

CHAPTER ONE: INTRODUCTION

1.1 Introduction

This study examined the self- and collective efficacy beliefs of principals and teachers who were involved in the nation-wide implementation of the latest educational reform in Bhutan – ‘Educating for Gross National Happiness (GNH)’ values and principles. The first chapter provides an introduction to the study with particular emphasis on a brief history of education system in Bhutan, historical development of values education and ‘educating for GNH’, the research context, rationale followed by the research questions, significance of the study, the definition of key terms employed and an overview of the dissertation structure.

1.1.1 A brief history of the Bhutanese education system

Bhutan is a small Himalayan Kingdom with a population of about 0.7m wedged between the two giant economies, India in the south-west and China in the north. It has an area of 38,394 sq/km with 72 percent forest cover (Wangdi & Dorji, 2010). Buddhism is the state religion and 70 percent of the population are Buddhist (Maxwell, 2008). “The people of Bhutan are mainly Mongoloid or Indo-Mongoloid with an influx of Nepali people, the Lhotshampas, who settled in the foothills during the 20th Century” (Maxwell, 2008, p. 2). After 100 years of absolute hereditary monarchy, Bhutan is regarded as having had a successful transition to a democratic form of government in 2008 under the guidance of the Fourth King, His Majesty Jigme Singye Wangchuk. Of the two political parties, Druk Phuensum Tshokpa formed the first elected government in 2008 after winning forty-five of the forty-seven seats in the parliament. Therefore, the first elected government had only two opposition members in the parliament representing People’s Democratic Party. Bhutan had five political parties registered for the recent second election in 2013. However, it was again the two old parties who competed for the general election. This time the people of Bhutan favoured People’s Democratic Party over the former government with thirty-two seats against fifteen.

Secular education based on western models began in Bhutan in the 1960s. This major change coincided strategically with the launch of the country’s first five-year economic development plan based on foreign aid. Prior to this, education was predominantly monastic in structure and content and the influence of the Buddhist clergy was dominant. The scenario, however, changed in the 1960s when Bhutan’s Third King, Jigme Dorji Wangchuk, decided to come out of its centuries-old self-

imposed isolation (Maxwell, 2008). To meet the human resource needs of a planned economy, schools were opened throughout the country and the education system was expanded rapidly borrowing heavily from the British system via post-colonial India. Subsequently the United Nations International Children's Educational Fund's (UNICEF) policy, Education for All, provided a strong impetus for growth to the system (Sherab & Dorji, 2013). From just a handful of schools and students in the early 1960s, Bhutan now has 1794 schools, institutes, non-formal centres, day care centres and 212,326 students (MoE, 2011a) and its own local curriculum and teachers (although five percent of teachers are still expatriates). Bhutan has already achieved its one of the millennium development goals of universal primary education that was actually targeted for 2015 (MoE, 2010b; Planning Commission, 2007).

Unlike many non-English speaking nations, Bhutan chose English to be the medium of instruction in the schools. All subjects are taught in English except for Dzongkha (the national language) and environmental studies conducted during the first four years of primary schooling. Similarly Dzongkha is only one of the subjects taught in secondary and university education. The current education system in Bhutan is structured with seven years of primary schooling, six years of secondary education and three/four years of university education. Since English has become a universal language, the policy of English as the main language of instruction has proved to be of some benefit to all the Bhutanese who have undergone the process of secular education (although there are negative impacts when it comes to the preservation of unique culture and tradition), especially when it comes to the pursuit of higher education abroad or for effective communication with rest of the world (Thinley, 2010).

In 2003 Bhutan established its first university, the Royal University of Bhutan (RUB), bringing its existing tertiary colleges and institutes together. The RUB has eight (2013) diverse colleges (including two teacher training colleges) offering various disciplines of study located at campuses throughout the country. While the Bhutanese education focused on basic education until recently, diversification of secondary and especially higher education is slowly emerging. The Bhutanese education system has witnessed a rapid growth within just half a century (Maxwell, 2008).

The impact of this growth is reflected in the words of His Majesty the Fifth King, Jigme Gesar Namgyal Wangchuk, "I am a firm believer that if there is one word that will stand out above all other words when we describe our country's amazing journey of modernisation over the last few decades – it is Education." The King further stated that, "our institutions, our leaders of today – all of us,

including me – are the proud products of the Bhutanese education system” (Wangchuk, 2009a, p. 1). Education has always been a priority for the government. The former Minister of Education, Powdyel, who was the first education minister of the first elected government, announced (see Royal Education Council, 2009, p. 2) the ministry’s future plans to address the issue of quality of education through strengthening of “education policy, academic programmes, capacity of teachers, assessment and evaluation, and setting up of model international schools through foreign direct investment.” While it has not been explicitly mentioned in the minister’s announcement, one of the major educational reforms that the first government had reinvigorated was the promotion of values through infusion of values systems based on Bhutan’s development philosophy of GNH known as ‘Educating for GNH’ values and principles, which is discussed in the next section.

1.1.2 Historical development of Values Education and ‘Educating for GNH’

To further strengthen and improve the educational system in the country, ongoing curricular and extra-curricular reforms were initiated. For instance, the idea of ‘wholesome education’ or “wholesome personal development of an individual” was rigorously implemented in the mid 1980s to inculcate traditional values in a more holistic way (Ngedup, 2006). According to the Ministry of Education (2007), ‘wholesome education’ was considered to be one of the strategies to improve the quality of education. The Ministry of Education (2006, p. 6) considered that values could be learnt during the day to day working of the school through a ‘whole school approach’, and further claims that a variety of extra-curricular programmes (ECPs) are organised in the schools to specially promote values in students, including:

- Daily morning assembly;
- Celebration and festivity- His Majesty’s birthday, the national day celebrations, teachers day, social forestry day; and
- Specialized programs- *choeshed*¹, scouting, games and sports, career education and counselling, school agriculture programme, social services.

In 2008 the importance of ‘wholesome education’ for personal, academic, intellectual, psychological, emotional, spiritual, social and occupational development of students also appeared in a report provided to the government by a ten-member Education Sector Review Commission. According to the commission, one of the main goals of Bhutan’s education sector is to “establish an enabling

¹ Religious discourse

environment imparting wholesome education to children and youth” (Education Sector Review Commission, 2008, p. 11). Research in the context of developed countries, particularly in the United States (Cooper, Valentine, Nye, & Lindsay, 1999) has shown that students who took time to participate in ECPs significantly improved their academic performance. Given such empirical evidence, it is worth providing opportunities for students to participate in ECPs.

The Bhutanese education system also witnessed an introduction of values education in 1999 (Wangyel, 2001) with a time allocation of 40 minutes per week for every grade level. A values education textbook entitled, *Learning to Be* was released in 2001 published by the Department of Education, Bhutan (Wangyel, 2001). This reform was introduced in response to the social issues brought in by rapid modernisation processes such as “weakening traditional family ties and the community-based social support system” and youth related problems such as drugs, petty crimes and teenage pregnancy (Department of Education Bhutan, n.d, p. 8).

The importance of Bhutanese children for Bhutan has been repeatedly mentioned by His Majesty the Fourth King, Jigme Singye Wangchuk, including for example, the statement that, ‘the future of our nation lies in the hands of our children.’ As a result, further strengthening of the existing values education appeared as one of the foci in the then Prime Minister, Sangye Ngedup’s executive order (Ngedup, 2006, p. 1) which stated:

We need to nurture perpetual generations of future citizens who will espouse values and principles, ideals and passions, hopes and aspirations that will build a compassionate, tolerant and a caring society, and propel Bhutan to be one of the most secure, prosperous and happy nations in the world.

Besides formal teaching of values, schools were required to inculcate values through ECPs as *choeshed* or the ‘Dharma talk’ (as explained in a previous paragraph), games and sports, scouting, and social services (Ngedup, 2006). ECPs such as these have taken some role in imparting values to students (MoE, 2007). Realising the benefit of ECPs, recently the Ministry of Education re-emphasised its policy of providing adequate opportunities to all students to participate in ECPs (MoE, 2012).

The Bhutanese education system emphasises values education (VE) through its own unique approach known as ‘Educating for GNH’ (MoE, 2010e) which has been referred to as ‘GNH Education’ for this study. The Ministry argued that it is essential for every Bhutanese to consciously espouse GNH values and principles to achieve GNH as His Majesty the King and the Government

considers GNH to be the bridge between material development and the “fundamental values of kindness, equality and humanity” (Wangchuk, 2009b, p. 6).

While it may not be the case with VE in other countries, GNH Education in Bhutan represents a simultaneous focus on both inputs and outputs as is evident from article 9 (point 2) of the constitution of Bhutan which states, “The state shall strive to promote those conditions that will enable the pursuit of Gross National Happiness” (Royal Government of Bhutan, 2008). The focus is also evident in the vision of a GNH-infused educational system (MoE, 2010c, p. 9):

The principles and values of Gross National Happiness will be deeply embedded in the consciousness of Bhutanese youth and citizens. They will see clearly the interconnected nature of reality and understand the full benefits and costs of their actions. They will not be trapped by the lure of materialism, and will care deeply for others and for the natural world.

The ultimate goal of GNH Education, according to the then Prime Minister, Jigme Y. Thinley (MoE, 2010e), is to produce graduates:

Who are genuine human beings, realizing their full and true potential, caring for others – including other species – ecologically literate, contemplative as well as analytical in their understanding of the world, free of greed and without excessive desires; knowing, understanding, and appreciating completely that they are not separate from the natural world and from others; – in sum manifesting their humanity fully.

The visions of Bhutan’s monarchs and government leaders have for some time sought to strike a balance between modernisation and preservation of its strong natural, cultural and social capital (Planning Commission, 1999). Yet, there is a growing awareness that changing circumstances demand renewed efforts in the education system. For instance, recently the King expressed concern about the future of the Bhutanese education system, “we must understand that the times have changed here in Bhutan and all around us in the world. We cannot face new challenges with the same tools” (Wangchuk, 2009a, p. 2). He further challenged everybody to contemplate the following question, “Does our education system reflect our changing opportunities and challenges?” (Wangchuk, 2009a, p. 4). Implied in this statement, is a clear indication that the education system needs to undertake and implement relevant innovations in the 21st century.

The effects of globalisation are already evident in Bhutan. The then Prime Minister (Thinley, 2010 p. 1), in his January 21 speech to the school Principals, who had gathered to attend a familiarisation workshop for implementing GNH Education in the schools, said:

The truth is that we are in trouble, deep trouble. Our little country, once so blissfully isolated in a remote corner of the Himalayas, seemingly protected by high mountain peaks wisely and peacefully governed by a lineage of great enlightened monarchs, is now buffeted by powerful forces we could not have imagined or conceived just a generation ago. Though some have brought benefit, those powerful forces are not always benign, and some of them threaten not only our profound heritage but even our lives and land.

The presence of the Prime Minister at such a gathering indicated the high importance the Government placed in the education toward GNH values and principles. While the Government had acknowledged the importance of this reform, the Prime Minister clarified that it should not be at expense of the academic excellence. He further indicated that this reform was neither the addition of a new subject nor would it burden teachers and principals (Thinley, 2010).

Apparently alarmed by what he termed the “self-centred culture of materialistic development” and an ever degraded planet in the 21st Century, the Prime Minister called for “urgency about seeing GNH principles, practices and values embodied quickly and without delay in our educational system” (Thinley, 2010 p. 2). He considered education to be the glue that could hold the whole notion of GNH together. Anticipating the complexity that the future citizens were likely to encounter brought the idea of GNH Education to the forefront of the education system beginning in the February 2010 academic session (MoE, 2010d).

The focus of GNH Education is to create what are called ‘GNH schools’. The Ministry of Education (2010d, pp. 37-44) aims to transform all schools into GNH schools through a rigorous focus on innovating and improving: i) school leadership and management practices; ii) green schools for green Bhutan (physical and psycho-social ambience); iii) curriculum: strengthening teaching and classroom management practices; iv) continuous and holistic students’ assessments (summative and formative); v) co-curricular activities for wholesome development; vi) the school-community relationship; and vii) qualities of a GNH school graduate. Each of these areas has several indicators that schools need to address to enable them to transform their schools into a ‘GNH school’ (see Appendix 1.1 for indicators). Recently, the concept of ‘green school’, one of the focus areas of GNH Education, has been further elaborated into eight critical dimensions – environment greenery, intellectual greenery, academic greenery, social greenery, cultural greenery, spiritual greenery, aesthetic greenery and moral greenery (Powdyel, 2011). Schools are urged to promote each of these dimensions in their effort towards creating a ‘green school for green Bhutan.’ These key areas and

indicators are part of the school self-assessment tool. All schools are now required to conduct 'school self-assessment' twice a year and accordingly design a 'school improvement plan' (Education Monitoring and Support Services Division, n.d).

Different countries have their own name for values education. For instance, this concept is known as: Character Education in USA (Lickona & Berreth, 1993), New Zealand (Galloway, 2007) and the United Kingdom (Arthur, 2005); Values Education in Australia (Curriculum Corporation Australia, 2006), the Philippines (Quisumbing, 1994); Moral Education in Sub-Saharan Africa (Swartz, 2010); Civics and Moral Education in Singapore (Aia, 1998); and Citizenship Education in Canada (Sears & Hughes, 1996) and Pakistan (Dean, 2005). Similar to these programmes, UNICEF has also started a 'Peace Education' programme for developing countries (UNICEF, 1999). These names are often used interchangeably. For the Bhutanese, in recent times it is known as 'Educating for Gross National Happiness' (MoE, 2010e). While the emphasis and the name vary, the ultimate goal of such education is to promote character through inculcation of moral values aimed at generating much desired human happiness. In this research the one umbrella concept of 'values education' (VE) is used. However, the difference in emphases will not be disregarded.

1.1.3 The research context

One of the foremost aspirations of most human beings is to lead a happy life (Lama & Cutler, 1998; Noddings, 2003; Thierry, 2012). Further, there is a general belief that human beings who exhibit good moral values make judicious judgments, their actions are ethical and they become good citizens (e.g., Ozolins, 2010). When human beings choose their way forward judiciously, sustainably, and ethically, the possibility of generating happiness is much more likely. However, experiences from developed countries show that too much emphasis on Gross Domestic Product has failed to bring universal happiness amongst their citizens (Dixon, 2004; Duncan, 2010; Easterlin, 2003; Fishman, 2010; Hewavitharana, 2004). This is evident from the apparent decline of moral values accompanied by drug abuse, violence, sexual aberrations, suicide, and mental disorders (Galloway, 2007; Noddings, 2010; Quisumbing, 1994; Seligman, Ernst, Gillham, Reivich, & Linkins, 2009). Critics argue that such social ills appear to be dominating the 21st Century lifestyles all around the world. In fact, many affluent countries such as United States, New Zealand and Japan have undergone rapid changes in the values system in their communities exposing youth to various social ills (Galloway, 2004; Hesse, 2010; Kusago, 2007).

In addition education systems in many countries such as England, USA, Australia and New Zealand have been criticised for not providing holistic education for their citizens and as a consequence, values education has been re-emphasised in their schools (Arthur, 2005; Damon, 2002; Galloway, 2007). Towards the end of the 20th Century most countries were witnessing renewed interest in values education in their education systems (Aia, 1998; Curriculum Corporation Australia, 2006; Damon, 2002; Dean, 2005; Lickona & Berreth, 1993; Lovat, 2005; Sommers, 2002; Winton, 2007; Zia, 2007). Recent interest has also been shown in developing nations like Bhutan (Wangyel, 2001) and the Philippines (Quisumbing, 1994).

Concerned with deteriorating human values in Bhutan and elsewhere, His Majesty the Fifth King (Wangchuk, 2009b, pp. 1-2) asserted that:

I had always wanted to think more deeply about how one might find an enduring place for simple human values in a world that is becoming unrecognizable from one generation to the next. And how, sadly, while the need for values is stronger and more urgent than ever, the climate in which they would flourish grows more and more unfriendly.

Recently commentators have indicated that Bhutan has also been witnessing a decline in moral values, which is claimed to have a relationship to poor values education (Thinley, 2010 ; Ura, 2009). According to Ura (2009, p.18), “we in Bhutan now face a sudden transformation and dislocation, bringing value and community disintegration at this conjuncture in our history.” This has implications for the Bhutanese education system because Bhutan has already achieved universal primary education (MoE, 2010b). Therefore, GNH Education serves as a means to produce morally educated citizens.

Discussing the importance of teaching children values, Bennett (1991, p. 133 in Milson & Mehlig, 2002, p. 47) commented, “If we want our children to possess the traits of character we most admire, we need to teach them what those traits are.” In a similar vein, Bhutanese leaders, experts and senior citizens argue that the type of values that adults desire to see in their children must be taught and promoted in the schools especially when children are at their formative age. Nurturing of essential human values and happiness skills can be taught in the schools to help nurture responsible citizens (Fordyce, 1983; Milson & Mehlig, 2002; Srinivasan, 2008). Yet, happiness and development research from around the globe has also justified that as a country’s economy rises, happiness amongst its citizen dwindles or remains at the same level (Brockmann, Delhey, Welzel, & Yuan, 2009; Duncan, 2010; Easterlin, 2003; Freeman, 2008; Smith, 2005). Furthermore, Dockery’s (2010) longitudinal surveys of Australian youth on the school-to-work transition also ascertained that as the

education level goes up, the happiness level goes down. Duncan (2010) argued that such research findings are a cause of concern for the government and as such should drive policies. It can be argued that the urgent requirement of the 21st Century education system is to create a balance between intellectual and character development. However, overemphasis on knowledge and skills has led to the neglect of values and attitudes (Galloway, 2007; Quisumbing & Leo, 2005).

1.1.4 Rationale

From the Government perspective, Bhutan has made a timely response to the effects of its own history and globalisation and its associated social ills by introducing GNH Education (MoE, 2010d). For the government, and especially for the Ministry of Education, GNH Education is a desirable policy that has now turned into a reform. The then Minister of Education made it clear to all the school principals that “the GNH view is meaningfully reflected in everything we do – from classroom structure and atmosphere, to teaching methods, curricula, classroom activities, teacher education, and more” (Powdyel, 2010, p. 2). For the country’s leaders it makes sense and gives the nation a sense of direction.

On the other hand, Ura (2009) and Wangyel (2001) found that school textbooks in almost all the key learning areas do not adequately integrate necessary values to be taught to students. This finding is important because textbooks are an important resource for many teachers in Bhutan. Furthermore, the findings of an unpublished doctoral thesis indicated a lack of literatures that carry Bhutanese moral values and specifically that the Bhutanese secondary English curriculum is under represented in what does exist (Thinley, 2010). According to Tandin Dorji (the former Social Studies and Values Education Curriculum Officer, Ministry of Education) values education sessions were used for other purposes such as cleaning the school campus, teaching other academic subjects and making students do other school chores (personal communication, 06/12/12). Anecdotally whilst working as a teacher educator for the last 16 years, an observation was made that values education did not appear to be a high priority at the teacher education colleges either. However, pre-service teachers were oriented to a teaching skill termed ‘teaching of values and attitudes’ to enable them to handle values-related topics in their own teaching subjects in the schools (College of Education Samtse and Paro, 2007). Consequently, pre-service teachers were taught the concept of values and approaches for teaching values to their students. As a part of their training programme each pre-

service teacher was given the opportunity to practice this skill in a small group setting as well as, at least potentially, during their practicum in a real classroom situation.

Discussing the practice of other countries such as South Korea, where only certified teachers are allowed to teach moral education, Ura (2009) shared that in Bhutan we do have neither the teachers nor appropriate textbooks that focus on values education. Ura (2009) further argued that values should be included in the textbooks (and hence in the classrooms) and should be explicitly taught in the schools rather than leaving it for implicit learning (as implied in ECPs). Further, the Bhutanese education system is known for rigid syllabi, textbook and examination orientation, rigorous classroom discipline, and poor teacher education (Education Sector Review Commission, 2008; Royal Education Council, 2009). Discussing the Bhutanese school curriculum, Maxwell (2008, p. 33) comments that it is “too academic/traditional producing graduates who do not have the required skills for the work force and a globalised world.” A student’s success (or for that matter a teacher’s success) would be solely judged by the marks obtained by the students in the final examination at the end of each school year. Both students and teachers have to scrupulously prepare for the All Bhutan Board Examinations (for a history of the assessment system in Bhutan, see Maxwell, Rinchen, & Cooksey, 2010).

Now that GNH Education has been implemented, it is imperative to search for empirical evidence to determine whether teachers and principals have a similar view, and that if they are capable of implementing this programme with competence as required by the government. As the success of this educational reform effort would largely depend on the immediate educational change agents – principals and teachers, it is vital to unveil their beliefs and experiences with regard to the GNH Education and to understand how well these are translated into actions that assist children to learn values. The task of implementing any educational reform largely depends on the self-efficacy beliefs of change agents such as principals and teachers and the collective efficacy beliefs of schools (Bandura, 1997; Fullan & Stiegelbauer, 1991; Haney, Czerniak, & Lumpe, 2002). Discussing the importance of both self- and collective efficacy in achieving the organisational goals, Wood and Bandura (1989, p. 413) maintain, “a robust sense of efficacy is necessary to sustain the productive attentional focus and perseverance effort needed to succeed.” There is evidence to show that teachers and principals with a high sense of efficacy beliefs related to a particular reform effort are more adaptable, enthusiastic, committed and willing to experiment new educational practices and as a result undergo transformation of their assumptions, beliefs and actions through critical reflection

(Evers, Brouwers, & Tomic, 2002; Ghaith & Yaghi, 1997; Guskey, 1988; Mezirow, 1991; Wahlstrom & Louis, 2008). There is ample evidence to show that perceived efficacy of those involved in educational change, transformative learning theory and reform efforts are related (Cranton, 1994; Evers et al., 2002; Guskey, 1988; Tschannen-Moran & Gareis, 2004; Wahlstrom & Louis, 2008; Wheatley, 2002). There is also ample evidence to show that changing teachers' beliefs and practices is not easy (Fullan, 1992).

Teachers have long been recognised as key players in the process of implementing educational innovation and in particular character education (Adelman & Walking-Eagle, 1997; Ampel, 2009; Fullan & Stiegelbauer, 1991). Likewise in GNH Education, the Ministry of Education used a 'train-the-trainers' model to initiate change and help raise the efficacy beliefs of principals and teachers. With a view that school principals play a critical role in the success of such educational reform, this task commenced with training of all the school principals, the key stakeholders in the schools (Thinley, 2010). In turn principals have been mandated to train their teachers before actual implementation of the policy. The effectiveness of such training programmes is not known due to lack of empirical research.

However, judging from the history of values education following its introduction in 1999 and implementation of other educational innovations, certain concerns emerge. For instance, has the GNH Education reform adequately considered the on-the-ground realities? For example, do key stakeholders like teachers and principals have adequate support in terms of materials, attitude, morale and skills required? What are their beliefs? For example, do they believe that they are capable of infusing GNH values and principles in students and are Bhutanese teachers and principals good role models?

In her book, *Teaching in mind: How teacher thinking shapes education*, Yero (2010) brings to attention of both the authorities and teachers themselves, how teachers' beliefs and values shape the atmosphere of the classroom and the school in general. She further argues that "teachers have always had the power to determine the tone and direction of a school, to create exemplary worlds within the classroom, and to scuttle reform movements that failed to fit their mental models" (2010, p. xiv). If implemented successfully Bhutan could be the leader in values education and demonstrate to the rest of the world a model to generate much desired happiness amongst its population while simultaneously providing for economic growth. As Bhutan is relatively a small and more importantly

that it is predominantly a Buddhist nation, it is reasonably assumed that the GNH Education might be successfully implemented.

No research has previously been undertaken on the implementation of GNH Education. However, past research in the Bhutanese context (Royal Education Council, 2009; Sherab, 2001; Sherab et al., 2008) on implementation of educational programmes such as this, indicated that policy directives are often not well executed because field practices did not match government policies, and lacked the right kind of teacher and principal attitude and skills (efficacy) all of which affected the implementation process. This situation is consistent with much literature pertaining to top-down educational change in the developed and ‘developing’ world. This research was an exploratory study to examine the relationship between efficacy beliefs (Bandura, 1977) of change agents, educational reform (Fullan, 1992) and transformative learning (Mezirow, 1997).

While self-efficacy of teachers and principals for various school subjects and programmes is a well-researched area in other countries (Ampel, 2009; Dembo & Gibson, 1985; Hoy & Woolfolk, 1993; Stajkovic & Luthans, 1998; Tschannen-Moran & Gareis, 2004; Tschannen-Moran, Hoy, & Hoy, 1998; Wheatley, 2002) no research has been carried out in Bhutan related to self-efficacy and implementation of educational reforms. Moreover educational research on self- and collective efficacy beliefs are largely dominated by the positivist paradigm and very little has been done following the interpretivist paradigm (Labone, 2004; Pajares, 1992; Tschannen-Moran et al., 1998). The existing knowledge gap at the Bhutanese as well as at the international level provided the opportunity to employ a multi-paradigm perspective to gain more general and in-depth insights based on the perceptions of principals and teachers measured by their efficacy beliefs, importance, support system, and actions and impacts of GNH Education.

The history of the Bhutanese education system shows that the introduction of subjects or programmes that are not a part of the formal assessment either at the school level or national level appear to have been undergoing a slow decline. For instance, VE and the physical education programme, introduced in 1999, have almost disappeared from the curriculum. The history of character education curriculum in countries like the United States of America appears to be headed in a similar direction. With respect to the latter, Damon (2002, p. 8) comments that “in the middle and latter part of the twentieth century educators found themselves embedded in a highly specialised, secular, knowledge-driven, postmodern world.”

Some questions can be drawn from this situation. First, the extent to which Bhutanese teachers in schools regarded VE, introduced in 1999, seriously is unknown although there is anecdotal evidence to suggest that not much is being done in terms of teaching values to students. Potential reasons for this lack include absence of a VE curriculum framework, teachers being engrossed in academic subjects, lack of teacher preparedness, perhaps more importantly, the rigorous examination system that have compelled teachers to provide selective attention to academic activities over others (Maxwell et al., 2010).

Second, the extent to which teachers, who were key stakeholders, were prepared adequately or otherwise to handle values and VE is another question. Like teaching of any other subject, the teaching of values also requires a certain level of understanding and pedagogical skills. Discussion of values needs deeper grounding based on logical argument and engaging pedagogical skills, so it is important to have an adequate theoretical and philosophical orientation before one attempts to handle teaching of any values. For instance, Fyffe (2006), Lickona and Berreth (1993), and Williams (1993) have found that role modelling is one of the best ways of teaching values. The old adage, ‘action speaks louder than words’ is befitting when it comes to promoting values to children. Teachers need to understand that most human behaviour is habitual and most often persons in authority lead the process (Fyffe, 2006).

Third, policy directives from the Ministry of Education may not have been succinctly outlined. Much confusion results when policies are not succinctly outlined (Sherab et al., 2008). A brief outline of an example of such confusion in the Bhutanese education system can be seen in the Ministry of Education’s policy to implement physical education as a subject in the primary schools. While some schools followed the policy as required there were many others who did not have physical education classes for their students (Sherab, 2001). Experts in educational change theory highlight that implementing a change is technically simple and socially complex (Fullan & Stiegelbauer, 1991; Hargreaves, 1997; Lieberman, 1995; Sarason, 1996). Research (Dorji, 2000; Royal Education Council, 2009; Sherab, 2001; Sherab et al., 2008) in the Bhutanese education system has confirmed that many reform efforts have failed because most often social complexities have not been adequately considered.

The research into the nature of introduction of teaching of GNH values in the Bhutanese education system is timely. This research intended to explore and understand the self-efficacy beliefs of principals and teachers and collective efficacy of schools with regard to the implementation of

GNH Education in the Bhutanese schools. It further explored the perceptions of principals and teachers with respect to the importance, support systems, and their actions and attainment of impact of GNH Education. It was also aimed at gaining insight into the efficacy levels of principals and teachers in terms of their placement in primary or secondary schools, years of experience, gender, age, qualification, teaching subject/s, service status (regular or expatriate), nationality, number of teachers and students in the school, religion, length of time in the school and location of school (urban, semi-urban, rural) as these are likely to affect the efficacy beliefs of change agents (see Chapter Two). Further, the link between efficacy, transformational learning and educational reform was explored through in-depth case studies of a small number of two ‘efficacious’ and two ‘inefficacious’ schools. Consequently, this study was designed to seek answers to two overarching research questions:

What are the principals’ and teachers’ efficacy beliefs for GNH Education in Bhutanese schools? and What are the principals’ and teachers’ lived experiences for GNH Education in Bhutanese schools?

The next section provides a discussion of the significance of the study.

1.1.5 Significance of the study

This study is significant in several ways. First, GNH Education was seen by the Government of the day as critical for the sustained development of Bhutan. There is also considerable international interest in Gross National Happiness and its development in Bhutan;

Second, this study intended to characterise how self-efficacy of Principals and Teachers and school collective efficacy are related to aspects of GNH Education implementation. As such this study is intended to provide policy-oriented research for the use of the Ministry of Education;

Third, the success of such a national programme requires commitment and considerable changes from those involved. Knowledge generated from this study may contribute(s) significantly to an understanding of how GNH and education can respond to this challenge in local, national, as even international contexts. It is important to understand how current reform is or is not being translated through the experiences and efficacy beliefs of Principals and Teachers;

Fourth, the study enabled identification of relevant strategies that would provide significant contributions and insights into infusion of GNH values in the Bhutanese education system;

Fifth, understanding principals' and teachers' efficacy beliefs has implications for teacher education. It is important that both in-service and pre-service teacher education programmes are aligned to address teacher and principal efficacy for GNH Education;

Sixth, the in-depth study of schools provides insight into how GNH Education is being implemented and so provides potential contextualised learning and models for other schools;

Seventh, self-efficacy of principals and teachers for various school subjects and programmes is a well-researched area in other countries (Ampel, 2009; Dembo & Gibson, 1985; Hoy & Woolfolk, 1993; Stajkovic & Luthans, 1998; Tschannen-Moran & Gareis, 2004; Tschannen-Moran et al., 1998) but no research has been carried out in Bhutan. So this study is perhaps the only known empirical research to explore linkages between efficacy beliefs, educational reform and transformative learning.

Eighth, most efficacy research related to school leadership and teachers has been conducted under the guidance of positivist assumptions and very little has been undertaken from the point of view of interpretivist/constructivist assumptions. Consequently this study employed both the positivist and interpretive guiding assumptions, at different stages, to more deeply understand the efficacy beliefs and experiences of principals and teachers in implementing GNH Education. It is also the first study in the Bhutanese context to adapt tools for measuring self-efficacy of principals and teachers and collective efficacy of schools employing a combination of both the constructivist and positivistic paradigms. Future researchers in the Bhutanese education system can employ these efficacy tools to study a wide variety of key learning areas and programmes.

1.2 Definition of key terms

As this study employed various terminologies such as values, values education, gross national happiness, happiness, self-efficacy beliefs of teachers and principals, school collective efficacy beliefs and transformative learning, definitions of each term and what it means for this particular study is provided in the following sub-sections.

1.2.1 Values

The term 'values' may have different association depending on the situation in which it is being put to use. However, for this research purposes, values refer to one's attitudes, beliefs, convictions, principles, or virtues (Hayward, Pannozzo, & Colman, 2009b).

1.2.2 Values Education

For the purpose of this study, values education refers to the ‘Educating for GNH’ values and principles that have been implemented in the Bhutanese education system commencing in the 2010 academic session.

1.2.3 Gross National Happiness

Gross National Happiness refers to the development philosophy of Bhutan that has been rigorously promoted as a middle path to modernisation and preservation of unique culture and tradition.

1.2.4 Happiness

The happiness component in GNH defined by Hayward, Pannozzo and Colman (2009b, p. 1) denotes happiness in this study:

[Happiness is the] welfare of future generations of Bhutanese as well as that of the present generation, and to be correlated with certain key conditions – physical and mental health, decent living standards, a healthy physical environment, strong and safe communities, vibrant culture, good government, and the ability to balance the often competing demands of paid and unpaid work with ample free time.

1.2.5 ‘Educating for GNH’ values and principles

‘Educating for GNH’ values and principles is used to describe both prescribed formal as well as informal educational processes that teaches, discusses, practices, inquires and models about infusing human values in students through both curricular and extra-curricular programmes.

1.2.6 Self-efficacy beliefs

Bandura’s (1997, p. 3) definition of perceived self-efficacy which states, “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” will be used in this study.

1.2.7 Collective efficacy beliefs

The collective efficacy beliefs of a school in this research refer to the perceptions of teachers and principals with regard to the capability of the entire academic staff in successfully implementing GNH Education in their schools (Bandura, 1997; Goddard, 2002).

1.2.8 Self and collective efficacy beliefs for GNH Education

Self- and collective efficacy for GNH Education refers to the teachers' and principals' beliefs as well as the schools' collective beliefs about their abilities to implement GNH values and principles effectively in their schools and produce 'GNH graduates.'

1.2.9 Transformative learning

Transformative learning in this study is used to refer to any evidence of change in principals' and teachers' assumptions, beliefs, and actions in implementing GNH Education (Mezirow, 1991).

1.3 Chapter summary

This chapter presented a brief overview of the Bhutanese education system leading to the most recent educational reform – Educating for GNH values and principles. The discussion pertaining to research context and rationale for the study led to design of two overarching research questions. A detailed discussion of the significance of the study followed by the operational definition of key terms employed was presented next. The final section provides a “bird’s eye view” of the overall dissertation. The next chapter presents the theoretical background leading to the development of a conceptual framework that guided the study.

1.4 An overview of the dissertation structure

- Chapter 1 presented a brief history of the education system in Bhutan, historical development of values education and ‘educating for GNH’, the research context, rationale followed by the research questions, significance of the study and discussion of the key terms employed.
- Chapter 2 presents a detailed discussion of the theoretical background of the study related to five key areas: 1) the historical development and the concept of Gross National Happiness; 2) the concept of values and values education and its place in the education system; 3) the

concept of perceived efficacy beliefs and its usefulness in the educational reform efforts; 4) transformative learning; and 5) dynamics of educational change leading to the development of conceptual framework.

- Chapter 3 presents the details of the methodology employed with highlights on the paradigm choice, research design and data gathering strategies, survey instruments, validity and reliability of the measurement scales, gaining access and ethical issues and approaches to data analyses.
- Chapter 4 describes the processes followed for demographic analyses and validation of measurement scales with particular emphasis on data screening, missing value analyses, demographic characteristics and principal component analysis for each measurement scale.
- Chapter 5 is fully devoted to presentation of phase one survey data analyses in which answers to nine sub-questions related to the first overarching research question are provided.
- Chapter 6 presents within-case data analyses obtained from phase two qualitative case studies of four schools.
- Chapter 7 is the third data analyses chapter based on cross-case analyses of the four case studies presented in the previous chapter.
- The final chapter includes broad conclusions drawn from between-paradigm triangulation of both quantitative and qualitative phases and review of the conceptual framework. This chapter ends with discussions on implications (theory, methods, practice and policy), limitations and delimitations of the current study and possible directions for future research.

CHAPTER TWO: THEORETICAL BACKGROUND AND CONCEPTUAL FRAMEWORK

2.1 Chapter introduction

Implementation of GNH Education was a recent reform introduced in the Bhutanese education system commencing in the 2010 academic session. In 2011 this research on Gross National Happiness-inspired educational innovation of Bhutan explored the experiences and perceptions of principals and teachers with particular focus on understanding self-efficacy and school collective efficacy beliefs, their perceptions of importance of GNH Education, support systems and actions and impacts. This chapter is divided into two sections – i) theoretical background and ii) conceptual framework. The first section presents a detailed discussion of the constructs drawing on relevant literature. The second section provides a discussion of the conceptual framework for the study, building on the three interrelated theories of Bandura's perceived efficacy beliefs, Mezirow's transformative learning and Fullan's dynamics of change.

2.2 Theoretical background

The first section contextualises the study by providing a review of key literature on the five central constructs implicated in the overarching research questions: i) Gross National Happiness; ii) values education; iii) efficacy beliefs; iv) transformative learning; and v) dynamics of educational reform.

2.2.1 Gross National Happiness

The term 'Gross National Happiness' was first pronounced by His Majesty the Fourth King Jigme Singye Wangchuk in the late 1980s as a fundamental principle of Bhutan's development philosophy (Planning Commission, 1999). This idea directly opposed 'Gross Domestic Product' (GDP) as a frequently used measure of development in many countries. The King's emphasis on GNH over GDP was clearly articulated in the following words as quoted by the *New York Financial Times*:

We are convinced that we must aim for contentment and happiness. Whether we take five years or 10 to raise the per capita income and increase prosperity is not going to guarantee that happiness, which includes political stability, social harmony, and the Bhutanese culture and way of life. (Elloitt, 1987)

Although the GNH philosophy has inspired much interest over the last decade, not much has been done in terms of operationalising the concept to the present day. Nor has it travelled much beyond the borders of Bhutan. It was only in 2004 when the Bhutanese government organised its first international seminar in the capital city of Thimphu that the attention of scholars from around the globe was sought to engage in intellectual dialogue to help Bhutan operationalise the concept of GNH (Bracho, 2004; Donnelly, 2004; Hershock, 2004; Hewavitharana, 2004; Lokamitra, 2004; Tenzin, 2004; Tideman, 2004). The subsequent international seminars of 2005 (Canada), 2007 (Thailand), 2008 (Bhutan) and 2009 (Brazil) produced much brainstorming and discourse at both national and international levels resulting in a more comprehensive understanding of this philosophy.

2.2.1.1 A brief review of the concept of GNH

According to His Majesty the Fifth King, “GNH acts as our national conscience guiding us towards making wise decisions for a better future” (Wangchuk, 2009b, p. 6). The foremost priority for the king and the government is clearly reflected in His Majesty’s address to a gathering of Bhutanese university graduates in 2007 (as cited in Ura, 2009, p. vi):

Today’s world demands economic excellence and I have no doubt that during our lifetime we will be working towards building a stronger economy for Bhutan to further consolidate and secure our own future. In doing so, no matter what our immediate goals are, I am confident that the philosophy of GNH will ensure that ultimately our foremost priority will always be the happiness and the well-being of our people.

The king considered that GNH was ‘development guided by human values’. GNH values and principles, as reflected in a GNH-based educational system, are understood to include:

- a deep and genuine understanding of and care and respect for nature, for others, and for Bhutan's profound and ancient culture;
- the critical capacity to understand and see reality clearly and to see through deception; and
- the ability to manifest these qualities in action and behaviour in order to benefit Bhutan and the world, to develop the economy in a sustainable and socially responsible way, and to be "good citizens" who can act effectively to improve well-being. (Hayward, Pannozzo, & Colman, 2009a, p. 1)

Today, (2013) there seems to be a general consensus amongst scholars from a wide range of disciplines that the traditional economic approach to development (GDP-focused) has failed to adequately measure the progress of a nation resulting in diminished happiness and well-being (Bandyopadhyay, 2005; Bracho, 2004; Braun, 2009; Eda Hiro & Oda, 2008; Johnson, 2004). These authors claim that too much emphasis on GDP has heightened the human greed that has led to unsustainable growth. Therefore, GNH has been promoted to address the shortcomings of a western economic approach that has failed to address the “inequality of resource distribution, imbalanced human development and environmental degradation” (Bandyopadhyay, 2005, p. 2). The emphasis of conventional development on material comfort is observed to have little regard for future generations. Discussing the GDP as a complete measure of prosperity and well-being is flawed, Dixon (2004, p. 105), who is the Managing Director of Innovest Strategic Value Advisors an international financial service firm, comments:

Western economic systems have produced great improvements in many areas including technology, medicine and the provision of essential and non-essential goods and services. However, as industrial economies continue to grow in a finite world the overall impact is increasingly negative. Inefficient use of resources, high levels of pollution and numerous social disruptions resulting from industrialization have caused human society to be grossly unsustainable.

According to Hewarithana (2004, p. 496) industrialisation has “undermined human dignity and the value of human life”. Furthermore, Dixon (2004) further argued that unsustainability is the result of short-sightedness of humans that has failed to acknowledge the interconnected systems of every person, plant, animal and thing on this planet. With much dissatisfaction, Dressel (2005, p. 281) reiterated that the conventional development approach a “dysfunctional economic system that has now spread across the entire planet, that provides immediate short-term goods and benefits, but is inexorably destroying the systems that support all life.” These authors claim that the conventional development approach indicates lack of moral and ethical values and with such dissatisfaction spreading across the globe, the GNH approach to development has been considered as an alternative approach to progress. This is apparent from the recent acceptance of happiness as one of the Millennium Development Goals following Bhutan’s proposal at the 65th UN General Assembly in New York in 2010 (Bhutan Broadcasting Service, 2011). This is a modest accomplishment for Bhutan as its development model of GNH is beginning to make a profound impact not only in Bhutan

but, potentially at least, worldwide. The GNH approach to development is aimed at achieving economic progress based on moral and ethical values. Hewavitharana (2004) argued that happiness could be promoted if our actions are based on good moral values while immoral actions can bring miseries and unhappiness.

The Centre for Bhutan Studies has now created GNH indicators to reflect and measure the Centre's understanding of progress (see Ura, Alkire, Zangmo, & Wangdi, 2012). These indicators are important for the Government to provide empirical evidence in designing plans and policies for sustainable development (Colman, 2008) because sustainability is considered to be the cross cutting theme of GNH (Hayward et al., 2009b).

While the concept of GNH is still evolving, some understanding has been achieved. Donnelly (2004, p. 357) defines "GNH as an average of individual measures of happiness within the citizens of the country." If happiness is the key element in the concept of GNH, it deserves some clarification. 'Happiness' is considered to be a subjective notion depending on many factors and conditions. For instance, what is considered to be happiness for one person may not be the same for another person. What is considered to be happiness today or at a particular moment may not be considered to be happiness the next day or at another moment. Happiness for one culture or society may not be happiness for another. The notion of happiness basically depends on the context and perspective. While happiness is a much debated and controversial issue, academics have defined the concept in order to bring some common understanding. For instance, Donnelly (2004, p. 348), a psychologist, defines happiness as "a subjective experience of positive affect." Veenhoven (2004, p. 287) envisages happiness "as the degree to which a person enjoys his or her life-as-a-whole" and GNH "as the degree to which citizens in a country enjoy the life they live." So GNH is fundamentally a collective concept. According to Bracho (2004, p. 430) happiness is defined as "a state of well-being and contentment." Hellemont (2008) considers that the experience of happiness depends on both the individual management of the human mind and the external conditions that influence our lives. Hayward, Pannocho and Colman (2009b, p. 1) regards the happiness component in GNH as the:

Welfare of future generations of Bhutanese as well as that of the present generation, and to be correlated with certain key conditions- physical and mental health, decent living standards, a healthy physical environment, strong and safe communities, vibrant culture, good government, and the ability to balance the often competing demands of paid and unpaid work with ample free time.

The philosophy of GNH implies that Bhutan's social, economic, political, and religious life should be designed to maximise happiness amongst its people through building resilience, ensuring equity, and sustainability. The GNH philosophy is therefore committed to generating sustainable happiness. According to O'Brien (2005, p. 108) sustainable happiness "is achieved without the exploitation of other people, the depletion of non-renewable resources, and the well-being of future generations." Much research (e.g., Donnelly, 2004; Hirata, 2004) has shown that individual happiness, though subjective, can be measured and its determinants quantified. Hirata (2004, p. 725) suggests that:

Now happiness should be measured in Bhutan just as product is measured in most other countries. One would simply have to take the average of the population's SWB [subjective well-being] scores in order to arrive at a 'per capita GNH' - indicator that would replace the indicator of 'per capita GNP'.

The philosophy of GNH poses a challenge to the discourse in orthodox developmental theory as it calls for a paradigm shift from purely materialistic concerns to a melding of material development and the holistic well-being of its citizens and of its environment (Bakshi, 2004; Edahiro & Oda, 2008; Ura & Galay, 2004; Wang, 2008; Willenswaard, 2008; Worcester, 2004). The GNH approach to human development is considered by some to be a revolution in development thinking (Priesner, 1999; Tideman, 2004; Whitehouse & Windrel, 2004). According to the former Prime Minister, Jigme Y. Thinley (2005, p. 11) "GNH is a balanced and holistic approach to development." Hence, collective happiness of the people of Bhutan is addressed directly through public policies in which projects and programmes will be designed through the lens of happiness (Thinley, 2005; Tshiteem, 2008). In a similar tone, Ura (2009, p. 20) stated "GNH is about removing obstacles of public nature to collective happiness through policies, programmes and associated public expenditure."

GNH is underpinned by Buddhist philosophy and scholars from wide range of disciplines (Bakshi, 2004; Dixon, 2004; Dorji, 2007; Hewavitharana, 2004; Horayangura, 2007; Hylkema, 2004; Lokamitra, 2004; Tashi, 2008; Tideman, 2004) acknowledge the wisdom of Buddhism as applicable to all human activities including economic activities. Tideman (2004) considers GNH as the Buddhist equivalent to GNP. In addition Dorji (2005, p. 3) states that:

GNH is a reasoned and pragmatic attempt to find a wholesome and stable course for change in today's increasingly turbulent world. For the people of Bhutan, it is a Buddhist-inspired path to a nation's growth by ensuring individual and collective happiness.

Buddhist teachings indicate that one's desire is the root cause of unhappiness and by nature that craving is insatiable because both conventional economics and Buddhism highlight that human desires are unlimited. One of the key teachings of Buddha emphasises that even if a person can magically convert a mountain into two mountains of solid gold that person will not be satisfied (Payutto, 1994). Unlimited human desire is also illustrated in the fable 'The golden egg and the goose' where the conventional economic activity can be compared to a person in this fable that kills the goose with the hope of extracting all the golden eggs at once. Related to this fable, Covey (1989) in his book, *The 7 habits of highly effective people: Powerful lessons in personal change*, highlights the importance of balancing production and production capability. Similarly conventional economic activities tend to be focused more on short-term production than on enhancing and preserving production capability in the longer term (Dressel, 2005). While the GNH philosophy values conventional economic activity it is more focused on nurturing the production capability of its social, cultural, and natural capital.

The core belief of Buddhism is managing one's internal mind and external conditions from which happiness is likely to be generated. According to Buddhist philosophy, "it is not the end which justifies the means, but rather the means which condition the end" (Payutto, 1994, p. 4). Therefore, as a Buddhist, one's thoughts, words, and deeds should be directed to benefit not only self but also all sentient beings. Good actions lead to good results and bad actions lead to bad results (Lokamitra, 2004; Payutto, 1994; Tashi, 2004). As a Buddhist, Tashi (2008, p. 219) deliberates that "everything is dependent on the right causes and conditions to have result and outcome. When the cause and conditions are rightly met, things get activated and function as desired". Buddhist teachings indicate that one gains merit through chanting of prayers (*Drowa rig drug semchen thamchen ngi dendu om mani padmi hung*) for all living beings in this universe. It would be selfish to chant prayers for one's own happiness and good luck. As against conventional economics of gaining satisfaction from owning material goods, the Buddhist philosophy of gaining satisfaction from helping others is explained by Payutto (1994, pp. 4-5):

Sometimes we can experience a sense of satisfaction by parting with something without getting anything tangible in return, as when parents give their children gifts: because of the love they feel for their children, they feel a more rewarding sense of satisfaction than if they had received something in return. If human beings could expand their love to all other people, rather than confining it to their own families, then they might be able to part with things without receiving

anything in return, and experience more satisfaction in doing so. This satisfaction comes not from a desire to obtain things to make ourselves happy (*tanha*), but from a desire for the well-being of others (*chanda*).

The fundamental nature of GNH is ‘creation of a society in which the individual’s progress toward enlightenment is not impeded by unnecessary suffering, material or mental’ (Mancall, 2004, p. 37). While ‘happiness’ is recognised to be a difficult term to understand, examining the Buddhist perspective ‘throws some light’ on this fundamental concept of GNH. From the Buddhist perspective happiness is defined as:

A quality of the mind that arises from positive mental attitudes, which among others, include the intention never to harm others, the desire to provide help and support to those around us, and to remain contented with one’s life. (Tashi, 2004, p. 483)

Tashi (2004) further purports that GNH will be accomplished if every Bhutanese is able to cultivate such mental attitudes. Discussing the Buddhist idea of happiness, Powdyel (2004, p. 735) shares a proverb “*mii tsi gaawai soenam, rta khei nga yaa baa mi thei*. Simply translated, the line means that the intensity of happiness experienced is such that even a hundred horses cannot carry it.” Therefore, the fundamental teaching of Buddhism is based on benefiting other beings. Dorji (2007, p. 28) shares the teachings of Shantideva, the great seventh century Indian master in which *karma*, the law of cause and effect, is explained, “all those who are unhappy in the world are so as a result of their desire for their own happiness. All those who are happy in the world are so as a result of their desire for the happiness of others.”

In brief, GNH philosophy has evolved to counteract the perceived shortcomings of the conventional economic activities and as a result bring more happiness on this ever-degenerating planet as discussed above. As a part of concept clarification, the next section presents the four goals known as the GNH pillars, designed to guide Bhutan in its developmental activities.

2.2.1.2 Four Pillars of GNH

The four pillars on which GNH rests are: 1) sustainable and equitable socio economic development; 2) preservation and promotion of cultural heritage; 3) preservation and sustainable use of the environment and 4) good governance (MoE, 2010d). These four pillars support a fundamental thrust in designing and implementing developmental plans, policies and actions (Planning Commission,

1999). The social, cultural, environmental and governance pillars are interdependent and complementary in creating enabling conditions for GNH (Thinley, 2005).

The first pillar – sustainable and equitable socio-economic development – requires the improvement of the physical, intellectual, social, and economic well-being of the people through social and economic services (Dorji, 2005) in a more sustainable and equitable approach. According to Dorji (2005, pp. 9-10) these services include “health, education, trade and commerce, industries, roads and bridges, urban development and housing, ICT, and employment.” Keeping in line with this policy of the government, health and education are provided free of charge for Bhutanese (Maxwell, 2008). While the GNH philosophy supports growth of material wealth, this pillar makes it clear that it should not be at the expense of others. We live in a world, which is very much interconnected: the humans, the animals, the plants, and the environment in general. This interconnectivity is not limited to the present generation but also extends to the future generations. For survival one has to support the other without which the basic life support systems are at risk (Payutto, 1994; Thinley, 1998). Sustainability and equity are often neglected in conventional economic analysis. Equity is not just giving an equal share to everyone but sharing on the basis of one’s needs. This is from where a GNH philosophy has been “born” to find a middle path between a Western (capitalist) conventional economy and the GNH economy. If Bhutan is able to follow this middle path successfully, it is likely to bring more happiness to its citizens.

The second pillar – preservation and promotion of cultural heritage – requires the Bhutan government to invest enormous amount of time and resources in order to maintain its unique culture and traditions (Planning Commission, 1999). The 21st Century landscape is witnessing rapid disappearance of cultural identity amongst communities in both developed and developing countries in the face of globalisation. To some extent this is the case in Bhutan (e.g., Thinley, 2010). Consequently, Bhutan also started an inventory of its heritage, which includes historical sites, architecture, physical artefacts, folklore, arts and crafts, music, dance and sports (Planning Commission, 1999). This effort to preserve the rich cultural heritage and pristine environment has been appreciated by many thoughtful visitors (e.g., Fishman, 2010; Sachs, 2010).

The third pillar – Preservation and Sustainable use of the Environment – is considered to be a cornerstone for achieving GNH. As the majority of Bhutanese are from farming backgrounds, the quality of the physical environment surrounding them is vital for health, survival and aesthetic experiences. The Government’s environment policy is based on an understanding that sustainable use

of the environment is important not only for the well-being of the present generation but also for future generations. The then Prime Minister Jigme Y. Thinley argued that there is a demonstrable relationship between happiness and environment (Thinley, 2005), hence, it has been chosen as one of the objectives of GNH. To date Bhutan's effort in preservation of the environment has been remarkable with 72 percent of its land under forest cover of which 26 percent maintained under protected areas (Thinley, 2005). Bhutan has also made a commitment that 60 percent of its land will be maintained under forest cover at all times (Planning Commission, 1999). Any activities that are likely to damage the environment such as tourism, wood based industries, or energy production are monitored and restrained (Dorji, 2005). The former Prime Minister Jigme Y. Thinley proudly asserted that Bhutan could have easily become economically self-reliant had it not been for preservation of culture and environment (Thinley, 1998).

The fourth pillar – Good governance – has been recognised as one of the key areas for achieving GNH. The importance attached to enhancing the governing system of Bhutan is expressed in the following words of the former Prime Minister, Jigme Y Thinley: “without good governance none of the other objectives are achievable” (Thinley, 1998, p. 5). The plan for promoting good governance began in 1981 when His Majesty the Fourth King initiated a vigorous programme of administrative and political decentralisation. Almost a decade later, the government vigorously promoted three themes of efficiency, transparency and accountability in all government and private offices to augment good governance (Royal Government of Bhutan, 2005). Continuous efforts are now made to lessen bureaucracy and improve public services.

2.2.1.3 Nine domains and seventy two indicators of GNH

The four pillars support nine domains targeted by 72 indicators. Psychological well-being, time use, community vitality, culture, health, education, ecology, standard of living, and good governance are the nine domains (see Figure 2.1) that provide the foundation for achieving the four goals. All these domains of life are interdependent and to promote GNH, the domains should be considered holistically. According to Ura (2009, p. 25) “to get it right in culture is not enough. We have to get it right in culture with respect to other domains, for instance, the economy or industrial activity.”

Each of the nine domains has several indicators or variables that are imperative for enhancing happiness. For instance psychological well-being domain has six indicators – positive emotions, negative emotions, general health questionnaire, spiritual practice, spiritual belief and quality of life.

To understand the state of one’s psychological well-being all the six indicators must be addressed. Likewise the culture domain has 12 indicators, time use domain has six, community vitality domain has 13, health domain has 11, ecology domain has six, standard of living domain has six and good governance domain has seven indicators (see Appendix 2.1 for details).

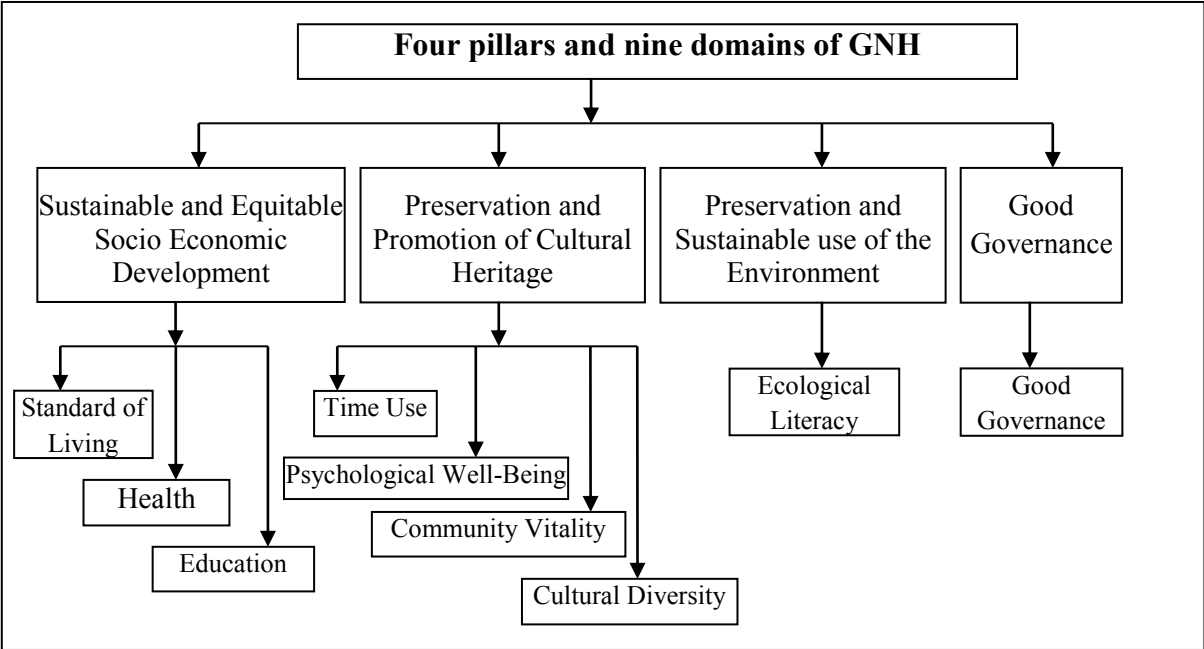


Figure 2.1 Gross National Happiness- Four Pillars and Nine Domains (Ura, 2009)

2.2.1.4 Nine domains and their values

Each of the nine domains of GNH reflect several human values (see Appendix 2.2) such as compassion, trust, identity, tranquillity, integrity, aesthetic, sustainability, vitality, creativity that constitute happiness (Ura, 2009). The philosophy of GNH is interwoven into the whole notion of values outlined in Appendix 2.2. In order for GNH-led development to occur, the Government considers fundamental for every Bhutanese to consciously espouse these values including the government itself. To support the realisation of a GNH vision, the Bhutan government has recognised that the education of future citizens is fundamental, thus leading to a nation-wide introduction of ‘educating for GNH’ in all schools and institutes (MoE, 2012).

2.2.2 Values Education

As alluded to in the first chapter (see section 1.1.3, p. 7), one of the developments in the beginning of the 21st Century education system of most nations in the world is the growing emphasis on

reintroduction of values education into their education systems due to ever increasing youth related problems. In order to keep up with its core mandate of human development and promotion of peace in the world, UNESCO also established a new agency termed 'Asia Pacific Network for International Education and Values Education' (APNIEVE) in 1995. The principal objective of APNIEVE is to develop and promote values education for peace through holistic human and sustainable development (Quisumbing & Leo, 2005). Such developments that occurred towards the end of 20th Century were a clear indication that some important aspects of education were missing worldwide.

Values are regarded as a controversial, ever evolving and complex subject (Fyffe, 2006). Values generally refer to "the strong beliefs by which we lead our lives. We reflect these beliefs in our actions" (Curriculum Corporation Australia, 2006, p. 55). The meaning of 'value' is often denoted by the context as it varies across time, circumstances and space (Fyffe, 2006) and, more importantly, cultural determinants are critical. What is a value today may not be a value after a certain period of time. What is a value for one person, one family, one society, or one nation may not be a value for another person, another family, another society or another nation.

There is no one accepted definition of 'values'. Arguing that values are grounded in human well-being, Beck (1990, p. 2) defined "values as those things (objects, activities, and experiences) which on balance promote human well-being." According to Halstead and Taylor (2000, p. 169) values refer to the "principles and fundamental convictions, which act as general guides to behaviour, the standards by which particular actions are judged to be good or desirable". If the type of values one holds affects one's behaviour, actions and character, it is imperative that one inculcates current culturally acceptable values.

In pursuing a similar line of reasoning, Berkowitz and Bier (2004, p. 73) provides a comprehensive definition of character in the following words, "character as an individual's set of psychological characteristics that affect that person's ability and inclination to function morally." While the choice of words is slightly different, Berkowitz's and Bier's definition of character in essence remains the same as Halstead's and Taylor's definition of values but from a different perspective. However, in all these one can notice a discernible pattern that values refer to one's attitudes, beliefs, convictions, principles, or virtues (Hayward et al., 2009b).

According to Quisumbing and Leo (2005, p. 15), "values represent aspirations and goals; the motives and purposes we seek. They are emotionally charged; they give power to our ideas and understandings, such that they constitute the driving force behind individual and group behaviours".

Values, therefore govern every aspect of human life. Everything that human beings do in life; actions, behaviours, thoughts, consciously or unconsciously are all based on the values we hold. Values can help identify what is good or bad for self and for society in general.

So, education for the development of values is important. “Values education is the process by which values, attitudes and habits are formed as the learner interacts with the environment under the guidance of a teacher” (Quisumbing, 1994, p. 3). As students (especially at the primary school level) are at their formative stage of development it is imperative that the environment they interact with/in is conducive for the formation of positive values, attitudes and habits. In a similar line, Milson and Mehlig (2002, p. 47) defined character education as “the process of developing in students an understanding of, commitment to, and tendency to behave in accordance with core ethical values.” In both the above definitions, the central focus is the development of fundamental values through a well-defined process guided by the teachers. There seems to be an increasing consensus now that most values are universal and that it should be explicitly taught in the schools (Milson & Mehlig, 2002; Quisumbing & Leo, 2005). Milson and Mehlig (2002, p. 47) further argue that it should not be even left to the hidden curriculum, though the implication here is that the hidden curriculum can have an effect on learning. Notwithstanding, in discussing the importance of hidden curriculum, Ryan (1993, p. 18) mentioned that “many of education’s most profound and positive teachings can be conveyed in the hidden curriculum.”

Teachers play a paramount role in this process of forming positive values, attitudes and habits in students, as clearly indicated by Quisumbing (1994), the President of the Asia Pacific Network for International Education and Values Education. However, Quisumbing cautioned all stakeholders involved in values education that studying values would not necessarily influence behaviour. For one’s behaviour to change a value learned has to be experienced and a commitment made to it in belief and attitude. This statement is a clear indication that teaching and learning of values involve more than teachers, students, and textbooks. According to Lovat (2005, p. 9) “Values Education is always connected with the real contexts and concerns of the students.” Various opportunities should be made available to the students to practically experience the value learned. Isolated learning of values theoretically without much experimentation will not make meaning to the learners.

Children begin to learn values as soon as they are born, initially from their families, but also from friends, and a host of media products such as television, newspapers, and movies (Halstead, 1996). Therefore, children come to school with a wide range of values developed during their pre-

school environment. Most often their learning of values depends on the type of environment to which they are exposed. Generally, a safe and healthy environment inculcates positive values and unsafe and unhealthy environment injects negative values. Most often it is the latter that takes control of values formation in youth especially in the 21st Century where humans are witnessing rapid globalisation and a decline of values (Quisumbing & Leo, 2005). Such a trend has increasingly put added pressure, by the governments and public, on their school systems to solve the ever increasing problem of diminishing values amongst its youth (e.g., Galloway, 2007). Values are, according to Hayward et al. (2009b) an integral part of basic education for every student.

Discussing the role of the school in values inculcation, Halstead and Taylor (2000, p. 169) comment that:

The role of the school is two-fold: to build on and supplement the values children have already begun to develop by offering further exposure to a range of values that are current in society (such as equal opportunities and respect for diversity); and to help children to reflect on, make sense of and apply, their own developing values.

A careful examination of the role of school discussed by Halstead and Taylor in the previous quotation has an implication for the entire school system. In the Bhutanese context, are our teachers and schools ready to handle this issue of values education? Are education policies conducive for the infusion of values into academic lessons? Do teachers have adequate pedagogical and philosophical orientations to teach values? Are they appropriate role models? According to Bandura's (1997) social cognitive theory, role modelling is one of the important sources of efficacy information and knowledge. Research conducted by Galloway (2007) and Lickona and Berreth (1993) also indicated that role modelling is an effective way of inculcating positive values in children. It is important that teachers practice what they teach. If teachers lack an intellectual depth, pedagogical skills and are not good role models, values education might lead to surface learning or the wrong values.

With a recommendation for a completely different approach to teaching values education for the 21st Century children, the Asia Pacific Network for International Education and Values Education (APNIEVE) (2005, p. 23) identified how values education was taught traditionally:

The traditional model of values education has placed greater emphasis on content and skills instead of developing the ability to choose and act on one's values and convictions. The traditional approach is more teacher-centred, where the educator is seen as both the possessor of

knowledge and skills (an expert), as well as the model of values (an idol). The learner adopts a more passive role, merely absorbing the material being handed down.

If this is an accurate statement, perhaps this could be one of the reasons why many values education programmes in different parts of the world may have failed. The values education programme for the 21st Century needs a major shift in its approach (APNIEVE, 2005, p. 23):

The shift is from content to process, from knowing to valuing and from a teacher to a student-centred orientation. The greater part of the learning this time will involve the *valuing process* itself where a dynamic interaction occurs within the individual learner, between learner and educator and among the learners. ... the values they profess in the cognitive level will be filtered down to the affective as well as the behavioural level.

The essence of undergoing a 'valuing process' is providing opportunities for experiential learning where children genuinely explore, express and discover freely (APNIEVE, 2005). The role of the teacher in the valuing process is to act as a guide as well as a model. How Bhutanese teachers can cope with such an educational reform is a concern, mainly because the Bhutanese education system is known for its crowded curriculum, rigid examination system and the low morale of teachers as well as its traditional approach (Maxwell et al., 2010; Royal Education Council, 2009).

Developing values in children and youth is a complex process that is unlikely to yield immediate impact. Among other requirements, teachers must be persistent and motivated for the task. Teacher persistence and motivation have been linked to the construct of teacher efficacy in that teachers with high levels of efficacy tend to exert more effort in teaching situations and tend to persist when faced with obstacles (Gibson & Dembo, 1984). There is a substantial base of research knowledge about teacher efficacy but not about the relationships between teacher efficacy and values education (Tschannen-Moran et al., 1998). To develop teachers' capacities to provide GNH Education, there is a need to understand various aspects of the programme that tend to undermine or heighten teacher efficacy.

2.2.3 Perceived efficacy beliefs

The perceived efficacy construct originated from Bandura's (1977) work on social cognitive theory (SCT). According to SCT, learning takes place through cognitive processing of information as well as social origins of much human thought and action (Bandura, 1977; Stajkovic & Luthans, 1998).

Human beings have powers to control thought processes, motivation and action. Humans' reflective

processes have the capacity to facilitate judgments, which in turn help to deal effectively with different environmental circumstances. Stajkovic and Luthans (1998) refer to these types of perceptions as self-efficacy, which they claim, has strong predictive potential. A perceived sense of self-efficacy refers to future beliefs of one's capabilities to organise and execute a specific task in a specific situation (Bandura, 1977; Stajkovic & Luthans, 1998).

Efficacy theory has been used in a wide variety of situations to predict effort exertion, persistence, actions, and coping from infancy to old age (Bandura, 2000; Caprara, Barbaranelli, Steca, & Malone, 2006; Haney et al., 2002 ; Kavanagh, 1992; Williams, 1992). In carrying out any task in day-to-day life people are sometimes efficacious and at other times inefficacious. Discussing the difference between efficacious and inefficacious people, Bandura (1977, p. 6) indicated that:

Efficacious people are quick to take advantage of opportunity structures and figure out ways to circumvent institutional constraints or change them by collective action. Conversely, inefficacious people are less apt to exploit the enabling opportunities provided by the social system and are easily discouraged by institutional impediments.

According to Bandura's (1977) social cognitive theory, individuals with a high sense of efficacy visualise successful outcomes and the ones with low sense of efficacy visualise failure. Bandura (1977, p. 518) contends that perceived efficacy "largely determines how complex things look". He further asserted: "activities that exceed perceived capabilities appear complex, whereas those that fall within the bounds of perceived capabilities are viewed as doable" (p. 518).

Bandura (1997, p. 37) cautioned that one's "skills can be easily overruled by self-doubt". Thus, irrespective of the skill level, perceived efficacy beliefs can play an overriding role in accomplishing a given task. However, perceived efficacy beliefs do not indicate actual level of competence, it is just a self-perception of competence (Tschannen-Moran et al., 1998). Bandura (1997, p. 37) further clarified that "perceived self-efficacy is not a measure of the skills one has but a belief about what one can do under different sets of conditions with whatever skills one possesses." Highly skilled individuals do not make satisfactory achievements if they undervalue their capabilities, and individuals with high sense of efficacy accomplish extraordinary outcomes even with low skill levels (Tschannen-Moran et al., 1998).

While efficacy has been employed in various forms of research, it has received increasing attention in educational research (Cheung, 2006; Dembo & Gibson, 1985; Enderlin-Lampe, n.d; Fives, 2003; Henson, 2001; Hoa & Haub, 2004; Hoy & Spero, 2005; Hoy & Woolfolk, 1993;

Labone, 2004; Looney, 2003; McCollum, Kajs, & Minter, 2005; Milson, 2003; Milson & Mehlig, 2002; Pajares, 2007; Sridhar & Badiei, 2008; Tschannen-Moran & Gareis, 2004; Tschannen-Moran et al., 1998). Principals' and teachers' self-efficacy, and also the collective efficacy of schools have been associated with a wide variety of student outcomes including achievement, motivation, students' academic goal setting and their own sense of efficacy and classroom functions including management, variety of instructional strategies, and student-centred approaches (Bandura, 1993; Caprara et al., 2006; Goddard, 2001; Milson, 2003; Tschannen-Moran & Hoy, 2001; Woolfolk & Hoy, 1990; Zimmerman, Bandura, & Martinez-Pons, 1992). Since this study involved principals, teachers and schools, a brief discussion of teacher self-efficacy beliefs (TSEB), principal self-efficacy beliefs (PSEB) and school collective efficacy beliefs (SCEB) is provided. Furthermore, sources of perceived efficacy beliefs are also discussed.

2.2.3.1 Teacher self-efficacy beliefs

The task of creating a conducive learning environment in the classroom depends on the talents and self-efficacy beliefs of teachers (Bandura, 1977). Derived from Bandura's self-efficacy theory, teacher self-efficacy belief (TSEB) refers to the future beliefs of their capabilities to accomplish a given task normally in the classroom. Like general efficacy, a teacher self-efficacy belief is task/domain and situation/context specific. For instance, an English teacher might have high self-efficacy for teaching spelling whereas his or her self-efficacy for teaching pronunciation could be very low. Alternatively, someone could be highly efficacious in teaching mathematics and inefficacious in teaching sports. Similarly, the situation or context plays a crucial role in estimating TSEB. For instance, a teacher would be highly efficacious in teaching values education in a particular time period than at other times. A robust sense of TSEB has been shown to bring about improvement in various educational practices: teacher efficacy for character education (Milson & Mehlig, 2002), teacher efficacy for moral education (Narvaez, Khmelkov, Vaydich, & Turner, 2008), teacher efficacy for mathematics (Chang & Wu, 2007; Midgley, Feldlaufer, & Eccles, 1989), teacher efficacy for teaching science (Arigbabu & Oludipe, 2010; Yenice, 2009), teacher efficacy and implementation of change (Haney et al., 2002). This line of thought indicates that teacher efficacy has been well researched and its usefulness has been well documented.

2.2.3.2 Principal self-efficacy beliefs

Principal self-efficacy belief (PSEB) plays a vital role in the normal work of the school and in any educational innovations because of their leadership role. A principal's sense of self-efficacy beliefs has been referred to as "a judgment of his or her capabilities to structure a particular course of action in order to produce desired outcomes in the school he or she leads" (Bandura 1997, in Tschannen-Moran & Gareis, 2004, p. 573). Like teacher efficacy, principal efficacy is also task and situation specific. For instance, a principal might be highly efficacious in maintaining group dynamism in the school but have a very low efficacy in fostering values to students. Smith, Guarino, Strom and Adams (2006, p. 6) comment that PSEB is "central to the creation and facilitation of an effective teaching and learning environment within a school". Discussing the importance of personal efficacy in achieving the organisational goals, Wood and Bandura (1989, p. 413) maintain that, "a robust sense of efficacy is necessary to sustain the productive attentional focus and perseverance effort needed to succeed." Leadership efficacy has been related to direction setting and to gaining followers' commitment as well as in overcoming impediments associated to change (Paglis & Green, 2002). While self-efficacy research in the educational context has been primarily focused on teachers, recently there has been increasing attention on advancing school leadership efficacy (Leithwood & Jantzi, 2008; McCollum et al., 2005; Smith et al., 2006) and also on the collective ways that efficacy can effect outcomes (Goddard, Hoy, & Hoy, 2004).

2.2.3.3 School collective efficacy beliefs

Derived from self-efficacy, there has been growing interest in understanding what has been called the perceived collective efficacy of organisations (Bandura, 1997; Chan, 2008; Goddard, 2002). Efficacy is not only related to individuals but also to groups of people working in an organisation such as schools (Bandura, 1997; Goddard et al., 2004). Bandura (1997, pp. 468-469) asserts that "perceived collective efficacy is concerned with the performance capability of a social system as a whole." According to Goddard (2002, p. 100), perceived collective efficacy of a school refers to the "perceptions of teachers [and leaders] in a school that the efforts of the faculty as a whole will have positive effects on students." A more comprehensive discussion of perceived collective efficacy of a school is summarised by Pajeres (2007, p. 20):

Schools develop collective beliefs about the capability of their students to learn, of their teachers to teach and otherwise enhance the lives of their students, and of their administrators and policymakers to create environments conducive to those tasks.

Such collective belief in schools is called school collective efficacy beliefs (SCEB). The SCEB is important to understand educational reform efforts as both teachers and administrators are equally involved in implementing the reform. SCEB helps to understand the social and organisational environment of the school. Without a high level of SCEB, reform efforts are bound to fail (Bandura, 1997).

In forming the collective efficacy of a group or school one must assess his or her own abilities as well as other group members' abilities to successfully perform a given task at a given situation (Beverly & Wray, 2008). Bandura (1997, p. 478) maintains that, "perceived collective efficacy is an emergent group level attribute rather than simply the sum of the member's perceived personal efficacies". Therefore, perceived collective efficacy can be appraised only through the individual cognitive processing of how group members interact and coordinate on a given task (Bandura, 1997). Research studies (Avolio, Zhu, Koh, & Bhatia, 2004; Chen & Bliese, 2002; Walumbwa, Wang, Lawler, & Shi, 2004) have consistently revealed that organisational commitment and collective efficacy largely depend on leadership. As in self-efficacy, collective efficacy is also situational- and task- specific (Bandura, 1997; Goddard, 2002).

2.2.3.4 Efficacy and values education related research

As discussed in the previous sections on teacher self-efficacy, principal self-efficacy and school collective efficacy beliefs there is literature to indicate that both self- and collective efficacy have been well researched in various educational contexts and domains. However, there is very limited research work on efficacy for values education particularly in relation to educational reform efforts. Three studies on self-efficacy for moral and character education (Milson, 2003; Milson & Mehlig, 2002; Narvaez et al., 2008) indicate a positive relationship between teacher efficacy and character education. If teachers have higher levels of efficacy in relation to character education, they are more likely to have a positive impact on children from implementing character education; the reverse could be true. For instance, Milson's (2003) nation-wide study in the United States of America (USA) concluded that teachers generally have a positive sense of efficacy for character education, but they doubt their abilities to offer character education for students who lack good character. Concerned

with this notion, Milson commented that for character education to be effective a teacher must believe in his or her ability as well as the ability of teachers in general to build the character of students by overcoming negative influences. These studies have also confirmed that elementary school teachers, and teachers who earned their degrees from private, religiously affiliated colleges and universities, have higher levels of character education teaching efficacy than high school teachers, and those who earned degrees from public and secular colleges and universities (Milson, 2003; Milson & Mehlig, 2002). Their studies also found that both self- and collective efficacy for character education were not related to age, qualification, grade level or teaching experience. In another study Narvaez et al. (2008) observed that, like instructional self-efficacy, self-efficacy for moral education is also related to teacher classroom behaviour and favourable student outcomes. These studies all speak clearly of the difficulty of values education, made all the more poignant in a developing country like Bhutan.

Other studies related to efficacy can be identified. One such study, namely, an unpublished doctoral thesis undertaken, by Knoblauch (2004) found that contextual factors played a role in the development of the student teachers' efficacy. Rural and suburban student teachers had significantly higher perceived collective teacher efficacy scores than urban student teachers (Knoblauch, (2004, p. ii). A study by Jones (2012) challenged the efficacy theory when her results revealed that some of the low self-efficacy intern teachers performed better in their practicum compared to their colleagues with high self-efficacy. In addition one important finding of Milson's (2003) study was that staff development training and character education conference sessions have a positive impact on teachers' sense of efficacy for character education. In another study conducted by Smith, et al. (2006) female principals reported significantly higher self-efficacy for instructional leadership than did males and principals working in larger schools scored higher self-efficacy than principals working in smaller schools. What do all these findings mean for Bhutan? Do Bhutanese principals and teachers possess robust sense of efficacy for GNH Education? Do they believe that they have adequate abilities to inculcate GNH values into their students? Do efficacy levels vary depending on the demographic variables such as gender, age, qualification, service status and nationality, level of school, size and location of the school? Despite a voluminous body of efficacy research in various educational contexts in the western culture, principals' and teachers' efficacy for GNH values education remains unexplored.

While the potential benefit of high efficacy is acknowledged, Wheatly (2002) in his theoretical article argued that teachers' efficacy doubts or low efficacy can sometimes be favourable for teachers' learning and educational reform. Jones's research with teacher interns support this when she found that under certain conditions low efficacy teacher interns made considerable effort to learn while high efficacy interns did not necessarily learn from their internship (Jones, 2012). To reiterate experiencing something new is usually difficult but if principals and teachers are committed, proactive and efficacious, they are likely to experience learning in the process of implementing GNH Education. How, then, is self-efficacy developed?

2.2.3.5 Sources of perceived efficacy beliefs

According to Bandura (1997) beliefs about personal efficacy form a major part of self-knowledge. He also reports one's sense of perceived efficacy is constructed from four core sources of information – enactive mastery experiences, vicarious experiences, verbal persuasion, and physiological and emotional states. These core sources are presented in attenuated form in the following paragraphs.

Enactive mastery experiences are the most powerful source of information for changing efficacy beliefs as they provide authentic evidence of one's performance in a given task per se (Bandura, 1997; Stajkovic & Luthans, 1998; Tschannen-Moran et al., 1998). Enactive mastery experiences are referred to as “succeeding in a challenging task” (Stajkovic & Luthans, 1998, p. 5) or “performance accomplishments” because they are based on experiences of personal mastery (Bandura, Adams, & Beyer, 1977, p. 126). Successful performance may lead to higher efficacy and unsuccessful performance may lead to lower efficacy. However, Bandura (1997, p. 81) clarifies that “performance alone does not provide sufficient information to judge one's level of capability” because other subtle factors such as resources, preconceptions of one's ability, the perceived difficulty of the tasks, support received and the amount of effort one expend can affect performance.

Vicarious experiences are another source of information for changing efficacy beliefs that are based on role modelling (Bandura, 1997). According to SCT, much human learning takes place in the social environment in which people work and live. Therefore, learning from a competent role model becomes especially important when individuals have little prior enactive experiences (Stajkovic & Luthans, 1998). Stajkovic and Luthans (1998) advise that modelling can be used as an efficacy enhancing training programme for employees. Further research in the United States has shown that an individual's efficacy level is enhanced when the model with whom the individual identifies performs

well and in contrast efficacy level goes down when the model performs poorly (Tschannen-Moran et al., 1998). Bandura (1997) also highlighted the concept of self-modelling, in which people observed their own successful outcomes in strengthening beliefs in personal efficacy.

Verbal Persuasion by someone who is trustworthy, competent, and reliable serves as an effective source of information for enhancing one's self-efficacy. One can experience a persistent sense of efficacy if significant others express confidence in one's capabilities than if they communicate some form of uneasiness in a given task (Bandura, 1997). Individuals who are verbally persuaded that they possess the required capabilities to master given tasks are more likely to put in greater effort and sustain it in the face of difficulties (Bandura, 1997). The success of persuasion to a large extent would depend on the integrity and credibility of the persuader.

Physiological and Emotional States refers to the level of physiological and emotional reactions that a person experiences in a given situation (Bandura, 1997; Tschannen-Moran et al., 1998). Circumstances such as relaxation and positive emotions can assure future success and circumstances such as increased heart and respiration rate, and trembling hands, depending on the situation can be referred to positively as excitement or negatively as stress and anxiety (Tschannen-Moran et al., 1998). While moderate levels of reaction can improve performance, high levels of reaction can lead to poor performance. However, the effects of a physiological reaction vary from individual to individual (Stajkovic & Luthans, 1998).

This section briefly highlighted the importance of understanding the nature of efficacy beliefs of school principals and teachers involved in implementing GNH Education. In implementing any challenging educational reform faithfully, change agents may experience learning through critical reflection of existing beliefs and values (Fullan, 1992; Mezirow, 2003), a notion that is further discussed in the following section.

2.2.4 Adaptive and transformative learning

GNH Education requires change in the entire education system and a transformation of assumptions, beliefs and actions amongst both change agents and those impacted by the change. Transformational learning is the process of effecting change in a "frame of reference" which has two dimensions: "habits of mind and a point of view" (Mezirow, 1997, p. 5). According to Mezirow (1997, p. 5):

Frames of reference are the structures of assumptions through which we understand our experiences. They selectively shape and delimit expectations, perceptions, cognition, and

feelings. ... We have a strong tendency to reject ideas that fail to fit our preconceptions, labelling those ideas as unworthy of consideration- aberrations, nonsense, irrelevant, weird, or mistaken.

Transformative learning occurs when assumptions and beliefs are critically examined through critical reflection and discourse resulting in autonomous thinking (Kitchenham, 2008; Mezirow, 1997). According to Mezirow (1991, p. 168) transformative learning undergoes several stages that often begin with “a disorienting dilemma” in an individual’s life followed by a critical assessment of the dilemma, exploring alternative strategies, acquisition of knowledge and skills, planning, building confidence, and implementing the new strategies. A disorienting dilemma brings in disequilibrium and dislocation in one’s pattern of assumptions and beliefs (Cranton, 1994; Mezirow, 1991). While such a challenge to deeply held values and beliefs is often painful, such process can lead to transformative learning as new ideas are developed through conscious search for alternatives and are reintegrated into one’s life (Mezirow, 1991). Such painful transformative learning needs to be accompanied by strong support (Jones, 2012). An ability to take action based upon new learning is an integral part of transformative learning (Mezirow, 1991). Albert Einstein once said, “In the middle of difficulty lies opportunity” and this idea is quite apt here because it is most often true that one learns and transforms one’s assumptions, beliefs and habits of mind from a difficult situation rather than from a familiar situation.

Transformative learning is focused on bringing radical change in the basic assumptions, which requires a shift in mindset (Appelbaum & Goransson, 1997), which is referred to as ‘double-loop learning’ (Argyris, 2002). Unexamined assumptions and beliefs can lead to undesirable outcomes as these adversely affect behaviours and actions. Mezirow (1991, p. 161) argued that:

Transformative learning involves an enhanced level of awareness of the context of one’s beliefs and feelings, a critique of their assumptions and particularly premises, an assessment of alternative perspectives, a decision to negate an old perspective in favour of a new one or to make a synthesis of old and new.

Transformative learning theory has now been increasingly applied in adult education to facilitate how adults make meaning of the world through their experiences (Cranton & King, 2003; Kitchenham, 2008; Lawler, 2003; Mezirow, 1997; Taylor, 2008). Mezirow (n.d, p. 4) further claimed “becoming critically aware of our own presuppositions involves challenging our established and habitual patterns of expectation, the meaning perspectives with which we have made sense out of our encounters with

the world, others and ourselves.” Imel (1998) asserted that it is important for human beings to understand the meaning of experience through critical reflection. Are Bhutanese principals and teachers who are implementing GNH Education able to understand the meaning of their experience or are they just implementing it because they are told to do so? Discussing about how people take things for granted, Cranton and King (2003, p. 32) reminded everyone that “in the process of daily living, we absorb values, assumptions, and beliefs about how things are without much thought” which could be also true to the context of implementing GNH Education.

Mezirow (1997, p. 5) insisted that, “in contemporary societies we must learn to make our own interpretations rather than act on the purposes, beliefs, judgments and feelings of others.” This quotation implies learning from experience that requires critical rather than adaptive reflection. Dewey (1933, cited in Jones, 2009, p. 22) observed that “critically reflective thinking emerged from the intra-personal qualities of open-mindedness, responsibility and wholeheartedness.” Do principals and teachers possess these qualities that would encourage critical reflection? If so, they are likely to develop a transformative approach to learning (‘double-loop learning’) as opposed to an adaptive approach that is ‘single-loop learning’ (Argyris, 2002; Greenwood, 1998; Jones, 2009).

In the adaptive approach, which is basically corrective learning, learners maintain the status quo and are basically technically and factually focused with lower levels of analysis and synthesis (Appelbaum & Goransson, 1997; Jones, 2009). Here, discrepancies between the outcomes of actions and intended goals are taken at ‘face value’ and learning focuses on what one should do to ‘close the gap.’ In ‘double-loop’ transformative learning, critical reflection and discourse play a central role that convinces the need for transformation of long held assumptions and beliefs. Transformative learning does not take performance-goal incongruities for granted and works to question the platforms on which actions, performance and goals are based upon critical reflection. Transformative learning helps to make deep sense of an experience, which ultimately promotes transformation of beliefs and practices. Many principals and teachers implementing GNH Education would need to enhance their self-efficacy as they experience transformation in their beliefs, actions and performance. It is important for the principals and teachers to develop a deeper awareness of their own ‘frames of reference’ and how these help shape practice, to foster change in their students (Taylor, 2008). Similarly, many schools would have to develop their collective efficacy. Otherwise, not much change will take place in the present reform (Bandura, 1997; Fullan, 1996). The current study also examined whether principals and teachers were following adaptive or transformative

approach to learning (Jones, 2009; Mezirow, 1991), which would have impact on their self- and collective efficacy levels.

2.2.5 Dynamics of educational reform

Alongside Bandura's work concerned with efficacy, and even the work on transformational learning, the educational change literature indicates that reform efforts are often complex. Change agents encounter resistance, anxiety, and confusion due to lack of skills, attitude, collaboration, support, confidence, materials and ownership from change agents (Fullan & Stiegelbauer, 1991). Fullan and Stiegelbauer argued that educational change agents, such as principals and teachers, find it difficult to cope with change because they work within their own beliefs, values, and practices, many of which have been developed and reinforced over time (see also Sherab, 2001). That is, the process of changing the work culture, and so the collective efficacy, has been often painful for principals and teachers (Bridges, 1991; Hargreaves, 2002). These factors can obstruct transformational learning. It is likely that experiencing such difficulties would lower the efficacy levels of principals and teachers for GNH Education, consequently impeding the implementation of GNH Education.

Indicating the power and influence of school principals, Tompkins (personal conversation, 2000) states, "as is the principal, so is the school", that is, what principals value or believe has a strong influence on the school. The findings of four authors have also confirmed that a principal's action serves as a message as to whether a change in the school is to be taken seriously or not (Fullan & Stiegelbauer, 1991; Tschannen-Moran & Gareis, 2004). Ideas expressed by the authors indicate that if principals do not convey some seriousness in the reform effort, other change agents, such as teachers, would not make as much effort. Therefore, the role of Bhutanese principals in raising the self-efficacy of teachers is important. Recognising the important role principals play in school reform, Tschannen-Moran and Gareis (2004, p. 573) asserted: "efforts to improve schools increasingly look to the principal to spearhead change efforts at the school level. It is widely accepted that good principals are the cornerstones of good schools." Wahlstrom and Louis (2008) also indicate that principal leadership is crucial for building trust and a sense of community, providing opportunities for taking risk, valuing shared decision making, and creating greater motivation among its members. A concern arises with regard to the level of seriousness of Bhutanese principals in their approach to implementation of GNH Education. Is their thinking congruent with that of the government and its leaders? If a significant number of the principals deviate and/or have different

opinions, the fate of GNH Education is likely to be at risk. Or, more importantly: do they fully understand GNH Education and what it looks like in schools?

Equally important to principals in implementation of GNH Education, or for that matter any educational reform, are the efforts of the teachers. The changing education system has impact on the work of teachers (Lang, Oslon, Hansen, & Bunder, 1999; Sarason, 1996). It is fundamental that implementers of educational reform understand the work culture of teachers. When change occurs in schools it is teachers who are directly or indirectly affected. Fullan and Stiegelbauer (1991, p. 117) maintain that, “educational change depends on what teachers do and think - it’s as simple and as complex as that.” Educational reforms that do not consider the important role teachers play in change are often met with resistance (Fullan, 1992). Learning from the past implementation of educational reform efforts in Bhutan, it is important that such reform efforts need to win the hearts and minds of teachers (Sherab et al., 2008). Winning the hearts of teachers involves, amongst others, developing the right kind of attitude, provision of necessary resources, enhancing confidence levels and their skills based on GNH Education reform. Research (Royal Education Council, 2009; Sherab et al., 2008) in the Bhutanese education system has shown that some reform efforts have failed because most often social complexities have not been adequately considered. It is imperative to understand the self-efficacy of principals and teachers and school collective efficacy for GNH Education to build on the existing strengths and to address the possible difficulties, if any.

Various educational research projects have ascertained that the efforts to understand teachers’ sense of efficacy (Wheatley, 2002) and principals’ sense of efficacy (Tschannen-Moran & Gareis, 2004) benefits educational reform. This idea is based on the notion that high efficacy or efficacious teachers and principals are likely to put in greater effort and persistence in spite of difficulties and low efficacy or inefficacious teachers and principals are likely to put in less effort and give up easily in the face of difficulties (Tschannen-Moran et al., 1998; Wheatley, 2002, p. 7).

2.2.6 Summary of the theoretical background

Bandura (1997, p. 466) contends that while self- and collective efficacy are similar constructs, they differ in the unit of agency. There is ample evidence to show that perceived efficacy of those involved in educational change, transformative learning theory and reform efforts are related (Cranton, 1994; Evers et al., 2002; Guskey, 1988; Tschannen-Moran & Gareis, 2004; Wahlstrom & Louis, 2008; Wheatley, 2002). For instance, Wahlstrom and Louis (2008, p. 466) indicate that, “as

educational reforms are initiated in schools, feelings of efficacy may shape teachers' willingness and preparedness to adopt reform strategies." Guskey's (1988) study also found that efficacious teachers are receptive to implementation of new instructional practices and inefficacious teachers less receptive. If change agents do not question, examine, and are unconscious of their assumptions and beliefs, the likely result may be a limitation to the "openness to change, growth and personal development" (Cranton, 1994, p. 30). Educational reform efforts, therefore, are likely to thrive only if the change agents such as principals and teachers are individually and collectively efficacious and undergo transformation of their assumptions, beliefs and actions.

There is evidence to show that teachers with high sense of self-efficacy are more adaptable, enthusiastic, committed to teaching (Ghaith & Yaghi, 1997) and willing to experiment and implement new educational practices (Evers et al., 2002). However, researchers of efficacy beliefs have to be cautious as the positive relationship of high efficacy and better performance or low efficacy and poor performance is challenged by the findings of Jones as shown by a recent research (Jones, 2012). Jones (2012) further concluded that classroom autonomy for the intern teachers and interns in a problematic situations who received high levels of support and guidance from mentors were found to have undergone transformative learning. Autonomy can sometimes foster creativity and allow risk taking, which are crucial for implementing GNH Education. Reform efforts often fail if change agents are deprived of conducive environments for taking risks (Fullan, 1996), which is often the case in the Bhutanese education system (Sherab et al., 2008).

Experts in efficacy research show that as change is implemented it is normal to expect a "temporary dip in efficacy" (Tschannen-Moran et al., 1998, p. 238), which Fullan (1992, p. 25) termed an "implementation dip." Implementing change in any given system is likely to cause disequilibrium in the system. Disorders and disequilibrium that results from change initiatives are sources of order and balance (Fullan, 1999). It is only when change agents encounter difficulties that they carefully look for solutions, attempting to bring new meanings to an effort.

Therefore, at the initial stage, GNH Education change agents such as principals and teachers are likely to experience disequilibrium and a dip in efficacy. It is imperative that timely support, encouragement and due attention are provided to raise their efficacy levels. Dealing with change requires a creative strategy (Mezirow, 1991), which is easy for some and difficult for others (Cranton, 1994). Together with support and guidance some form of pressure from the leadership is critical for making the innovations successful (Fullan, 1992; Guskey, 1988). Tschannen-Moran, et al. (1998, p.

238) claim that the “development of a strong sense of efficacy can pay dividends of higher motivation, greater effort, persistence, and resilience across the span of a teaching career.” It is of paramount importance to nurture the capabilities of change agents that would raise the efficacy levels that is a prerequisite to successful implementation of innovations. Change agents’ sense of efficacy is one of the best predictors of their willingness to adopt new reform movements (Evers et al., 2002; Ghaith & Yaghi, 1997). High efficacy is also critical for principals and teachers, as it is likely to build confidence to challenge their assumptions and beliefs through critical reflection.

Various studies have revealed that efficacious people and organisations set higher goals and are much firmer in their commitment (Bandura, 1989; Locke, Frederick, Lee, & Bobko, 1984). As discussed in a previous section such efficacious people have the potential to undergo transformative learning through making meaning in their experiences while inefficacious people are more likely to be satisfied with the status quo. Therefore, change agents are likely to attempt to make things happen only if they believe that they are efficient and confident to accomplish a given task. On the other hand, if change agents’ self-efficacy on a given task is low, they are likely to give up without much effort (Bandura, 1997) narrowing down the possibility for transformative learning. To make educational innovations meaningful, change agents have to undergo transformation without which change is likely to remain superficial. Furthermore, Sikes, (1992, p. 2) argues that:

Real change should take place with transformation of the beliefs, values, and ideologies held by teachers that inform their pedagogical assumptions and practices. This lies at the heart of real change and without transformations we have innovation without change.

Similarly, Leithwood and Jantzi (2008, p. 501) comment that, “weakly held efficacy can be easily extinguished when change agents face difficulty.” Therefore, it is vital that change agents hold strong efficacy beliefs. Strong efficacy among change agents can be promoted by adequately addressing the four sources of Bandura’s efficacy information – enactive mastery experience, verbal persuasion, vicarious experience and positive emotional states as elaborated in section 2.2.3.5 of this chapter.

The design of the conceptual framework for the study showing how these three interrelated theories of perceived efficacy beliefs, transformative learning and dynamics of change can negatively or positively impact GNH Education in the Bhutanese education system is provided in the next section.

2.3 Conceptual framework

A framework (see Figure 2.2) showing the relationship between perceived efficacy beliefs of principals and teachers for GNH Education, transformative learning and educational reform, which has been adapted from Tschannen-Moran and colleagues' teacher efficacy model (1998), Goddard's (2002) collective efficacy model and Goddard, Hoy and Hoy's (2004) model of collective teacher efficacy, indicates that both self- and collective efficacy beliefs are estimated, based on the same sources, (mastery experience, verbal persuasion, vicarious experience and physiological arousal), have the same functions and operate through similar processes. Transformative and adaptive approaches to learning (Jones, 2009, 2012; Mezirow, 1991) have also been incorporated into the framework to show the inter-relationship between perceived efficacy beliefs, learning approaches and educational reform that forms a major part of this study (see section 2.2 for detailed explanation of each of these concepts).

As indicated in the framework, the appraisal of both self- and collective efficacy by the principals and teachers takes place after a careful analysis of the nature of GNH Education reform and its vision in conjunction with the self-assessment of both personal and professional competence as well as resources related to the implementation of GNH Education reform. In analysing the nature of GNH Education and its vision for the future, the relative importance of factors that make leadership as well as teaching for principals (as most of them are also required to teach a few lessons in a week) and teaching for teachers either, easy or difficult, are weighed against an assessment of the available resources (Tschannen-Moran & Gareis, 2004; Tschannen-Moran et al., 1998) coupled with one's philosophical and theoretical underpinnings. These authors also maintain that in assessing personal and professional competence, the principals and teachers assess their capabilities in terms of skills, knowledge, strategies, or personality traits balanced against personal weaknesses in a particular school setting, which is GNH Education in the context of the present study. The analysis of the GNH Education task and assessment of both personal and professional competence related to implementation of GNH Education largely depends on whether the four sources of Bandura's efficacy information were adequately addressed or not prior to the nation-wide implementation of the programme.

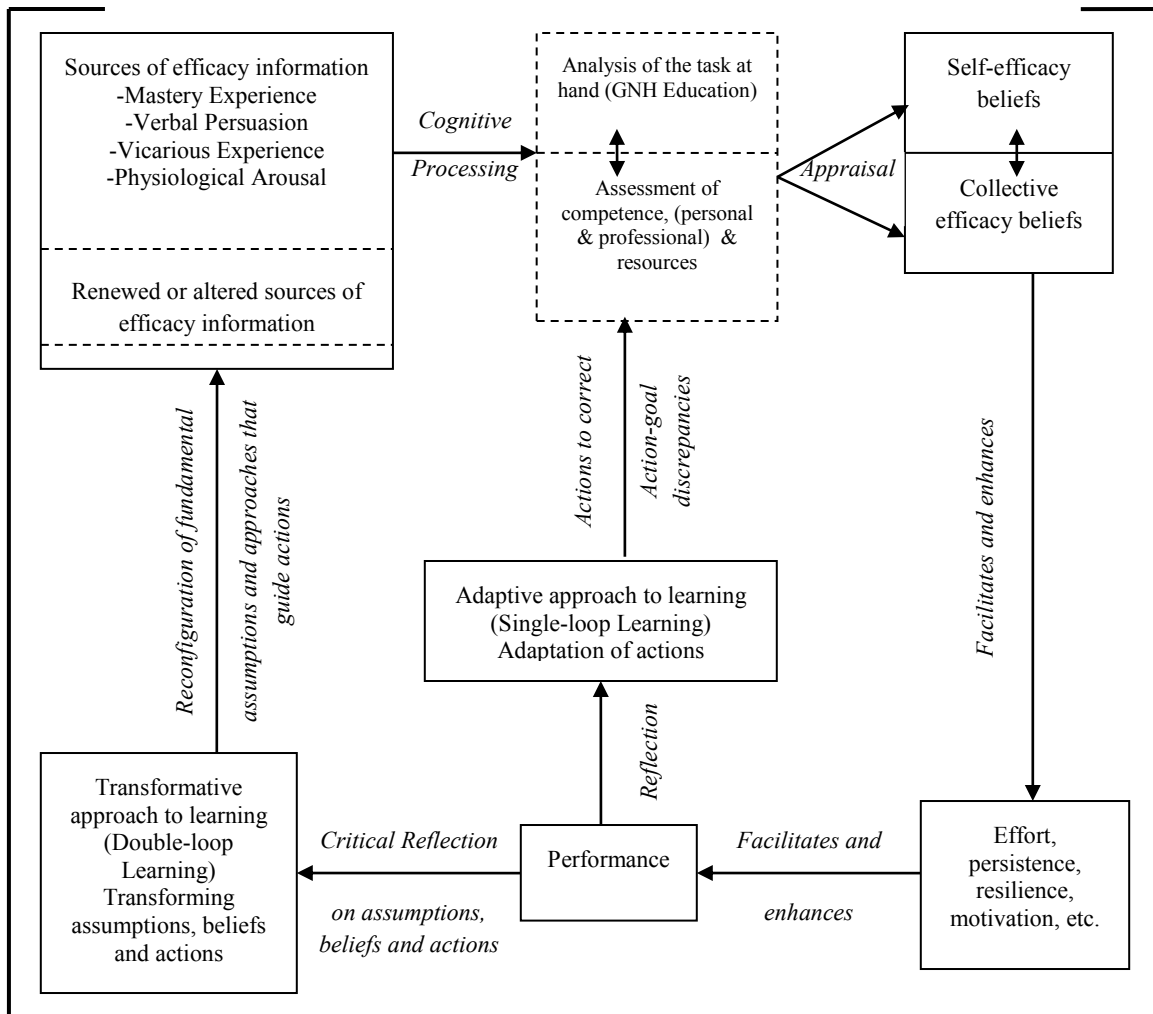


Figure 2.2 A framework showing inter-relationship between perceived efficacy beliefs for GNH Education, transformative learning and educational reform (adapted from Tschannen-Moran and colleagues (1998), Goddard (2002) and Goddard, Hoy and Hoy (2004))

Implied in Figure 2.2, principals and teachers involved in implementing GNH Education are likely to experience transformative learning or ‘double-loop learning’ through a process of critical reflection and discourse on their assumptions, beliefs and actions about GNH values and principles. Transformation that principals, teachers and schools experience will help to reconfigure their fundamental assumptions and approaches that guide their actions. Such transformative experience will provide renewed or altered sources of efficacy information that will further shape their self- and collective efficacy beliefs for GNH Education.

On the other hand, principals and teachers who do not challenge their assumptions, beliefs and actions about GNH values and principles are likely to take a shorter route following adaptive

approach to learning which is ‘single-loop’ (see Fig. 2.2) or, according to Jones (2009), may lead to no learning at all rather just a simple reinforcement of what is already known/believed. While adaptive learners do make changes and modifications to practices and “existing concepts to address incongruities and dilemmas, they also simultaneously maintain existing schema of frames of reference” (Jones, 2009, p. 21). As discussed in the ‘theoretical background’ section, without any change in principals’ and teachers’ ‘frames of reference’, (that is their ‘habits of mind’ and ‘a point of view’) not much of GNH Education is likely to take place.

Thus this study was intended to examine the efficacy beliefs of principals and teachers involved in implementing GNH Education through two over-arching research questions and a total of twelve sub-questions.

2.3.1 Over-arching research questions

- What are the principals’ and teachers’ efficacy beliefs for GNH Education in Bhutanese schools? And
- What are the principals’ and teachers’ lived experiences for GNH Education in Bhutanese schools?

2.3.2 Research sub-questions

Research sub-questions related to the first over arching question:

Research sub-questions related to School Collective Efficacy Belief (SCEB) for GNH Education

1. What levels of collective efficacy beliefs for GNH Education do schools hold?
2. Is there a statistically significant difference in SCEB based on school characteristics such as school level, location, size, system and type?
3. Is there a statistically significant difference in SCEB between schools in terms of common principal and teacher self-efficacy, their perceptions of importance of GNH Education, support systems, and actions and impacts components?

Research sub-questions related to comparison of principal and teacher samples

4. Is there a statistically significant difference in the perceptions of GNH Education as measured by common indicators of self-efficacy, importance, support systems and actions and impacts between principals and teachers based on various demographic characteristics (school location, level, gender, type, system, qualification, their years of

experience, age, length of time in the school, teaching subject/s, teaching class and religion)?

Research sub-questions related to principal sample-specific components

5. What levels of perceptions do principals hold with regard to principal sample-specific components?
6. Is there a statistically significant difference in the principal perceptions of principal sample-specific components based on various demographic characteristics (level of school, location of school, size of school in terms of number of teachers and number of students, years of experience, gender, age, qualification, teaching subject/s, length of time in the school, service status, nationality and religion)?

Research sub-questions related to teacher sample-specific components

7. What levels of perceptions do teachers hold with regard to teacher sample-specific components?
8. Is there a statistically significant difference in the teacher perceptions of teacher sample-specific components based on various demographic characteristics (level of school, location of school, size of school in terms of number of teachers and number of students, years of experience, gender, age, qualification, teaching subject/s, length of time in the school, service status, nationality and religion)?

Research sub-questions related to prediction of Principal-Teacher Actions, Principal-Teacher Impact, and Student Impact for GNH Education

9. Do demographic variables and common components of self-efficacy belief, school collective Efficacy belief, perceptions of importance for GNH Education, and perceptions of support system for GNH Education predict Principal-Teacher Actions, Principal-Teacher Outcomes and Student Outcomes scores for GNH Education? Which variables and components are better or worse predictors?

Research sub-questions related to the second over arching question:

1. What are some of the programmes initiated by the schools to implement GNH Education?
2. What are some of the factors that facilitate or hinder the implementation proves of GNH Education? and
3. Are there any contradictions between principals' and teachers' beliefs and their practices?

2.4 Chapter summary

This chapter based around the theoretical background and conceptual framework provided discussion related to the concept of GNH including its four pillars, nine domains and indicators, followed by the concept of values and values education. As this study pertinent to GNH Education was grounded on the three interrelated constructs of perceived efficacy beliefs, transformative learning and dynamics of change – a review of literature related to these three constructs, and how the conceptual framework has been developed, leading to the design of research questions that guided this study about the process of implementing GNH Education in the Bhutanese schools, were provided. The next chapter provides a detailed discussion concerning the overall methodology employed in this study.

CHAPTER THREE: METHODOLOGY

3.1 Chapter introduction

In Chapter Two a discussion of the theoretical background leading to the design of conceptual framework based on three interrelated constructs of perceived efficacy beliefs, transformative learning and dynamics of educational reform in the context of GNH Education were presented. This chapter presents a detailed discussion of the methodology that was employed to address the research questions presented in the previous chapter. In particular the focus is on the paradigm choice and research design, data gathering strategies, measurement scales, validation and reliability of the measurement, sampling strategies, approaches to data analysis, gaining access and addressing ethical issues.

Considering the nature of this issue and the research questions, it was considered that the issue could be best addressed through a combination of both the positivist and constructivist paradigms. More specifically it was appropriate to adopt an exploratory sequential mixed methods design (Cooksey & McDonald, 2011; Creswell & Clark, 2011; Tashakkori & Teddlie, 2003) commencing with a quantitative survey designed to measure the self-efficacy of principals and teachers, collective efficacy of schools, their perceptions of importance of GNH Education, support systems and actions and impacts in the first phase. In the second phase, more in-depth qualitative case studies of two ‘efficacious’ (in terms of collective efficacy beliefs) and two ‘inefficacious’ (in terms of collective efficacy beliefs) schools were employed. Each phase is aligned to a specific research question as shown in Figure 3.1. The phases are further explicated later in this chapter.

3.2 Paradigm choice

Positivists pursue an understanding of cause and effect relationships. Research in the positivist tradition is very much structured (Cooksey & McDonald, 2011; Firestone, 1987) and the process usually relies on gathering large scale numerical data aiming to generalise the findings to a population. In contrast multiple ways of interpreting experiences is considered important by the interpretivists (Cooksey & McDonald, 2011). Interpretivists attempt to understand human behaviours through investigation of participants’ lived experiences and the approach is usually much more loosely structured and adaptive. Each of these schools of thought has its own advantages and disadvantages.

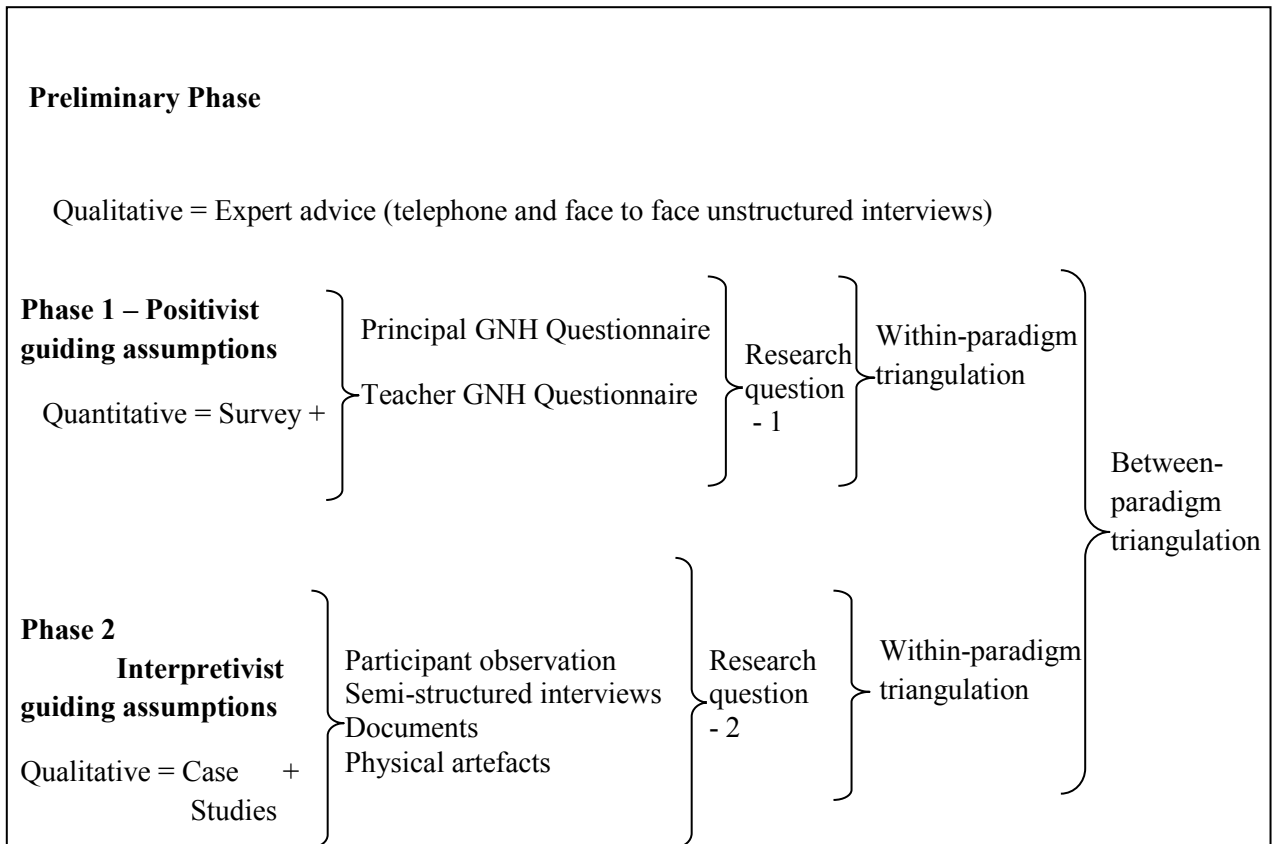


Figure 3.1 An overview of paradigm choice, research design and data gathering strategies

There has been a growing interest in mixing approaches and methods in educational and social science research (Bryman, 2006; Cooksey & McDonald, 2011; Creswell, 2009; Johnson & Onwuegbuzie, 2004; Neuman, 2003; Punch, 2001). Discussing the methodological justification for incorporating the interpretive/constructive and positivistic perspectives in research, Punch (2001, p. 245) states that, “at a general level, the reasons for combining are to capitalise on the strengths of the two approaches, and to compensate for the weaknesses of each approach.” Integrating the two paradigm perspectives for this particular study was of value in order to measure efficacy beliefs in the best ways possible and capture lived experiences of principals and teachers. This approach provided opportunities for both within-paradigm and between-paradigm triangulation, strengthening the credibility of the research.

Educational research concerning self- and collective efficacy beliefs has been largely dominated by the positivist paradigm and very little has been undertaken from the point of view of the interpretivist perspective (Labone, 2004; Pajares, 1992; Tschannen-Moran et al., 1998). As

discussed in Chapter Two, Bandura's self- and collective efficacy constructs are domain and context specific. Therefore, efficacy research that neglects the interpretivist perspective is likely to be incomplete as it ignores context specific information and is immune to participants' views on the question/meaning/implications of efficacy. Moreover, transformative learning processes can be best assessed through in-depth case studies (Cranton & King, 2003). On the other hand, neglecting a positivist perspective, particularly for this study, would have been inappropriate as the current study involved an educational innovation that was implemented at the national level. As a minimal amount of research has been carried out pertinent to efficacy beliefs in the Bhutanese context, it was appropriate to employ a multi-paradigm perspective that could provide more general as well as in-depth perspectives on the situation for the GNH Education implementation process.

3.3 Research design and data gathering strategies

This study was designed to expand and enrich understandings of efficacy beliefs and transformative learning in regard to implementation of GNH Education in the Bhutanese context. This study has been well timed as the schools commenced their second year of implementation process. The research was carried out in three distinct phases— preliminary phase, phase 1 and phase 2 with a range of data gathering strategies (see Figure 3.1).

3.3.1 Preliminary phase – Unstructured interviews

As Bhutan is a relatively small country this study provided an opportunity to begin with a preliminary phase where the researcher conducted face-to-face unstructured interviews with some experts such as Education Monitoring Officers, Curriculum Officers and other Ministry of Education Officials, to ascertain if there were some schools that have been performing relatively well or others which were performing poorly in implementing GNH Education. The preliminary phase unstructured interviews were basically conducted face-to-face to identify potential schools based on expert judgement for both phase 1 survey and phase 2 case studies. The discussions also provided on-the-ground general impressions of the implementation of GNH Education in schools. A brief discussion of the two main research design elements employed in this research is provided next.

3.3.2 Phase 1– Quantitative Survey

The survey has been one of the most commonly used methods in social research capable of collecting a large amount of quantifiable data for a number of variables at a given time (Neuman, 2003; Punch, 2001; Robson, 2002). A survey using self-administered questionnaires (one for the principals and the other for teachers) was the most appropriate method for this study as implementation of GNH Education was a nation-wide programme involving a population of 547 schools with over seven thousand teachers (referred to as ‘teacher questionnaire’ for this study) and more than one thousand principals including vice principals, assistant principals and officiating principals (referred to as ‘principal questionnaire’ for this study). Vice principals and assistant principals were included as a part of the principal sample because they also “shouldered” important leadership roles in their schools (for sampling strategy, see p. 65).

3.3.3 Phase 2– Qualitative Case studies

Phase two of this study employed qualitative case studies for eliciting in-depth contextualised understandings of efficacy beliefs of principals and teachers including their perspectives on the importance, support systems, and actions and impacts, of GNH Education. Case studies were also aimed at exploring evidence of any transformation of principals’ and teachers’ assumptions, beliefs and actions experienced in implementing GNH Education (see Fig. 3.1, phase 2, p. 52).

According to Burns (2000, p. 459) a case study involves the “observation of an individual unit, e.g. a student, a delinquent clique, a family group, a class, a school, a community, an event, or even an entire culture”. This unit is usually bounded in some way, so a study of a school can be considered a case study. This design, within the resources available to the researcher, provided the opportunity to observe four case study schools; two identified as ‘efficacious’ and two identified as ‘inefficacious’ in terms of collective efficacy beliefs related to influencing values development in students through role modelling. Two of the four case study schools (one with ‘efficacious’ beliefs and one with ‘inefficacious’ beliefs) were selected on the basis of the school collective efficacy ratings data gathered during the phase one survey. The other two schools (one with ‘efficacious’ beliefs and one with ‘inefficacious’ beliefs) were selected based on expert advice sought during the preliminary phase (detailed selection process is described under the sampling section 3.6 found later in this chapter).

Cohen, Manion and Morrison (2011, p. 253) claimed that, “case studies can penetrate situations in ways that are not always susceptible to numerical analysis.” Therefore, the case studies in phase two addressed the lived experiences of principals and teachers in the school as a whole in their natural setting in order to enrich and understand the whole process of implementation of GNH Education in the schools. This employment of case studies facilitated the collection of rich, holistic and contextually based data for deeper understanding of the principals’ and teachers’ efficacy beliefs for GNH Education and how these related to their perceptions of importance of GNH Education and its impacts, the support systems available and their own actions.

Semi-structured interviews and participant observations were the main data gathering strategies used for each of the case studies that addressed research question 2. Semi-structured interviews (see **Appendix 3.3** for the interview guide that was specifically designed for this study) were employed to elicit in-depth contextual information about the GNH Education implementation process. Two teachers and a principal from each of the four case study schools were interviewed at convenient times and locations (sampling process is described on p. 68). Each interview was conducted over a time period of approximately half an hour to one hour to complete. A total of four principal and eight teacher interviews were conducted across the four cases. Furthermore, all the eight teachers were observed during two teaching lessons, each selected on a random basis in order to avoid observing a lesson especially prepared for the researcher.

Teacher participants introduced the researcher to the class as a Doctoral student carrying out research. The researcher remained seated at the back of the class for the entire lesson. Observation notes were maintained in a form that was specifically designed for this research (see **Appendix 3.4**) and these focused on identifying GNH values discussed in the class (if any) while teachers taught their own academic subject/s, identifying strategies used to present the value/s, learning activity/ies provided to the students and observing their reactions and responses/commitments as a result of learning new values consistent with GNH Education.

Interviews were recorded using a digital recorder and the researcher carried out verbatim transcriptions of both the questions and the responses provided by the participants. Transcripts of each participant were maintained in a separate word file. Upper case letter ‘Q’ was used for the question asked by the researcher and upper case letter ‘R’ indicated the response provided by the research participant. As recommended by Cooksey and McDonald (2011, p. 488) anomalies such as unclear or inaudible words were coded as ‘()’ and ‘>Acme<’ for school pseudonym. Demographic

details of case study participants such as gender, qualification, teaching subject and years of teaching experience were maintained in the lesson observation form. Transcripts of principal and teacher interviews were provided by email for participants to check if the interviews were transcribed correctly as indicated by each participant. All participants were encouraged to either provide additional information or delete any information that they did not mean to share. Eight participants returned the transcripts without any changes while four participants did not respond.

Field notes were also maintained throughout the case study process to record observational and contextual data and the researcher's thoughts. All field notes amassed during the case study period were transcribed for analysis. Additionally, some secondary sources pertaining to GNH Education, such as seminar papers, documents and photos of physical artefacts and environmental surroundings, were gathered and analysed.

3.4 Survey instruments

Two separate self-administered questionnaires, one for sampling principals' responses (see **Appendix 3.1**) and the other for sampling teachers' responses (see **Appendix 3.2**) were designed to address the first overarching research question and its nine sub-questions. A total of 66 principal response items and 57 teacher response items in the two questionnaires were developed by the researcher, while another 27 principal sample items and 33 teacher sample items were based on efficacy scales of Dykes, (2007), Milson, (2003), Milson and Mehlig, (2002) and Narvaez et. al. (2008) (see **Appendices 3.1 & 3.2** for individual item source). Questionnaires were designed to illuminate the perceptions of principals and teachers for GNH Education as measured by self-efficacy beliefs, school collective efficacy beliefs (see Fig. 3.1, phase 1, p. 52), perceptions of importance, perceptions of support systems, and perceptions of actions and impacts.

Each questionnaire contained items grouped into five scales preceded by demographic items. The survey design in both the questionnaires consisted of:

1. scale A items gathered ratings of self-efficacy beliefs for GNH Education;
2. scale B items gathered ratings of school collective efficacy belief for GNH Education;
3. scale C items gathered ratings of importance of GNH Education;
4. scale D items gathered ratings of support systems for GNH Education; and
5. scale E items gathered ratings of the actions and impacts of GNH Education.

The principal questionnaire comprised of altogether 93 items and teacher questionnaire consisted of 90 items. There was a total of 50 common items between the principal and teacher questionnaires. The development of the scales is presented in the following paragraphs. Consistent with those employed in the original design of each scale, respondents used a five-point, “strongly disagree” to “strongly agree” Likert-type scale with a neutral point at the centre (neither disagree nor agree) to respond to each of the items in all of the scales. A “Not Applicable” category was also added to avoid confounding inability or unwillingness to give a response with a genuinely neutral “neither disagree nor agree” sentiment (Cooksey & McDonald, 2011). Each of the five scales in both the questionnaires was followed by a prompted blank space for open-ended comments (i.e. ‘please add any other comments you would like to make on scale A’...). Respondents required an average of 30 minutes to complete the questionnaires.

Both questionnaires were pilot tested at a middle secondary school in Bhutan. This pilot school was a relatively large school with more than one thousand students from pre-primary to grade 10. One male principal and two female vice principals and 23 teachers (4 male and 19 female) at this school participated in the pilot testing process. All the participants were briefed on the intended purpose of the research as well as on the pilot testing process and were urged to provide feedback and suggestions with regard to the overall design and quality of the instruments.

3.4.1 Demographic items

Demographic items specifically designed for this study preceded the Likert-type rating items in both the principal and teacher questionnaires. Demographic characteristics assessed included – gender, age, type of school, highest qualification, religion, teaching subjects, grade level at which they taught, and length of time in their current school. Demographic characteristics such as current role (principal or vice principal or officiating principal), principalship or vice-principalship experience, number of teachers in the school, and number of students in the school were exclusive for the principal sample. Service status and nationality were the two teacher specific demographic characteristics assessed, as at the time of the research, all principals in Bhutanese schools were Bhutanese nationals. Level of school (community primary and primary – pre-primary to grade 6; lower secondary – grades 7 and 8; middle secondary – grades 9 and 10; and higher secondary – grades 11 and 12) and geographical location (urban, semi-urban and rural) of the school were two common demographic characteristics that were pre-coded by the researcher to maintain uniformity. This strategy avoided the risk of getting

different locations from respondents of the same school. While the Bhutanese education system was structured according to the levels stated previously, these levels were not very strictly applied. For instance, there were many lower secondary schools with children starting from pre-primary and going on to grade 8. Likewise, there were also some middle secondary schools with children from pre-primary to grade 10 and higher secondary schools from grades 7 to 12. To minimise any potential complications the original four levels of schooling were collapsed into two categories (detailed discussion is provided in the next chapter) as secondary schools (consisting of lower, middle and higher secondary schools) and primary schools (consisting of primary and community primary schools). Some of the demographic characteristics were suggested by the literature (discussed in Chapter Two) and some were used for exploratory purposes to determine if there were any similarities or differences in the efficacy beliefs and experiences of GNH Education.

Based on the feedback from the pilot test, some minor modifications to the demographic items in both the instruments were made. For instance, the demographic item, “presently you are teaching class/es” was reduced to two categories, “Pre-Primary – grade 6” and “grade 7 - 12” from the initial 13 categories (each grade level was one category). A third category termed “both” was also added as there were teachers and principals teaching at both the levels of Pre-Primary – grade 6 and grades 7 - 12. The pilot school was excluded from the main sample for this study.

3.4.2 Principal and teacher self-efficacy for GNH Education scales

Principal Self-Efficacy Beliefs (PSEB) was assessed using 24 items and Teacher Self-Efficacy Beliefs (TSEB) with 23 items. Most of the self-efficacy items were worded identically between principal and teacher questionnaires except for four principal- and two teacher-specific items. It should be noted that all principals and vice /assistant/officiating principals in the Bhutanese schools were required to teach a specified number of hours and their degree of involvement in teaching varied from school to school depending on whether or not they had an adequate number of teachers. Where there were shortages of teachers, Principals taught almost full time. Consequently items relating to teaching were deemed to also be appropriate for them. All principal and teacher self-efficacy items were designed to investigate beliefs about their own abilities in the leadership role, as well as teaching GNH Education. Therefore, consistent with past research concerning self-efficacy beliefs, each of the items used the first person referent “I” (Gibson & Dembo, 1984; Milson & Mehlig, 2002).

The role-specific sample items in the principal questionnaire were: “I have been able to lead the development of a clear vision for implementation of GNH Education in this school” and “I have the knowledge needed to lead teachers in promoting GNH values”. A specific self-efficacy sample item in the teacher questionnaire was: “I can freely express my opinion on importance of GNH Education related matters in the school.” Examples of common self-efficacy sample items derived and adapted from other studies were, “I am able to influence the values of students because I am a good role model” and “I usually find it easy to encourage a student to understand that respect for others is important” (Milson & Mehlig, 2002) and “I know how to create GNH values lessons that hold my students’ interest” (Narvaez et al., 2008).

3.4.3 School collective efficacy beliefs scales

School Collective Efficacy Beliefs (SCEB) was assessed using 15 items for principals and 17 items for teachers to answer. Collective efficacy items were designed to investigate teachers’ and principals’ beliefs about their school’s collective ability (across all teachers and/or principals) to successfully implement GNH Education. Consequently, collective efficacy items in the teacher questionnaire mainly used the third-person referent *teachers* and principal questionnaire mainly used third person referent *schools* (Gibson & Dembo, 1984; Milson & Mehlig, 2002). A sample SCEB item in the teacher questionnaire was: “when a problematic student is improving, it is usually due to extra attention provided by the teachers in this school” and a sample SCEB item in the principal questionnaire was: “If students are kind, it is often because schools have sufficiently modelled this value (Milson & Mehlig, 2002).

3.4.4 Principal and teacher perceptions of importance of GNH Education scales

Principal perceptions of the importance of GNH Education were assessed using 22 items and teacher perceptions with 24 items. Five principal and six teacher items in this category were utilised from Dykes (2007) scale that was designed to measure educators’ perceptions of character education in terms of importance, efficacy and practice in the United States. These items were designed basically to assess the level of importance principals and teachers attached to the implementation of GNH Education in Bhutanese schools and to further investigate if there were any links with efficacy beliefs, support systems, and actions and impacts scales. Examples of the importance of GNH Education items were: “In the process of learning GNH values students will be able to avoid greed

and too much selfish desires,” “The GNH Education has the potential to improve students’ academic achievement” and “I do not consider GNH Education to be an extra teaching burden for me.”

3.4.5 Principal and teacher perceptions of support systems for GNH Education scales

Perceptions of the support systems for GNH Education were established using 17 items for principals and 14 items for teachers. All the items in these scales were developed by the researcher to measure the perceptions of principals and teachers with regard to the level of support systems in place to assist in implementing GNH Education. There were 10 principal and five teacher role-specific items such as “the support from Department of Curriculum and Research Development (DCRD) facilitates my leadership in implementing GNH Education” (Principal questionnaire) and “we have a supportive leadership in our school for GNH Education” (Teacher questionnaire). Examples of the common support systems for GNH Education items were “parents should take more responsibility in promoting GNH values” and “this school gets good support from Education Monitoring and Support Services Division (EMSSD) to implement GNH Education.”

3.4.6 Principal and teacher perceptions of actions and impacts of GNH Education scales

Perceptions of actions and impacts for GNH Education programme were assessed using 15 principal items and 12 teacher items. All the items in these scales were developed by the researcher to assess the perceptions of their actions in the GNH Education programme and measure impacts of GNH Education in the school. A sample item related to principal and teacher actions was: “I have established a high priority for promoting GNH values in my school.” Examples of other items related to impact of GNH Education were: “in the process of teaching GNH values I have been able to question some of my own beliefs and assumptions about values” and “in the process of teaching GNH values my students have been able to change some of their own actions and practices.”

3.4.7 Validity and reliability of the measurement scales

Validity and reliability are the two most indispensable dimensions of measurement quality in good research guided by positivist paradigm assumptions. Any measurement that is invalid and/or not reliable is not worth pursuing. Novice researchers have been reminded that generally a valid measure

is also reliable whereas a reliable measure may not be valid (Adcock & Collier, 2001; Cooksey & McDonald, 2011). It is not possible to have a 100 percent valid and reliable measurement (Cohen et al., 2011; Cooksey & McDonald, 2011), however, it is fundamental that validity and reliability of measurement should be maximised to the greatest extent possible.

3.4.7.1 Validity of phase one survey measurement scales

In order to maximise the validity of the phase one survey measurement scales, the researcher strove to focus on establishing “face validity” and “construct validity” (Cooksey & McDonald, 2011, pp. 431-432). Each of these types of validity and how this study addressed them are discussed next.

According to Cooksey and McDonald (2011, p. 431) *face validity* refers to “the question of whether the measure ‘looks’ like it measures the intended construct” to the research participants, the researcher/s, and to any observer. For this study, the face validity of measurement scales embedded within two questionnaires was enhanced through several processes of thorough discussion with two leading scholars in this area, (personal communication Maxwell and Cooksey, 2010), one of whom was very familiar with the Bhutanese school context. Further, these questionnaires were pilot tested (see section 3.4, p. 56) and completion of pilot questionnaires was accomplished without much difficulty. Furthermore, high response rates of 80 percent for the principal and 76 percent for the teacher surveys, with relatively few omitted responses, indicated that the questionnaires had reasonable face validity. As a part of the open-ended comments, some respondents also reported that they had learned much about GNH Education through the questionnaire items. This was another indication that the face validity of the measurement scales was reasonably sound.

Construct validity addresses the question of whether the research instrument statistically, empirically, logically and/or predictively reflect the intended construct (Cooksey & McDonald, 2011). Both questionnaires contained items grouped into five major measurement scales: self-efficacy, collective-efficacy, importance, support systems and actions and impacts.

In order to *statistically* (Cooksey & McDonald, 2011) establish construct validity, a series of factor analyses was carried out for each of the five measurement scales in the principal and teacher questionnaires using SPSS version 20.0. The extraction method applied was Principal Component Analysis (PCA) followed by promax rotation, to allow for the possibility of correlated components. The extraction criterion was ‘eigenvalue greater than 1.0’ rule and small factor pattern values below 0.40 were suppressed. Scree plots were also produced to help decide on the number of components to

retain and interpret. Items that showed small-rotated pattern values across all components or that had roughly equal loadings on more than one component, or components that had only one item loading were discarded and a refined analysis produced. A minimum of two items was required to be highly correlated to form a component. Once the components were finalised for each measurement scale, the items that defined each component were examined to identify the common theme or idea which had drawn the items together (Cooksey, 2007). A detailed discussion on establishing the factorial validity for each measurement scale is presented in the next chapter.

Efforts were made to *logically* maximise the construct validity of both the principal and teacher questionnaires. The self-efficacy, collective efficacy and importance measurement scales were expected to demonstrate high construct validity as most of their items were borrowed from several peer-reviewed sources and where necessary adapted slightly for the Bhutanese context (Dykes, 2007; Milson & Mehlig, 2002; Narvaez et al., 2008). Efficacy beliefs and importance of character education-related instruments were critically examined as they related to GNH Education prior to the development of two questionnaires for this study. Further some additional items were developed with the help of literature to suit the Bhutanese context and more specifically the GNH Education context of the present study.

Based on Gibson and Dembo's (1984) 30-item Teacher Efficacy Scale (TES), Milson and Mehlig (2002) developed a 24-item Character Education Efficacy Belief Instrument (CEEBI) to measure Personal Teaching Efficacy (PTE) and General Teaching Efficacy (GTE) with a sample of 254 elementary school teachers in the United States of America. The data from 208 elementary school teachers in the United States, based on the original 30-item TES of Gibson and Dembo, yielded two components that corresponded to Bandura's two efficacy dimensions. The first component was related to the personal teaching efficacy with Cronbach's alpha coefficient of 0.78 and the second component was related to general teaching efficacy with Cronbach's alpha of 0.75. However, Gibson and Dembo (1984, p. 574) found that these two components were "only moderately correlated" and as a result called for more research to further validate the teacher efficacy construct. Meanwhile Milson and Mehlig's CEEBI observed a moderate bivariate coefficient correlation of .65 between the PTE and GTE scales. Cronbach's reliability coefficient alpha for PTE was high ($\alpha = .83$) and at the acceptable level for GTE ($\alpha = .62$). Seventeen principal and 21 teacher items were CEEBI items borrowed for this study.

The present study also borrowed three principal and three teacher items from a measure for Teacher Self-Efficacy for Moral Education (TEME) developed by Narvaez, et al. (2008). Narvaez et al.'s pool of 17 items was submitted for factor analysis, which yielded two interpretable components with 5 items ($\alpha = .92$) and 8 items ($\alpha = .88$) respectively. The resulting TEME measure consisted of two subscales with 13 items along a 5-point Likert type rating scale, which was administered to 76 middle school teachers in United States. Cronbach's reliability alpha for the sample was high ($\alpha = .88$).

Five principal and six teacher items in the principal and teacher perceptions of importance of GNH Education were adapted from Dykes's (2007) measure of educators' perceptions of character education in United States. Dykes' (2007) character education survey was validated (face and content validity) by a panel of eight character education experts and had high reliability alpha for all the three subscales (importance subscale .85, efficacy subscale .76 and practice subscale .95).

As discussed in the previous sections, the present study had the advantage of utilising items from previously validated instruments and also a critical review of related literature was useful in the process of item construction. Furthermore, the questionnaires for this study were scrutinised by experienced research supervisors whose knowledge and expertise was invaluable. All these sources provided evidence to logically demonstrate construct validity.

3.4.7.2 Reliability of measurement scales

Reliability in quantitative research is frequently assessed using Cronbach's alpha (Cohen et al., 2011; Cooksey, 2007). According to Cooksey (2007), "it measures the degree to which the items comprising a scale work together in measuring a given construct". The internal consistency reliability of instruments used in this study was determined, once their internal structure was clarified using Principal Component Analysis (see p. 85) and was assessed using Cronbach's alpha.

3.4.7.3 Research quality criteria for the phase two case studies

The authenticity of research carried out with interpretive assumptions can be maintained through "internal coherence" and "extensional reasoning" meta-criterion developed by Cooksey (2008). According to Cooksey, showing transparency in research processes at all stages of the research can enhance internal coherence in qualitative research. Therefore, transparency was achieved in this study through the employment of following processes: (1) detailed procedures followed for the selection of

schools and teacher participants for case studies are provided; (2) interview and lesson observation processes have been adequately described; (3) to enhance internal coherence of the case study data, this research used techniques such as data triangulation (Creswell & Miller, 2000; Merriam, 1998); and (4) maintained detailed field notes. In terms of triangulation, firstly, data were gathered from a variety of sources and secondly via a variety of methods, i.e, semi-structured interviews, class observations, field notes and open-ended comments by teachers and principals. Thirdly, interview transcripts were returned to the respective participants to read for a “member check” (Merriam, 1998). Participants were encouraged to add any points or ideas to the transcript they may have omitted during the interview. Similarly, the participants were also encouraged to omit certain points and ideas if they thought they were not what they wanted to say or any other irrelevant information that might have been included unknowingly and fourth, according to Riege (2003), authenticity in case studies can be enhanced through within-case analysis and cross-case matching. So the data for each case study in this research were first analysed within-case and then cross-case analysis were conducted.

The extensional reasoning meta-criterion of Cooksey (2008) refers to the issue of transportability of research findings to other contexts in qualitative research. However, since transportability of research findings is not always an aspiration of qualitative researchers (Cooksey, 2008; Merriam, 1998), a case needs to be made for its applicability. Accordingly, for this study a “multi-site designs” and “rich, thick description” was used to gain an understanding of different case study school stories in their own context (Merriam, 1998, p. 211). First, four schools of varying levels, sizes, and locations were involved in this study in order to “maximize diversity in the phenomenon of interest” (Merriam, 1998, p. 212). Two of the case study schools (one primary and one lower secondary) had ‘efficacious’ beliefs and the other two (one higher secondary and one lower secondary) had ‘inefficacious’ beliefs in terms of school collective efficacy for GNH Education. One ‘efficacious’ school and one ‘inefficacious’ school were from urban settings and the other two were from semi-urban settings. Such variety allows readers to contextualise the findings in a wider variety of situations. Second, this phase provided thick descriptions of all the four cases and then undertook cross-case analysis. It was through cross-case analysis that the extent of transportability of meanings and interpretations was explored.

3.5 Sampling

The population for the quantitative study comprised the 7067 teachers and principals and assistant/vice principals in 547 schools in the country at the time the research was conducted (MoE, 2010b). These teachers were from 267 Community Primary Schools, 95 Primary Schools, 90 Lower Secondary Schools, 52 Middle Secondary Schools and 43 Higher Secondary Schools (Note that 56 “Extended Classrooms” were excluded because extended classrooms were attached to a parent school. As a result most of these extended classrooms did not have a principal and were managed by one teacher). Discussion of sampling processes for the phase one quantitative study and the phase two case studies are provided separately as follows.

3.5.1 Sampling process for the preliminary phase

In the preliminary phase, expert advice was sought through unstructured interviews with two Education Monitoring Officers and the Officiating Chief of School Curriculum Division. These relevant education officials were requested to share whether they knew of any schools that had been doing well or not very well in terms of implementing GNH Education. Discussion with the two monitoring officers was held simultaneously as they were sharing the same office. The Officiating Chief of School Curriculum Division was approached next. In addition, an audience was granted with the then Minister of Education, Thakur S. Powdye! who also shared his observations and experiences of GNH Education. While all these individuals often converged in their opinions, there were also some contradictions. Altogether a list of 12 ‘efficacious’ and seven ‘inefficacious’ schools were compiled. Two of the case study schools (one ‘efficacious’ and one ‘inefficacious’) were selected using the knowledge gained from the preliminary phase expert consultation. School collective efficacy scores supported the judgements of the experts.

3.5.2 Sampling process for the phase one quantitative study

The sample calculation for the phase one survey was based on the minimum ratio of ten participants per principal self-efficacy item for meaningful statistical analysis (Cooksey, 2007). Items in the principal self-efficacy belief scale were selected as the basis for calculating the desired sample size as it had the largest number of items to be dealt with in a single multivariate analysis, compared to all the other measurement scales. Moreover the number of principal/vice principals in each school was far fewer than the teachers. For the 24 PSEB items, a total of 240 principals and vice/assistant

principals were required to participate considering the minimum required ratio of 10 participants for one item (Hair, Black, Babin, & Anderson, 2010). Taking into account the possibility of getting an average of two principal participants (one principal and one vice/assistant principal) from each school, a minimum of 120 schools altogether (22% of 547) would have sufficed.

However, it was assumed that some of the principals would be absent from school on the survey day and all identified schools would not have vice/assistant principal. As a result 40 additional schools were also included as possible substitutes. This contingency plan was considered important because there was every possibility, not only for principals but also for teachers to miss the survey, especially in small schools overseen by one teacher. Thus, the target sample for this study comprised the principals, vice/assistant principals and all the teachers from 160 schools.

This sample of 160 schools was identified using stratified random sampling which is a blend of categorisation and randomisation (Cohen et al., 2011) making sure to include representatives from each of the levels of school (higher/middle secondary school, lower secondary school, primary school and community primary school), each of the 20 districts and various geographical locations (urban, semi-urban and rural). All 547 schools were categorised by level (HSS/MSS - 95, LSS - 90, PS - 95 & CPS - 267) (MoE, 2010b) and location (urban - 74, semi-urban - 59 & rural 414).

A random number generator using the SPSS programme was employed to select the sample schools. In terms of location of schools, the official six categories of urban, semi-urban, semi-remote, remote, very remote and difficult (MoE, 2010b) were reduced to three categories of urban, semi-urban and rural to avoid fewer samples in each cell and also because this study was not able to cover enough very remote and difficult to reach schools. Anecdotally, urban schools in the sample mainly consisted of schools near the district headquarters with a majority of the children from educated parents. Semi-urban schools in the sample mainly consisted of schools in smaller towns farther away from major district towns with children from parents of both educated and farming backgrounds. The rural schools in the sample mainly consisted of schools in rural settings where majority of the children whose parents came from farming backgrounds.

Self-administered postal questionnaires were used for the seven remote districts (Gasa, Dagana, Lhuentse, Trashiyangtse, Trashigang, Pemagatshel and Samdrup Jongkhar) and self-administered questionnaires were distributed and collected by the researcher for schools from nine districts (Paro, Haa, Thimphu, Punakha, Wangdue, Trongsa, Bumthang, Mongar and Trashigang) and by a research assistant from four southern districts (Samtse, Chukha, Tsirang and Sarpang). An experienced

research assistant was employed who was briefed and trained to distribute and collect the survey questionnaires. A map of Bhutan showing the twenty districts is provided in the Figure 3.2.

The District Education Officer in each of the seven remote districts was contacted by telephone to ascertain the number of principals and teachers in all the sample schools for the purpose of dispatching an adequate number of questionnaires. After accounting for missing data, responses from 155 schools (244 principals – 132 principals and 114 vice/assistant principals – and 1633 teachers) were used for data analysis. A detailed discussion of demographic characteristics of the resulting sample is provided in the next chapter. Two principal respondents did not mention whether they were vice principal or the principal. Some quantitative data in the form of responses to ‘any other comments’ in the questionnaires were used as qualitative data to supplement case study data.



Figure 3.2 A map of Bhutan showing the twenty districts (source–
<http://www.lonelyplanet.com/maps/asia/bhutan/>)

3.5.3 Sampling process for the phase two qualitative case studies

For an in-depth understanding of the nature and characteristics of principal and teacher self-efficacy and school collective efficacy for GNH Education, two ‘efficacious’ and two ‘inefficacious’ schools were selected for case studies. The categorisation of sample schools into ‘efficacious’ and ‘inefficacious’ schools in this study was purely based on the collective efficacy belief scores of schools and not on the evaluation of GNH Education outcomes.

In section 3.5.1 the selection process for two case study schools, based on expert judgment, was presented. The other two case study schools (one ‘efficacious’ and one ‘inefficacious’) were selected using the quantitative data based on school collective efficacy belief. When it was time to begin the case studies, data obtained to that point from phase 1, from a total of 124 schools with 1509 teachers were submitted for principal component analysis, which yielded one interpretable factor for school collective efficacy. A mean score was computed for each school using the regression factor score (standard z-score) on this single component. All 124 schools were ranked in order of their mean z-scores from largest ($M = 1.50$ = one and a half standard deviations above the school sample mean in terms of collective efficacy based on the preliminary data) to the smallest ($M = -1.12$ = more than one standard deviation below the school sample mean in terms of collective efficacy based on the preliminary data).

The four case study schools’ mean z-score and their mean rank based on the collective efficacy factor scores are shown in Table 3.1. The two schools selected based on the collective efficacy data were also in the list provided by the experts. The other two based on the expert advice were also in the category of ‘efficacious’ and ‘inefficacious’ schools, although they were not the most ‘efficacious’ school and the least ‘inefficacious’ school (see Table 3.1). Selection of case study schools based on both the expert advice and collective efficacy data provided variety and robustness to the sample.

Table 3.1 Mean z-score and mean rank of the four case study schools

Case study	Selection process	Category	Mean z-score	Mean rank (N=124)
CS One	Expert advice	‘Inefficacious’	- 0.21	95 th
CS Two	SCEB data	‘Inefficacious’	- 1.10	122 nd
CS Three	SCEB data	‘Efficacious’	1.07	5 th
CS Four	Expert advice	‘Efficacious’	0.65	9 th

The final selection of the four case study schools was, however, based on two delimiting factors. First, an important delimiting factor that was adopted in selecting the final four case study

schools was geographical location. Some of the potential schools for case studies were located in remote areas that would have required many days of travel. Considering the amount of time required remote schools were excluded. The second criterion adopted for the final selection of case study schools was the total number of respondents in each of the schools. It was assumed that school collective efficacy beliefs based on one or two respondents would be misleading because Bandura's (1997) construct of perceived collective efficacy of a school or an organisation could be appraised only through the individual cognitive processing of how group members interact and coordinate on a given task. So the four case study schools were selected based on number of respondents (minimum of five in each school) coupled with consideration of their location.

A minimum period of one week was spent in each case study school. Semi-structured interviews were conducted with all the participants and further two teaching lessons were observed for each teacher participant. Interactions with other teachers at some of the case study schools were also made to collect additional data. Time was also spent observing the school culture and taking photographs of any evidence of GNH Education whenever there was no class observation and interviews.

Teacher participants in each case study school were selected based on availability and individual agreement. All principals of the four sample schools directed their vice-principals to identify two teacher participants (one male and one female). Vice principals in consultation with the individual teachers (based on their willingness) finalised the list. One of the teacher participants in case study school one was the GNH Education coordinator. He was appointed as the coordinator because in the absence of principal he had attended the Paro GNH Education workshop (Teacher 2, WHSS). All teacher participants were contacted prior to the interview and lesson observation for their consent followed by discussion of interview and teaching observation schedule.

3.6 Gaining access and ethical issues

Ethical approval from the University of New England (UNE), Human Research Ethics Committee (HREC) was sought (see **Appendix 3.5**) and obtained (UNE Ethics Approval No. HE11/061). Prior to the commencement of the study, formal consent was also sought from the Director, School Education (see **Appendix 3.6 and 3.7**). Copies of his consent were then sent to all the 20 District Education Offices who in turn informed all the schools in their district about the research. Furthermore, all participants were provided a copy of the information sheet (see **Appendix 3.8**).

Each of the interview and observation participants for the case studies was requested to sign a consent form (see **Appendix 3.9**). They were also provided with a copy of the permission letter as well as the information sheet for the participants. Interviews were conducted in Dzongkha for the two Dzongkha-speaking teachers and one principal (as they could not speak English or their English was weak) and in English for all others. Interviews were recorded after seeking permission from each participant. All the participants were guaranteed that their identity would not be disclosed and pseudonyms are used in the final results. Any information regarding the research such as questionnaires, field notes and interview transcripts were kept securely and will be destroyed after five years. These practices are in accord with the UNE, HREC policy and practices.

3.7 Approaches to data analyses

Both the principal and teacher questionnaires were divided into two sections. Section one consisted of categorical (demographic) variables and section two consisted of five measurement scale items. Categorical variables in both the principal and teacher questionnaires were coded, assigning specific numbers for data entry into Statistical Package for Social Sciences (SPSS) programme. Dummy coding was applied to all the dichotomous demographic nominal scale items (Cooksey & McDonald, 2011). Variable names were designed for each categorical and scale variable using standard SPSS conventions. Data entry process began as soon as the first questionnaires were received.

All quantitative analyses were carried out using SPSS v. 20. A preliminary analysis of teacher perceptions of school collective efficacy scale was conducted as early questionnaires were received, as outlined in the previous subsection labelled “sampling process for the phase one quantitative survey”. A detailed discussion of data screening processes, missing values analyses and demographic analysis in preparation for statistical analysis are presented in the next chapter.

All major statistical analyses such as principal components analysis for scale validation and refinement, reliability analysis for the resulting components, MANOVAs for comparing teacher and principal samples on common measurement scales and demographic items and hierarchical multiple regression analysis to test the contributions of various demographic items and measurement scales to prediction of actions and impacts were carried out. For the purposes of the analysis of data, a large number of tests were computed. So in order to control Type 1 error, multivariate statistical tests were used wherever possible coupled with setting the decision criterion for significance at $p = .001$ (Cooksey, 2007).

Qualitative data generated through observations and interviews from the four case study schools were analysed at two levels – namely within-case and cross-case (Eisenhardt, 1989; Yin, 1981) using MAXQDA 10 Plus (<http://www.maxqda.com/>) as the analytical support system to help identify emerging themes (Merriam, 1998). Data from “any other comments” in the questionnaires and field notes were content analysed to provide another perspective to the data generated from observations and interviews. More specifically, qualitative data from the questionnaires of all the participants and field notes from the case study schools were included for analysis using MAXQDA 10 Plus. As represented in Figure 3.1 (p. 52) data in this research were gathered through multiple sources which provided opportunity for both within-paradigm and between-paradigm triangulation.

3.9 Chapter summary

This chapter provided a discussion of how the paradigm and design choices were made and the data gathering strategies employed. In addition, the details of survey instruments for each of the five measurement scales in both the principal and teacher questionnaires with sample items and the processes followed to establish its validity and reliability, were presented. Sampling processes followed for both the quantitative and qualitative aspects of the research followed by approaches to data analysis and how ethical issues were handled were also discussed. In the next chapter, detailed demographic analyses and results following from measurement scale validation are presented.

CHAPTER FOUR: DEMOGRAPHIC ANALYSIS AND MEASUREMENT SCALE VALIDATION

4.1 Setting the context

The Bhutanese education system made a historic move with the introduction of GNH Education commencing with the first academic session in February 2010. It became imperative for the first Parliamentary Government and the Ministry of Education in particular to successfully implement this educational innovation (Powdyel, 2011; Thinley, 2010). All the school principals were trained through a week-long workshop to lead the GNH Education in their own schools. In turn principals were mandated to train their teachers. The Ministry of Education also had a plan to further train teachers before the commencement of the 2011 academic session. However, this plan did not fully materialise. Principals and teachers at all levels of schools became the key change agents in implementing GNH Education. While adequate preparation has been carried out from the government and its leaders' perspectives, it was uncertain if the change agents were adequately prepared to make the GNH Education journey smooth and effective.

As set out in the previous chapter, a nation-wide multi-method survey was designed to explore the experiences and efficacy beliefs of school principals and teachers for GNH Education. A sequential data collection process commenced in March 2011 with self-administered questionnaires and was followed by case studies of four carefully selected schools. As argued in previous chapters unveiling the efficacy beliefs and experiences of the change agents regarding GNH Education would enable the prediction of the future of GNH Education and/or make suggestions for improvements.

This chapter provides detailed information on the processes used in preparation for statistical analysis as follows:

- Data screening;
- Missing value analysis;
- Demographic characteristics;
- Principal component analysis; and
- Identification of common components between the two data sets.

4.2 Data screening

Data from 248 principals and 1649 teachers who responded to the survey from 155 schools were initially entered into the SPSS database. A thorough data screening process was undertaken to confirm that data from the questionnaires had been entered correctly into the SPSS database and to check the distribution characteristics of the questionnaire items. Frequency distributions with the normal curve superimposed and summary skewness and kurtosis statistics were produced for all Likert-type items in each questionnaire to check for any irregularities. These descriptive analyses showed no substantive non-normality in terms of skewness, kurtosis or outliers in the items. However, some typographic errors were sorted out through cross-checking with the original questionnaires. As a part of the preparation for the statistical analysis, a discrete missing value of '9' was assigned to the 'Not Applicable' category to distinguish these responses from those coded as SPSS system missing (no response to an item) (i.e., omitted responses). As a part of data screening process, a total of twenty respondents (four principals and 16 teachers) were deleted from the database as each of these respondents left more than half of their questionnaire incomplete. Following the data screening process, a total of 244 principal and 1633 teacher respondents remained in the final samples for data analysis. Missing value analyses for these sets of data were carried out as presented in the next section.

4.3 Missing value analysis

It was imperative for this research to get a clear understanding of the behaviour of each data set as missing data patterns could potentially have an impact on the quality of data analysis (Cooksey, 2007). Were the data missing completely at random or not for both the principal and teacher questionnaires? The databases were also examined for any anomalous patterns and relationships associated with missing data.

4.3.1 Missing value analysis for principal data

Little's MCAR test with marginal significance value between .01 and 0.001 indicated that to a certain extent principal data were not missing completely at random ($\chi^2 (7493) = 7793.503, p = .008$). In order to assess why this might have been the case, inspection of univariate statistics for the principal questionnaire was undertaken and showed that several items targeting Support Systems for GNH Education (SSGNHE) had the greatest number of cases with missing values (items SSGNHE65,

SSGNHE66, SSGNHE67, SSGNHE68, SSGNHE69, SSGNHE70, SSGNHE72, & SSGNHE74, see Appendix 3.1, Part D). The missing value percentage for these items ranged from five percent to nineteen percent of the principal's sample. These missing items were all largely related to respondent ratings of 'Not Applicable' category in terms of support provided by the Paro GNH Education workshop (items SSGNHE65, SSGNHE66, & SSGNHE67) and other external support (items SSGNHE68, SSGNHE69, SSGNHE70, SSGNHE72, & SSGNHE74) such as support from Curriculum Department, Education Monitoring, Support and Services Division, District Education Office, Principals from other schools and Teacher Education Colleges) in implementing GNH Education.

The high rates of 'Not Applicable' responses likely reflect principals' inability or unwillingness to access these support systems. This observation was an indication that there was some pattern in the missing data and that, at least for these specific items, data were not missing completely at random. The implication of this was that some caution was needed when interpreting the outcomes involving support systems for GNH Education. Further, 'Not Applicable' responses were treated as missing data in all subsequent analyses. Respondents who gave such responses, as well as who omitted responses, were automatically deleted (by SPSS) from consideration in analyses as appropriate. The remaining items in the principal questionnaire showed relatively low frequencies of missing data (less than 5% in all cases).

Exploratory *t*-tests (comparing groups defined by whether or not they were missing a score on a specific item) were computed to identify variables whose pattern of missing values was likely to affect positioning on other quantitative variables. Examination of the separate variance *t*-tests indicated that 'missingness' associated with the support system items SSGNHE65, SSGNHE66 and SSGNHE67 (each related to the Paro GNH Education workshop) predicted significant differences in the means of several of the principal self-efficacy belief (PSEB) items (PSEB1, PSEB2, PSEB3, PSEB4 & PSEB8) (see Appendix 3.1, part A for the wording of items). The means for the missing data group (SSGNHE65, $M = 3.86$, SSGNHE66, $M = 3.92$ and SSGNHE67, $M = 3.93$ respectively) were significantly lower than the means of these self-efficacy belief items (PSEB1, $M = 4.00$, PSEB2, $M = 3.93$, PSEB3, $M = 3.89$, PSEB4, $M = 4.01$ & PSEB8, $M = 4.10$ respectively). The *t*-values for these self-efficacy belief items were large (above 2.1 to -3.1) compared to other items. This finding helped to explain why the data were not missing completely at random. On the other hand, the 'missingness' of the support system items (SSGNHE68, SSGNHE69, SSGNHE70, SSGNHE72,

and SSGNHE74, each related to external support) predicted differences in means for relatively few quantitative variables (ImpGNHE40, ImpGNHE41, ImpGNHE42, ImpGNHE43 & ImpGNHE44) that were related to principal perceptions of importance of GNH Education, signalling that their influence was at least localised.

The missing values analysis also computed cross tabulations of categorical variables versus indicator (missing/non-missing) variables, which helped to determine whether there were differences in missing values distributions across various categories. For the principal questionnaire, items SSGNHE65, SSGNHE66, SSGNHE67, SSGNHE68, SSGNHE69, SSGNHE70, SSGNHE72 and SSGNHE74 formed the indicator variables, based on their percentage of missing cases exceeding 5%. An examination of the cross tabulation tables for all the categorical variables, the percentage of missing values in the indicator variables did not appear to vary except for the gender, school level, current post, school location and school system (see Table 4.1).

Table 4.1 Percentage of missing values differences in the categorical variables for each indicator variable

Categorical Variable	Gender		Principal Type		School Level		Location			School System		School Type	
	Male	Female	Principal	VP/AP	Primary	Secondary	Rural	Semi-Urban	Urban	Government	Private	Boarding	Day-school
SSGNHE 65	2.6	5.8	1.6	5.3	0.0	10.0	3.1	1.8	4.3	3.1	4.0	0.0	4.3
SSGNHE 66	2.0	7.7	2.4	4.4	2.8	9.1	3.1	1.8	4.3	3.1	4.0	0.0	4.3
SSGNHE 67	3.6	9.6	2.4	7.9	4.5	13.1	5.1	3.6	5.3	4.9	4.0	4.8	4.8
SSGNHE 68	1.5	5.8	2.4	2.6	2.8	6.6	2.0	0.0	4.3	2.2	4.0	0.0	3.2
SSGNHE 69	1.5	5.8	2.4	2.6	2.8	6.6	2.0	0.0	4.3	2.2	4.0	0.0	3.2
SSGNHE 70	1.0	7.7	2.4	2.6	2.8	6.5	2.0	1.8	3.2	2.2	4.0	0.0	3.2
SSGNHE 72	1.0	7.7	2.4	2.6	2.8	6.5	2.0	1.8	3.2	2.2	4.0	0.0	3.2
SSGNHE 74	2.6	9.6	3.3	5.3	4.5	10.4	4.1	3.6	4.3	4.0	4.0	3.2	4.3

As shown in Table 4.1, female principals had a relatively higher percentage of missing values in the entire indicator variables compared to male principals. In terms of their current post, vice /assistant principals had substantially a higher percentage of missing values than the principals. Missing values in terms of school levels were also substantially higher for secondary level principals than for primary level principals. Data from urban schools revealed a slightly higher percentage of missing values than semi-urban and rural schools. Going by the school system, private school

principals had a slightly higher percentage of missing values than the principals from the government schools. In terms of type of school, day-school principals had a relatively higher percentage of missing values than the boarding school principals. So findings related to these support systems items (which are mainly related to the perceptions of principals support provided by Paro workshop and external agents such as colleges of education, education monitoring division, district education office and curriculum department) needs to be cautiously interpreted.

4.3.2 Summary of missing value analysis on principal data

While there seems to be some pattern for the missing data in the principal questionnaire, missingness is mainly concentrated within a few indicator variables belonging to the support systems for GNH Education measurement scale. Careful examination of these items revealed that this missingness was likely due to lack of opportunity rather than any other problems. For instance, the Paro GNH Education workshop (items SSGNHE65, SSGNHE66 & SSGNHE67), which was the first and the major workshop in preparation for implementation of GNH Education, was provided mainly for the principals. The values of missingness for these items were large because, 46 percent of the principal samples (see Table 4.1) were vice/assistant principals who did not have the opportunity to attend the Paro GNH Education workshop. Female vice/assistant principals (62.7%) outnumbered the female principals (37.3%), which could be one of the reasons for females having a higher percentage of missing values because vice/assistant principals did not get the opportunity to attend the Paro GNH Education workshop. Frequency cross tabulation of gender with current post, school location and level, indicated that there were more female principals and vice/assistant principals in urban secondary schools than in semi-urban and rural schools. So this demographic data could explain why urban secondary schools had a larger percentage of missing values. In terms of the school system, the difference was minimal and this result was likely due to the sample size (25 private school principals compared to 219 government school principals).

From the above discussion, it can be concluded that missingness of some items related to principal perceptions of support systems for GNH Education were mainly due to 'Not Applicable' category, as shown by separate variance *t* tests. However, it is essential to note here that the Paro GNH Education workshop apparently had some influence on the overall principal self-efficacy for GNH Education. In particular principal self-efficacy beliefs related to their ability in designing a clear vision for implementation of GNH Education (PSEB1), generating interest amongst teachers to

implement GNH Education (PSEB2), knowledge needed to lead teachers in implementing GNH Education (PSEB3), good understanding of the GNH concept (PSEB4) and convincing students to stop lying (PSEB8) were much lower.

Further, the missingness of items related to the principal perceptions of external support system for GNH Education (support from agencies such as Curriculum Department, Education Monitoring Division, Teacher Training Colleges and District Education Office) affected the overall principal perceptions of importance of GNH Education. In particular principals showed weaker perceptions of importance of GNH Education in terms of items such as “GNH Education has been introduced at the right time” (ImpGNHE40), “introduction of GNH Education will encourage development of moral values in students” (ImpGNHE41), “schools should assume a central role in shaping the values of youth” (ImpGNHE42) and “GNH Education is not an extra administrative and teaching burden” (ImpGNHE43 & 44). Preliminary findings from the missing value analysis suggest that provision of professional development opportunities and support from relevant agencies were crucial for successful implementation of GNH Education in the Bhutanese schools. However, these findings are further discussed in the following chapters. The next section presents missing value analysis for teacher data.

4.3.3 Missing value analysis for teacher data

Little’s MCAR test with significance value less than 0.001 confirmed that teacher data were not missing completely at random ($\chi^2(7493) = 7793.503, p = .001$). Observation of univariate statistics for the teacher questionnaire showed again that several items from the support systems for GNH Education scale had the greatest number of cases with missing values (items SSGNHE67, SSGNHE68, SSGNHE69, SSGNHE70, SSGNHE71 & SSGNHE75). The missing value percentage for these items ranged from 5.7% to 28%. These missing values were all related to teacher perceptions in terms of support provided by their vice-principal/s (item SSGNHE67), their teacher training experiences at the college of education (item SSGNHE68), GNH Education workshop for teachers (items SSGNHE69 & SSGNHE70), resources required for GNH Education (item SSGNHE71) and support by teacher education colleges (item SSGNHE75). There was also one item from the Actions and Impacts scale (A&I 79). The A&I 79 item was related to the conduct of School Based In-Service Programme (SBIP) for the teachers on GNH Education. This was again an indication that there was some pattern in the missing data and that missingness was not completely at

random. All other items in the teacher questionnaire had a relatively low percentage of missing data (less than 5% in all cases). Similar to the principal questionnaire, the primary source of ‘missingness’ for these items was a ‘Not Applicable’ rating on the Likert scale, rather than an omitted response.

Examination of the separate variance *t*- tests showed that missingness of the items SSGNHE69 and SSGNHE70, related to the GNH Education workshop, affected the means of most of the items. The means for the missing data group (items SSGNHE69, M = 3.43 & item SSGNHE70, M = 3.37) were much lower than most of the other quantitative variables. This was also another indication that the data may not be missing completely at random. The missingness of the other four items (SSGNHE67, SSGNHE68, SSGNHE71, SSGNHE75 & A&I79) with large missing value percentages did not make a huge impact on the means of all other quantitative variables.

The cross tabulation of categorical variables versus indicator variables table indicated that there were some discrepancies in some categorical variables while there was not much impact on some. For instance (see Table 4.2 below), teachers from urban areas generally showed higher percentage of missing values compared to semi-urban and rural areas. In terms of gender, female teachers appeared to have a slightly higher percentage of missing values than the males. Missing values in terms of type of schools were larger for the day-school teachers than the boarding school teachers. Contract teachers (both Light Druk-Yul² and Expatriate) had a comparatively larger percentage of missing values than the regular teachers.

Table 4.2 Percentage of missing values differences in the categorical variables for each indicator variable

Categorical Variable	Gender		Service Status		Location			School System		School Type	
	Male	Female	Regular	Contract	Rural	Semi-Urban	Urban	Government	Private	Boarding	Day-school
SSGNHE 67	2.0	3.0	2.5	1.9	4.7	1.2	1.7	2.5	2.7	3.5	2.2
SSGNHE 68	1.8	1.8	1.4	5.9	1.2	1.2	2.6	1.6	4.3	1.5	1.9
SSGNHE 69	5.1	4.3	4.5	11.6	4.3	3.1	5.7	5.0	2.7	3.0	5.2
SSGNHE 70	5.0	4.3	4.2	16.3	4.5	3.4	5.3	4.7	4.3	2.5	5.3
SSGNHE 71	1.2	1.5	1.2	4.0	0.6	1.9	1.7	1.4	1.6	1.2	1.4
SSGNHE 75	1.6	2.8	1.7	5.2	1.4	1.5	3.2	2.0	4.9	1.5	2.4
A&I79	1.7	2.3	1.9	4.5	1.6	1.5	2.6	1.6	5.4	2.2	1.9

² The Ministry of Education introduced recruitment of university graduates as contract teachers to reduce the burden of teacher shortage in the schools under the programme – ‘Light Druk-Yul’

4.3.4 Summary of missing value analysis on teacher data

As for the principal data, the missingness for the teacher data was also associated with items belonging to teacher perceptions of support systems for GNH Education implementation process. In particular these items were related to the vice principals' role model, GNH Education workshop, availability of resources, support from teacher education colleges and support from their teacher training experience. The majority of the missing cases in all the support systems items (shown in Table 4.2) were from the 'Not Applicable' category rather than the omitted missing category. For instance, from a total of 462 missing cases in the item "the GNH Education workshop for teacher that I attended helped me to teach values lessons," 384 teacher respondents (83%) provided a 'Not Applicable' response. Preliminary analysis provided some indication that these teachers either did not get an opportunity to attend the GNH Education workshop or they did not find the workshop very useful to support them in the implementation process. Frequency cross tabulation of teacher gender with school location, school type and service status, also indicated that teachers who participated in the survey were more from – urban areas, day school, regular service status and female teachers which could be one of the reasons why these categories had more missing values.

Overall the missing values analysis for both the questionnaires revealed that there were not many problems associated with missing data patterns except for items related to GNH Education training and other support activities. However, this trend may have been more attributable to lack of opportunity than to any problems related to questionnaire itself or to the respondents. Nevertheless, some care is needed when interpreting data associated with support systems for implementing GNH Education. Having confirmed that the missingness of the data was a localised problem, the next step involved examining demographic characteristics followed by the data refinement process using principal components analysis.

4.4 Demographic characteristics

Demographic characteristics of the respondents for this study focus at three levels: schools, principals and teachers. The categories for a number of demographic characteristics, as shown in Table 4.3, have been collapsed to form smaller sets mainly to reduce the number of categories to interpret and to counter small sample sizes within specific categories. The demographics of each level of sampling are discussed in sub-sections, which follow.

Table 4.3 Demographic characteristics with original and collapsed categories

Demographic characteristics	Original categories	Collapsed categories	Reference in the dissertation
School level	HSS/MSS	HSS/MSS/LSS	Secondary school
	LSS		
	PS		
	CPS		
Age	Less than 25 years	Less than 30 years	Young
	26-30		
	31-35		
	36-40		
Principal type	41 and above	41 and above	Senior
	Principal	Principal	Principal
	Officiating Principal		
	Vice/Assistant Principal		
PTC/ZTC/Diploma			
Qualification	Bachelor	Bachelor	Bachelor
	Masters		
	PhD		
	Postgraduate		
Principalship or Teaching experience	Less than 5 years	Less than 5 years	Short experience
	6-10 years		
	11-15 years		
	16-20 years		
Length of time in current school	21 and above	16 and above	Long experience
	1-2 years	1-2 years	Short time
	3-5 years		
	6-10 years		
11-15 years			
Number of teachers	16 and above	11 and above	Long time
	1-5	1-10	Small school
	6-10		
	11-15		
16-20			
Number of students	21 and above	21 and above	Large school
	1-50	1-100	Small school
	51-100		
	101-200		
201-300			
Religion	301 and above	301 and above	Large school
	Buddhist	Buddhist	Buddhist
	Hindu		
	Others		
Others			
Teaching subject	Dzongkha, EVS (Environmental), Mathematics, Health & PE, English, Economics, IT, Biology, Physics, Chemistry, Commerce, Accounts, Social Studies, History, Geography	Dzongkha, EVS, HPE, Mathematics, English	Dzongkha, General subjects (Primary - PP-6)
		Economics, IT, Biology, Physics, Chemistry, Commerce, Accounts, Mathematics	Sciences (Secondary)
		History, Geography, English, Social studies	Humanities (Secondary)

4.4.1 School-level demographic characteristics

A total of 155 schools (28% of all schools in Bhutan) representing all *levels* of school (Higher Secondary School (HSS)/Middle Secondary School (MSS), Lower Secondary School (LSS), Primary School (PS) and Community Primary School (CPS), geographical *location* (urban, semi-urban & rural), school *system* (government & private) and *type* of school (day school & boarding school) participated in this study (see Table 4.4). As shown in the Table 4.4, schools were also characterised by their size in terms of number of teachers and students. The sample consisted of a minimum of three schools from each of the twenty districts with exception of one district (Gasa), which had only one school.

Eleven of the sample schools (three were secondary schools and eight primary) did not have principal respondents and five schools did not have teacher respondents. In terms of location there was only one urban high school and the remainder were from rural locations (two high schools and eight primary schools). All the 11 schools were government schools. Of the five schools without teacher respondents, three were urban secondary schools and two were rural primary schools. In some columns the total number of schools, principals and teachers do not add up to 155, 244 and 1633 respectively because of the missing values.

4.4.2 Demographic characteristics of the principal sample

From all the sample schools ($n = 155$) a total of 244 principals including vice principals/assistant principals/officiating principals responded to the survey (see Table 4.5). The overall response rate for the principal survey was 78.2%. The majority of the principals were male ($n = 194$). Principals as a primary category of respondents also included vice principals and assistant principals as occupants of these roles also bore some managerial responsibilities. Larger schools had a principal and two or three vice principals/assistant principals while a lone principal mainly managed smaller schools in the rural communities. Therefore, the exact population of the principal sample was not available. As shown in Table 4.4, the principal sample was approximately calculated at 30%. The Principal sample has been further categorised by gender, age, qualification, their current teaching class/es (because both principals and vice/assistant principals are required to teach certain number of classes), length of time in their current school, principalship experience, teaching subject and their religion.

Table 4.4 Background characteristics of the sample at the school level

Characteristic	Category	School		N%		n%		Principal***		N%		n%		Teacher		N%		n%	
		N*=547	n**=155	28		N=827	n=244	30		N=7067	n=1633	23							
Level	Secondary (LSS, MSS & HSS)	185	70	38	45	370	149	40	61	4662	1127	24	69						
	Primary (CPS & PS)	362	85	23	55	457	95	21	39	2405	506	21	31						
System	Government	520	141	27	91	774	219	28	90	6609	1450	22	89						
	Private	27	14	52	09	53	25	47	10	458	183	40	11						
Location	Urban		45		29		99		41		801		49						
	Semi-urban		24		16		50		20		321		20						
	Rural		86		55		95		39		511		31						
Type	Day school		119		77		182		75		1222		75						
	Boarding school		36		23		62		251		397		24						
Size by teachers	1-10 (small school)		55		36		57		23		231		14						
	11-20 (medium school)		32		21		51		21		261		16						
	21 and above (large school)		64		41		135		55		1070		65						
Size by students	1-100 (small school)		24		16		24		10		68		4						
	101-300 (medium school)		40		26		51		21		225		14						
	301 and above (large school)		81		52		168		69		1294		78						

*N= population, source (MoE, 2010a)

**n= sample,

*** All schools have 1 principal and on an average 1 vice/assistant principal. However, this excludes community schools (N = 267) that have only 1 principal. Therefore, the principal sample was approximately calculated at 30%.

Table 4.5 Demographic characteristics of the principal respondents ($n= 244$)

Characteristic	Category	n	%
Gender	Male	194	79
	Female	50	21
Age	<i>*Less than 30 years</i>	16	6
	31 - 40	131	54
	41 & above	97	40
Principal Type	Principal	130	53
	Vice/Assistant Principal	112	46
Qualification	PTC/ZTC/Diploma	65	27
	Bachelor	124	51
	Postgraduate	51	21
Principalship Experience	Less than 5 years	89	36
	6 – 15 years	111	45
	16 & above	39	16
Current Teaching Class	Pre-Primary (PP) - 6	130	53
	7 - 12	97	40
	<i>*Both</i>	16	7
Length of Time in Current School	1 - 2 years	84	34
	3 - 10 years	135	55
	<i>*11 & above</i>	22	9
Religion	Buddhist	217	89
	Others (Hindu, Christian)	27	11
Teaching Subject	Dzongkha	33	13
	General Subjects (Pre Primary – III)	66	27
	Sciences (Sc, Business, Maths & IT)	34	14
	Humanities (Hist, Geo, Eng, Social Stu)	99	40

*These categories in the principal sample were excluded from statistical analyses, as sample sizes were too small.

4.4.3 Demographic characteristics of the teacher sample

The teacher sample for this study ($n = 1633$) comprised 23% of the teacher population ($N = 7067$). The overall response rate for the teacher survey was 76%. In contrast to the principal sample, the teacher sample had proportionally more females (53%) than males (47%). Two teacher respondents did not identify their gender. The teacher sample was further categorised by age, qualification, service status, nationality, their current teaching class/es, their teaching subject, teaching experience, school level, school type, length of time in their current school and their religion (see Table 4.6).

Table 4.6 Demographic characteristics of the teacher respondents (n= 1633)

Characteristic	Category	n	%
Gender	Male	761	46.6
	Female	870	53.3
Age	Less than 30 years	791	48.4
	31 - 40 years	604	37.0
	41 years & above	234	14.3
Teaching Experience	Less than 5 years	637	39.0
	6 - 15 years	688	42.2
	16 years & above	298	18.3
Teaching Class	Pre-Primary (PP) – 6	908	55.6
	7 - 12	568	34.8
	Both	147	9.0
Qualification	Diploma/Certificate	438	26.8
	Bachelors	980	60.0
	Postgraduate	146	8.9
Service Status	Regular	1331	81.5
	<i>*Light Druk-Yul (contract)</i>	47	2.9
	Expatriates	209	12.8
	<i>*Temporary</i>	29	1.8
School level	Secondary	1127	69.0
	Primary	506	31.0
School type	Day school	1222	74.8
	Boarding school	397	24.3
Nationality	Bhutanese National	1482	90.8
	Non Bhutanese	149	9.1
Teaching Subject	Dzongkha	207	12.7
	General Subjects (Pre Primary – III)	616	37.7
	Sciences (Sc, Business, Maths & IT)	288	17.6
	Humanities (Hist, Geo, Eng, Social Stud.)	337	20.6
Length of Time in Current School	1 - 2 years	650	39.8
	3 - 10 years	856	52.4
	11 years & above	104	6.4
Religion	Buddhist	1278	78.3
	Others (e.g. Hindu, Christian, others)	334	20.5

*These categories in the teacher sample were excluded from statistical analysis as it had too small sample sizes

4.4.4 Summary of demographic characteristics

For a target sample of minimum 120 schools, the final sample of 155 schools was a successful sampling effort. In terms of the teacher sample, this study was just able to achieve the required sample size while more than enough respondents were achieved for the principals. However, in terms of various demographic characteristics for both principal and teacher samples there were some discrepancy observed between different categories.

4.5 Principal components analyses

Both the principal and teacher questionnaires comprised five measurement scales with items designed to measure self-efficacy, school collective efficacy, perceptions of importance, support systems, and actions and impacts for GNH Education. Principal Component Analysis (PCA) was conducted to identify subsets of items measuring a common sub-construct for each of the five measurement scales. PCA helped to condense the number of items and also to establish construct validity of the Likert-type items.

Prior to the PCA, a test was conducted for each scale to determine whether the study had a large enough sample, and that the items were suitable for PCA. Kaiser-Meyer-Olkin measures of sampling adequacy for all the five scales in both the principal and teacher questionnaires were all greater than the minimum requirement of 0.6 and Bartlett's Test of Sphericity showed statistically significant results ($p < .001$) for all the five scales with large chi-square values indicating suitability of items for component analysis (Manning & Munro, 2007). A series of separate PCAs for every measurement scale in the principal and teacher questionnaires were conducted.

4.5.1 Principal component analyses on principal data

The Principal Self-Efficacy Belief (PSEB) measurement scale comprised of 24 items, the School Collective-Efficacy Belief (SCEB) measurement scale comprised of 15 items, principal perceptions of Importance of GHN Education (ImpGNHE) comprised of 22 items, principal perceptions of Support Systems for GNH Education (SSGNHE) comprised of 17 items and principal perceptions of Actions and Impacts (A&I) comprised of 15 items. A PCA for each measurement scale was conducted following the procedures described in the previous chapter (see p. 61, statistically establishing construct validity).

The variance explained by retained components in each measurement scale was also produced. In the social sciences, solutions that accounted for around 60% of the variance in items or a bit less can be considered as satisfactory (Hair et al., 2010). The component correlation matrix for each measurement scale was also computed to show the relationships between retained components. The “correlometer” designed by Cooksey (2007, p. 109) was used to aid in the interpretation of the correlation coefficients for each analysis. The number that appears in front of each item in the pattern matrix tables is the original item number in the questionnaire.

Cronbach's coefficient alpha measuring the internal consistency reliability of items comprising each component was also computed. Coefficient alpha values have been interpreted as "acceptable" for values above .70, "good reliability" for above .80 and "excellent reliability" for above .90 (Manning & Munro, 2007). The lower acceptable limit was reduced to .60 as most of the items, especially in measurement scales related to perceptions of importance, support systems and actions and impacts, were self-designed (Cooksey, 2007, p. 299).

4.5.1.1 PCA on principal self-efficacy belief measurement scale

After deleting all non-performing items and rerunning the analysis to produce a refined solution, the final solution for PSEB measurement scale produced four distinguishable components. Component 1 comprised of seven items, components 2 and 3 four items each and component 4 two items. Seven items (item nos. 5, 6, 7, 16, 18, 20 and 21) that were not substantively aligned to any component were discarded (for actual items see Appendix 3.1). As a result, data from only 17 PSEB items were included for subsequent analysis. Table 4.7 thus shows the final refined component structure for the PSEB measurement scale. The four principal self-efficacy components accounted for a substantive 55.4% of the variance in the items, which was on the low side according to Hair et al (2010). As shown in Table 4.7 each of the four components correlated moderately weakly to moderately strongly with each other and each component demonstrated acceptable to good reliability.

The following labels were developed for the four PSEB components: Each component referred to a principal's sense of self-efficacy beliefs related to their ability ...

Component 1: Influencing values development in students – ... in influencing development of values such as respect, trust, kindness, responsibility and honesty in their students through role modelling.

Component 2: Designing and teaching GNH lessons – ... as a classroom teacher. It reflected their ability to integrate GNH values in their teaching subject/s in a manner that stimulated students' interest in learning values.

Component 3: Leading GNH Education – ... as a school leader. It reflected their ability to develop a clear vision for implementation of GNH Education. Further, it also reflected their ability in generating much interest and enthusiasm among teachers in their respective school for successful implementation of GNH Education.

Component 4: GNH Education training – ... in teaching as well as leading GNH Education in their school without GNH Education training.

Table 4.7 PSEB scale: Pattern matrix, component correlation matrix and Cronbach's alpha

	Component			
	1	2	3	4
(9) I usually find it easy to encourage a student to understand that respect for others is important	.74			
(8) When I have a student who lies regularly, I can usually convince him/her to stop lying to me	.74			
(11) I know what to do to help students become more kind to others	.72			
(10) I am able to influence the values of students because I am a good role model	.70			
(19) I am confident that I can teach my students to be honest	.65			
(17) I know how to help a student be more responsible	.64			
(22) I can usually control disruptive behaviours in the school	.59			
(14) I can design student-centred activities for GNH values classes		.87		
(12) I know how to create GNH values lessons that hold my students' interest		.83		
(13) I know how to adjust a GNH values lesson to the needs of my students		.82		
(15) I can easily integrate teaching of values into my academic lessons		.69		
(3) I have the knowledge needed to lead teachers in promoting GNH values			.82	
(2) I can generate much interest amongst teachers for successful implementation of GNH Education			.79	
(1) I have been able to lead the development of a clear vision for implementation of GNH education in this school			.77	
(4) I have a good understanding of the GNH concept			.66	
(23) I do not require separate training to teach values				.93
(24) I do not require separate training to lead GNH education in the school				.86
Component correlations				
Component 1	Influencing values development in students			
Component 2	Designing and teaching GNH values lessons	.50		
Component 3	Leading GNH Education	.32	.47	
Component 4	Training on GNH Education	.26	.42	.40
Cronbach's reliability alpha		.81	.84	.77 .84

4.5.1.2 PCA on principal perceptions of school collective efficacy belief measurement scale

The final solution for principal perceptions of school collective efficacy for GNH Education scale produced two distinct components as shown in Table 4.8. Both components 1 and 2 comprised of five items each. Five items (item nos. 25, 26, 34, 35 and 36) that were not substantively aligned to any component were discarded (for actual items see Appendix 3.2). The two school collective efficacy components accounted for 51% of the variance in the items (again on the low side). As shown in Table 4.8 these components were moderately strongly correlated with each other and each component demonstrated acceptable to good reliability (see Table 4.8).

Table 4.8 SCEB scale (principal perceptions): Pattern matrix, component correlation matrix and Cronbach's alpha

	Component	
	1	2
(30) If students are kind, it is often because this school has sufficiently modelled this value	.80	
(29) If parents notice that their children are more responsible, it is likely that the school has promoted this value at school	.78	
(27) When a student shows greater respect for others, it is usually because this school has effectively modelled that value	.77	
(31) When a student becomes kind-hearted, it is usually because this school has created a caring school environment	.66	
(28) When students show carefulness it is often because this school has encouraged the students to do so regularly	.63	
(32) Schools who encourage responsibility can influence students' level of responsibility outside of school		.78
(33) When a problematic student is improving, it is usually due to extra attention provided by the school		.69
(39) Teaching students what it means to be honest is likely to result in students who are more honest		.66
(38) Students will become more respectful if our school promoted respectfulness more		.61
(37) Schools which spend time encouraging students to be respectful of others will see changes in students' social interaction		.60
<u>Component correlation</u>		
Component 1	Modelling and promoting values	
Component 2	Influencing values development in students	.56
Cronbach's reliability alpha		.80 .70

The following labels were provided for principal perceptions of SCEB components: Each component referred to a principal's perceptions of school collective efficacy beliefs related to ...

Component 1: Modelling and promoting values – ... school's collective ability in promoting values such as kindness, respect, caring and carefulness in students through role modelling and

Component 2: Influencing values development in students – ... school's collective ability in influencing values such as responsibility, honesty and respectfulness in their students with more emphasis on problematic students.

4.5.1.3 PCA on principal perceptions of GNH Education importance measurement scale

The final solution for principal perceptions of importance of GNH Education scale produced five distinct components as shown in Table 4.9. Component 1 comprised of five items, component 2 six items, component 3 four items, and component 4 and 5 two items each. All of the 22 items in this scale were substantively aligned to a specific component, so no items were discarded. These five

components accounted for 63% of the variance in the items. As shown in Table 4.9 the first four components were moderately strongly correlated with each other, while component five was weakly correlated with all the other four components. This indicated that ‘teachability of human values and happiness skills’ sub-scale was relatively statistically independent of the remaining components. Items within each of the five components demonstrated acceptable to good reliability (see Table 4.9).

Table 4.9 ImpGNHE scale (principal perceptions): Pattern matrix, component correlation matrix and Cronbach’s alpha

	Component				
	1	2	3	4	5
(51) GNH Edu has the potential to support sustainable and equitable socio economic dev in the long run	.80				
(52) GNH Edu has the potential to support good governance in the long run	.77				
(50) GNH Edu has the potential to support preservation and sustainable use of environment in the long run	.74				
(49) GNH Education has the potential to support preservation of unique Bhutanese culture and tradition in the long run	.65				
(42) Schools should assume a central role in shaping the values of children and youth	.64				
(41) The introduction of GNH Edu will encourage development of moral values in my students	.62				
(40) I think GNH education has been introduced at the right time	.59				
(53) The future happiness status of Bhutan will depend on the success of GNH Edu	.56				
(56) In the process of learning GNH values students will become critical thinkers		.85			
(55) In the process of learning GNH ecologically literate		.75			
(57) In the process of learning be able to help and support others		.69			
(58) In the process of ... become more aware of democratic principles		.69			
(54) In the ... become more caring for others including other species		.64			
(59) In the ... be able to avoid greed and too much selfish desires		.64			
(47) GNH Edu is as important as academic education in this school			.76		
(48) Moral lessons learned in the social interactions of daily school life (such as sports, social work, cultural activities, etc.) can have more influence on students than the content taught through a formal curriculum			.72		
(45) GNH Edu has the potential to improve students’ academic achievements			.60		
(46) GNH Education has the potential to solve many youth problems such as school dropout, drug abuse, teenage pregnancy, alcohol abuse, depression, etc.			.52		
(44) I do not consider GNH Edu to be an extra teaching burden for me				.90	
(43) I do not consider GNH Edu to be an extra administrative burden for me				.89	
(61) Happiness skills can be taught to the children and youth					.90
(60) Human values can be taught to the children and youth					.87
Component correlations					
Component 1	Four pillars of GNH Education				
Component 2	Student learning processes	.52			
Component 3	Academic education and societal impacts	.45	.37		
Component 4	Teaching and administrative burden	.39	.32	.32	
Component 5	Teachability of human values and happiness skills	.06	.10	.11	.08
Cronbach’s reliability alpha		.88	.85	.76	.89 .63

The following labels were provided for principal perceptions of importance components: Each component referred to a principal's perceptions of importance of GNH Education ...

Component 1: Four GNH pillars – ... in relation to the potential of GNH Education to support the four GNH pillars.

Component 2: Student learning processes – ... in terms of supporting student learning in other key learning areas.

Component 3: Academic education and societal impact – ... in terms of supporting students' academic education which has more long term potentials in terms of making impact in the society such as solving youth related problems.

Component 4: Teaching and administrative burden – ... in terms of whether the implementation of GNH Education was considered to be a burden for them or not.

Component 5: Teachability of human values and happiness skills – ... in terms of teachability of human values and happiness skills for school children.

4.5.1.4 PCA on principal perceptions of GNH Education support systems measurement scale

The final solution for principal perceptions of support systems for GNH Education scale produced three distinct components as shown in Table 4.10. Component 1 comprised of 6 items and components 2 and 3 comprised of three items each. Five items (item nos. 62, 63, 64, 71 and 77) that were not substantively related to any component were discarded. As a result data from 12 support systems items were included for subsequent analysis. These three components accounted for 69.5% of the variance in the items. Each of the three components was weakly moderately to moderately strongly correlated with each other and items within each of the first two components demonstrated good reliability to excellent reliability. The alpha value for component 3 was at lower acceptable limit (see Table 4.10).

Findings from the missing value analysis indicated that a total of eight items from the support systems for GNH Education (especially items in components 1 and 2) had large numbers of missing values (ranging from five to 19 percent). The 'missingness' was attributed to the 'Not Applicable' category as more than 46% of the principal sample consisted of vice principals who did not get the opportunity to attend the Paro GNH Education workshop and consequently found ratings on these

items not applicable to them. So the pattern for this scale is most relevant to those principals who accessed the support systems signalled in components 1 and particularly 2.

Table 4.10 SSGNHE scale (principal perceptions): Pattern matrix, component correlation matrix and Cronbach's alpha

	Component		
	1	2	3
(74) The support from teacher education colleges facilitates my leadership in implementing GNH Education	.88		
(68) The support from the Curriculum Department (CASPD) facilitates my leadership in implementing GNH Education	.82		
(69) The support from Education Monitoring, Support and Services Division facilitates my leadership in implementing GNH education	.79		
(70) The support from the District Education Office facilitates my leadership in implementing GNH Education	.77		
(73) The support from parents (local community) facilitates my leadership in implementing GNH Education	.76		
(72) The support from principals in other schools facilitates my leadership in implementing GNH Education	.74		
(66) The Paro GNH Education workshop for principals helped me to organise curricular activities to promote GNH values in the school		.95	
(65) The Paro GNH Education workshop for principals helped me teach values lessons confidently		.91	
(67) The Paro GNH Education workshop for principals helped me to organise extracurricular activities to promote GNH values in the school		.90	
(75) Parents should take more responsibility in promoting GNH values			.79
(78) I promote shared decision making in this school with regard to GNH Edu			.74
(76) Teachers and administrators collaborate well in this school with respect to GNH Education			.73
<u>Component correlations</u>			
Component 1 External support			
Component 2 Paro GNH Education workshop	.43		
Component 3 Internal support and collaboration	.22	.24	
Cronbach's reliability alpha	.88	.92	.61

The following labels were provided for principal perceptions of support system components: Each component was related to the principal perceptions of support received ...

Component 1: External support – ... from external agencies such as curriculum department, school monitoring and support services, district education office, and teacher training colleges in the process of implementing GNH Education.

Component 2: Paro GNH Education workshop – ... by attending Paro GNH Education workshop provided for all the principals in preparation to implement GNH Education.

Component 3: Internal support and collaboration – ... through internal support and collaboration within the school with particular focus on GNH Education implementation process.

4.5.1.5 PCA on principal perceptions of GNH Education actions and impacts measurement scale

Lastly, the final solution for principal perceptions of their actions and impacts for GNH Education items produced three distinct components as shown in Table 4.11. Component 1 comprised of four items, component 2 five items and component 3 four items. Two items (item nos. 83 and 85) that were not substantively related to any component were discarded. As a result data from 13 actions and outcomes items were included for subsequent analysis. These three components accounted for 63.5% of the variance in the items (and they were moderately strongly correlated with each other) and items within each component demonstrated good reliability (see Table 4.11).

Table 4.11 A&I scale (principal perceptions): Pattern matrix, component correlation matrix and Cronbach's alpha

	Component		
	1	2	3
(93) In the process of learning GNH values my students have been able to change some of their own actions and practices	.93		
(92) In the process ... some of their own beliefs and assumptions about values	.93		
(91) In the ... question some of their own beliefs and assumptions about values	.78		
(86) I think that implementation of GNH Edu has reduced student disciplinary problems	.45		
(89) In the process of teaching GNH values I have been able to change some of my own beliefs and assumptions about values		.91	
(90) In the process... some of my own actions and practices		.83	
(88) In the ... to question some of my own beliefs and assumptions about values		.71	
(84) I often like to include the teaching of values in my academic classes		.63	
(87) I am able to critically reflect on my values lessons		.51	
(80) In this school an SBIP on GNH Education was effective			.84
(81) I have established a high priority for promoting GNH values in my school			.82
(82) I provide opportunities for teachers to take risks when it comes to implementation of GNH Edu			.74
(79) I am excited to teach GNH values to my students			.63
Component correlations			
Component 1 Student impact			
Component 2 Principal impact	.55		
Component 3 Principal actions	.51	.57	
Cronbach's reliability alpha	.83	.81	.80

The following labels were provided for principal perceptions of actions and impacts components: Each component reflected principal perceptions of ...

Component 1: Student impact – ... impact on students as a result of GNH Education. It referred to the transformation of students' beliefs and assumptions about values through critical reflection leading to decline of student disciplinary problems in the schools.

Component 2: Principal impact – ... impact on themselves (Principals) as a result of GNH Education. It referred to the transformation of principal's beliefs and assumptions about values through critical reflection leading to modification of their own actions and practices.

Component 3: Principal actions – ... their own actions with regard to the implementation of GNH Education in their own school. It referred to their priority and excitement levels and also whether they provided opportunities for teachers to take risks in terms of promoting GNH values in their school.

4.5.1.6 Summary of the PCA on principal instrument

PCA successfully refined the principal questionnaire through identification of items similar in nature as well as items that did not match with any other items in a particular component. Seven of the 24 original principal self-efficacy items, five of the 15 original principal perceptions of school collective-efficacy items, five of the 17 original principal perceptions of support systems items and two of the 15 original principal perceptions of actions and impacts items were identified to be invalid. However, all 22 items from the principal perceptions of importance of GNH Education were accepted to be valid showing homogeneity or high internal consistency. As a consequence of PCA, 19 principal items were discarded from a total of 93 items. All components in the questionnaire revealed internal consistency reliability alpha above acceptable range of .6 (Manning & Munro, 2007).

4.5.2 Principal component analyses on teacher data

The Teacher Self-Efficacy Belief (TSEB) scale comprised of 23 items, the teacher perceptions of School Collective Efficacy Belief (SCEB) included 17 items, perceptions of Importance of GNH Education (ImpGNHE) included 24 items, perceptions of Support Systems (SSGNHE) included 14 items, and perceptions of Actions and Impacts (A&I) included 12 items. A total of five PCAs, one for each measurement scale were conducted. PCA for teacher data followed the same process as that for the principal questionnaire.

4.5.2.1 PCA on teacher self-efficacy belief measurement scale

The final solution for TSEB items yielded two distinct components as shown in Table 4.12. Component 1 had 12 items and component 2 had nine items. Two items (item nos. 16 and 17) that were not substantively related to the TSEB scale were discarded. These two components accounted for a low 46% of the variance in the items and were moderately strongly correlated with each other (see Table 4.12). The items within each of the components demonstrated good reliability.

Table 4.12 TSEB scale: Pattern matrix, component correlation matrix and Cronbach's alpha

	Component	
	1	2
(12) I know how to adapt GNH values lessons to the needs of my students	.88	
(11) I know how to create GNH values lessons that hold my students' interest	.86	
(13) I can design student centred activities for GNH values classes	.85	
(10) I know how to design lessons that enable all my students to master GNH values	.78	
(21) I can freely express my opinion on important GNH Edu related matters in the school	.60	
(14) I can easily integrate the teaching of values into my academic lessons	.60	
(20) I can influence the decisions made in the school with regard to GNH values education	.59	
(19) I can teach values lessons as effectively as I do other academic subjects	.59	
(18) I am continually finding better ways to encourage dev. of GNH values in my students	.57	
(22) I can reduce negative student behaviours through GNH Education in my classroom	.57	
(23) I do not require separate training to teach values	.51	
(1) I have a good understanding of the GNH concept	.48	
(4) I am confident that I can teach my students to be honest		.74
(7) I usually find it easy to convince a student that respect for others is important		.71
(6) When I have a student who lies regularly, I can usually convince him/her to stop lying to me		.69
(8) I am able to influence the values of students because I am a good role model		.65
(9) I know what to do to help students become more kind to others		.65
(5) I am able to positively influence the values dev. of a child who has had little direction from parents		.64
(2) I know how to help a student to be more responsible		.62
(3) I know how to use different ways that can lead to positive changes in students' values		.58
(15) I am usually comfortable discussing issues of right and wrong with my students		.45
<u>Component correlations</u>		
Component 1	Designing and teaching GNH values lessons	
Component 2	Influencing values development in students	.60
Cronbach's reliability alpha		.89 .83

The following labels were provided for TSEB components: Each component represented a teacher's sense of self-efficacy beliefs in relation to their ability ...

Component 1: Designing and teaching GNH values lessons – ... to integrate GNH values in their teaching subject/s in a manner that stimulated student interest in learning values. It referred to teacher's understanding of GNH concept and training opportunities to teach values; and

Component 2: Influencing values development in students – ... in influencing development of values such as respect, trust, kindness, responsibility and honesty in their students through all aspects of school life and not just necessarily through classroom teaching.

4.5.2.2 PCA on teacher perceptions of SCEB measurement scale

The final solution for teacher perceptions of SCEB items produced two distinguishable components as shown in Table 4.13. Component 1 had nine items and component 2 had three items. Five items (item nos. 26, 33, 35, 36 and 40) that were not substantively related to the teacher perceptions of SCEB scale were discarded. These two components accounted for 49.8% of the variance in the items and were moderately strongly correlated with each other (see Table 4.13). The items within each of the two components demonstrated good reliability and lower acceptable limit respectively.

Table 4.13 SCEB scale (teacher perceptions): Pattern matrix, component correlation matrix and Cronbach's alpha

	Component	
	1	2
(32)If students are kind, it is often because teachers here have sufficiently modelled the value	.81	
(28)When students show carefulness it is often because teachers here have encouraged the students to do so	.71	
(27) When a student shows greater respect for others, it is usually because teachers here have effectively modelled that value	.69	
(38)When a student becomes kind hearted, it can be because teachers here have created caring classroom environments	.69	
(31)Some students will become more respectful if they have teachers who promote respect as they do at this school	.68	
(30)If parents notice that their children are more responsible, it is likely that teachers have promoted this value at this school	.66	
(34)At this school teaching students what it means to be honest is likely to result in students who are more honest	.65	
(29)In this school teachers who spend time encouraging students to be respectful of others will see changes in students' social interaction	.51	
(39)When a problematic student is improving, it is usually due to extra attention provided by the teachers in this school	.47	
(24)We have a clear vision for implementation of GNH Education programme in this school		.90
(25)Teachers in this school have the responsibility to model appropriate behaviour to students		.77
(37)Teachers here make the school a safe place for all the students		.52
<u>Component correlations</u>		
Component 1 Schools modelling and promoting values		
Component 2 Schools creating an appropriate context for GNH Education		.55
Cronbach's reliability alpha	.85	.62

The following labels were provided for SCEB components: Each component was related to a teacher's perceptions of school collective ability ...

Component 1: Modelling and promoting values– ... in terms of promoting values such as kindness, respectfulness, responsibility, caring, honesty and carefulness in students through role modelling; and

Component 2: Schools creating an appropriate context for GNH Education –...to create a context for GNH Education implementation that will be appropriate for the school as well as the students.

4.5.2.3 PCA on teacher perceptions of GNH Education importance measurement scale

The final solution for teacher perceptions of ImpGNHE items produced five interpretable components as shown in Table 4.14. Component 1 had six items, component 2 had eight items, component 3 had five items and component 4 and 5 had two items each. Only one item (item no. 50) that was not substantively related to the teacher perceptions of importance of GNH Education scale was discarded. As shown in Table 4.14, these five components accounted for 66.4% of the variance in the items and were weakly to moderately strongly to strongly correlated with each other. Component 5 showed relatively low correlation with all the four other components. The items within each of the five components demonstrated acceptable to good and excellent reliability.

The following labels were provided for teacher perceptions of importance components: Each component represented a teacher's perceptions of importance of GNH Education in terms of ...

Component 1: Student learning processes – ... student learning in the entire key learning areas.

Component 2: Improving academic education and societal impact –... improving students' academic education which has more long term potentials in regards to societal impacts such as solving youth related problems.

Component 3: Four GNH pillars – ... providing support for four GNH pillars.

Component 4: Teachability of human values and happiness skills – ... teachability of human values and happiness skills for school children.

Component 5: GNH Education as a separate subject – ... introducing GNH Education as a separate subject rather than integration with other academic subject.

Table 4.14 ImpGNHE scale (teacher perceptions): Pattern matrix, component correlation matrix and Cronbach's alpha

	Component				
	1	2	3	4	5
(62) In the process of learning GNH values students will be able to avoid greed and too much selfish desires	.92				
(61) In the process of learning GNH values students will be able to become aware of democratic principles	.88				
(59) In the process of learning GNH values students will become critical thinkers	.82				
(60) In the GNH values students will be able to help and support others	.71				
(58) In the ... GNH values students will become ecologically literate	.71				
(57) In the process of learning GNH values students will become more caring for others including other species	.62				
(43) The GNH Edu has the potential to improve students' academic achievements	.80				
(42) The introduction of GNH Education in the schools will encourage development of moral values in students	.80				
(44) The GNH Education has the potential to solve many youth/child problems such as school dropout, drug abuse, teenage pregnancy, alcohol abuse, depression, etc.	.79				
(41) GNH Education has been introduced at the right time	.78				
(48) Negative student behaviours can be reduced through GNH Education	.61				
(47) The GNH Education has the potential to prepare students to become responsible citizens	.51				
(45) Schools should assume a central role in shaping the values of youth/children	.50				
(49) The GNH Education is as important as academic education	.45				
(53) In the long run GNH Education has the potential to support preservation and sustainable use of the environment			.97		
(54) In the long run GNH Education has the potential to support sustainable and equitable socio economic development			.96		
(52) In the long run GNH Education has the potential to support preservation of unique Bhutanese culture and tradition			.91		
(55) In the long run GNH Education has the potential to support good governance			.81		
(56) The future happiness status of Bhutan will depend on the success of GNH Edu			.49		
(63) Human values can be taught to children and youth				.91	
(64) Happiness skills can be taught to children and youth				.91	
(46) GNH Education should be taught as a separate subject					.91
(51) I would prefer teaching values as a separate subject					.90
Component correlations					
Component 1	Student learning processes				
Component 2	Academic education and societal impact	.64			
Component 3	Four pillars of GNH	.66	.64		
Component 4	Teachability of human values and happiness skills	.35	.44	.39	
Component 5	GNH Education as a separate subject	.19	.18	.21	.10
Cronbach's reliability alpha		.90	.86	.91	.79 .77

4.5.2.4 PCA on teacher perceptions of GNH Education support systems measurement scale

The final solution for teacher perceptions of support systems for GNH Education items produced three distinct components as shown in Table 4.15. Component 1 and 2 had five items each and component 3 had two items. Two items (item nos. 68 and 71) that were not substantively related to the teacher perceptions of support systems for GNH Education scale were discarded. These three

components accounted for 69.9% of the variance in the items and were moderately strongly correlated with each other (see Table 4.15). The items within each of the three components demonstrated acceptable to excellent reliability.

Table 4.15 SSGNHE scale (teacher perceptions): Pattern matrix, component correlation matrix and Cronbach's alpha

	Component		
	1	2	3
(73) This school gets good support from the CAPSD to implement GNH Education	.93		
(72) This school ... EMSSD to implement GNH Education	.89		
(75) This school ... Colleges of Teacher Education to implement GNH Edu	.88		
(74) This school ... DEO to implement GNH Education	.80		
(76) This school ... parents to implement GNH Education	.68		
(66) The principal in this school is a good role model when it comes to GNH Education	.93		
(67) The vice principal in this school is a good role model when it comes to GNH Edu	.86		
(65) We have a supportive leadership in our school for GNH Education	.81		
(78) Teachers in this school are motivated to implement the GNH Edu programme	.49		
(77) Schools have more responsibility in promoting GNH values than parents	.47		
(69) The GNH Edu workshop for trs that I attended helped me teach values lessons			.95
(70) The GNH Education workshop for teachers that I attended helped me to organise extracurricular activities in the school to promote GNH values to my students			.95
<u>Component correlations</u>			
Component 1	External support		
Component 2	Internal support and collaboration	.48	
Component 3	GNH Education workshop (e.g., SBIP)	.48	.45
Cronbach's reliability alpha		.90	.91 .79

The following labels were provided for teacher perceptions of support systems components: Each component represented a teacher's perceptions of support received ...

Component 1: External support – ... from external agencies such as curriculum department, school monitoring and support services, district education office and teacher training colleges in the process of implementing GNH Education.

Component 2: Internal support and collaboration – ... through internal support and collaboration within the school with particular focus on GNH Education implementation process. School leaders' support through effective role modelling played critical role.

Component 3: GNH Education workshop (e.g., SBIP) – ... by attending GNH Education workshop (e.g., School Based In-service Programme) that was organised for teachers in preparation to implement GNH Education.

4.5.2.5 PCA on teacher perceptions of actions and impacts measurement scale

The final solution for teacher perceptions of actions and impacts items produced three distinct components as shown in Table 4.16. Component 1 and 2 had three items each and component 3 had five items. Only one item (item no. 83) that was not substantively related to the teacher perceptions of actions and outcomes scale was discarded. These three components accounted for 63.5% of the variance in the items and were strongly correlated with each other (see Table 4.16). The items within each of the three components demonstrated internal consistency of acceptable to good reliability.

Table 4.16 A&I scale (teacher perceptions): Pattern matrix, component correlation matrix and Cronbach's alpha

	Component		
	1	2	3
(89) In the process of learning GNH values my students have been able to change some of their own beliefs and assumptions about values	.97		
(88) In ... question some of their own beliefs and assumptions about values	.90		
(90) In ... change some of their own actions and practices	.89		
(86) In the process of teaching GNH values I have been able to change some of my own beliefs and assumptions about values		.97	
(85) In ... question some of my own beliefs and assumptions about values		.91	
(87) In ... change some of my own actions and practices		.79	
(79) SBIP on GNH Education was conducted for teachers in this school			.96
(80) I have established a high priority for promoting GNH values in my school			.71
(81) I often like to include the teaching of values in my academic classes			.64
(82) I have experienced some success in teaching GNH values			.49
(84) I am able to reflect critically on my values lessons			.46
<u>Component correlations</u>			
Component 1 Student impact			
Component 2 Teacher impact		.69	
Component 3 Teacher actions		.56	.57
Cronbach's reliability alpha		.87	.85 .78

The following labels were provided for teacher perceptions of actions and impacts components: This component reflected a teacher's perceptions of ...

Component 1: Student impact – ... impact on students made by learning GNH values. It referred to the transformation of students' beliefs and assumptions about values through critical reflection.

Component 2: Teacher impact – ... impact on himself or herself as a result of teaching GNH values. It referred to the transformation of teacher's beliefs and assumptions about values through critical reflection leading to modification of their own actions and practices.

Component 3: Teacher actions – ... their own actions with regard to the implementation of GNH Education in their own school. In particular it measured their priority level for GNH Education and willingness to include values teaching in their academic lessons.

4.5.2.6 Summary of the PCA on teacher instrument

PCA successfully refined the teacher questionnaire through identification of items that were of similar nature and items that did not match with any other items in a particular component. Eleven teacher items were discarded from a total of 90 original items. All components in the teacher questionnaire revealed internal consistency reliability alpha above acceptable range of .6 (Manning & Munro, 2007).

4.5.3 Common components across the Principal and Teacher samples

Once the number of components in each PCA had been computed and their labelling process completed, the existence of common components or otherwise in both the questionnaires was examined. As shown in Table 4.17 there were two principal *self-efficacy* belief components that were common to teacher *self-efficacy* belief components. For example, ‘Influencing values development in students’ was common across both the principal and teacher samples. Principal perceptions of school *collective efficacy* and teacher perceptions of school *collective efficacy* had only one common component. Principal and teacher perceptions of *importance of GNH Education* had four common components. Principal and teacher perceptions of *support systems* for GNH Education in their school had two common components. Principal and teacher perceptions of their *actions and impacts* for GNH Education had only one component common to each other.

Altogether there were ten common components between the two questionnaires. Every respondent was given a score on every component by averaging their ratings on each of the items that defined the component giving a unit-weighted factor score, which Pett, Lackey, and Sullivan (2003) argued was a more robust way to compute ‘factor-based scale scores’ than the internal factor scoring procedures offered by SPSS. Component scores were created by averaging rather than summing for two reasons: i) missing values could be easily and automatically handled within the SPSS Compute Variable transformation procedure, and ii) the resulting scale score was in the original units of measurement (Cooksey, 2007, pp. 144, 434).

Table 4.17 Results of PCA showing common and unique components

Scale	Component	Principal Label	Component	Teacher Label
Principal and Teacher Self-Efficacy Belief (PSEB and TSEB)	1	Influencing values development in students	2	Influencing values development in students
	2	Designing and teaching GNH values lessons	1	Designing and teaching GNH values lessons
	3	Leading GNH Education Training on		
	4	GNH Education		
School Collective-Efficacy Belief	1	Schools modelling and promoting values	1	Schools modelling and promoting values
	2	Schools influencing values development in students	2	Schools creating an appropriate context for GNH Education
Importance	1	Four pillars of GNH	3	Four pillars of GNH
	2	Student learning processes	1	Student learning processes
	3	Academic education and societal impact	2	Academic education and societal impact
	4	Teaching and administrative burden	4	Teachability of human values and happiness skills
	5	Teachability of human values and happiness skills	5	GNH Education as a separate subject
Support system	1	External support	1	External support
	2	Paro GNH Education Workshop	2	Internal support and collaboration
	3	Internal support and collaboration	3	GNH Education Workshop (e.g., SBIP)
Actions and impacts	1	Student impact	1	Student impact
	2	Principal impact	2	Teacher impact
	3	Principal actions	3	Teacher actions

Principal and teacher data files were then integrated bringing together all the common components for common statistical tests. The labelling applied for the ten common components in the statistical analysis presented in the next chapter are shown in Table 4.18. Any comparison at the school level and between principal sample and teacher sample were focused only on the common components. Exploration of principals and teachers as separate samples are focused on the components unique to that sample only.

Table 4.18 Labelling of the common components

Scale	Common Component	Label
Self-efficacy	Designing and teaching GNH values lessons	SEB_Teach_GNHlessons
	Influencing values development in students	SEB_Influ_Values
Collective efficacy	Modelling and promoting values in students	SCEB_ModPro_Values
Importance	Student learning processes	Imp_Stu_Learning_Pro
	Academic education and societal impacts	Imp_Aca_Educ_Socie_Imp
	Support for four GNH pillars	Imp_Sup_4Pillars
	Teachability of human values and happiness skills	Imp_Teach_Values
Support systems	External support	Ext_Support
	Internal support	Int_Support
Actions & impact	Student impact	Stu_Impact

4.6 Chapter summary

This chapter provided a detailed discussion of data screening process, which led to deletion of four principal and 16 teacher respondents from the database and correction of some typographic errors in the data. It was followed by a presentation of the whole process of missing value analyses, which pointed out some problematic items related to GNH Education training and other support activities for implementing GNH Education. However, it was concluded that this trend might have been more attributable to lack of opportunity than to any problems related to questionnaire itself or to the respondents. Data screening and missing values analyses confirmed that there was no serious non-normality in the items in both the principal and teacher data sets. This chapter also presented demographic details and the collapsing process carried out with some demographic categories.

Finally, the principal component analysis formed a major part of this chapter. PCAs were carried out for each scale in each of the principal and teacher data set. It involved refining the items, labelling the components and checking its correlation as well as its reliability. All items that defined each component were positively correlated and possessed adequate reliability. Common components between the two data sets were also identified for comparative study. Having carried out satisfactory preparatory analysis with both the principal and teacher data sets, statistical analyses were carried out and these are presented in the next chapter.

CHAPTER FIVE: PHASE ONE SURVEY DATA ANALYSIS

5.1 Chapter introduction

The previous chapter presented analyses carried out in preparation for the major quantitative data analysis. This chapter presents all relevant analyses conducted to answer quantitative overarching research question: *what are the principals' and teachers' efficacy beliefs, their perceptions of importance, support systems, actions and impacts of GNH Education in Bhutanese schools?* This overarching question has several sub-questions. This chapter presents each of the sub-questions with a detailed discussion of results derived from statistical analyses.

Research sub-questions related to School Collective Efficacy Belief (SCEB) for GNH Education

1. What levels of collective efficacy beliefs for GNH Education do schools hold?
2. Is there a statistically significant difference in SCEB based on school characteristics such as school level, location, size, system and type?
3. Is there a statistically significant difference in SCEB between schools in terms of common principal and teacher self-efficacy, their perceptions of importance of GNH Education, support systems, and actions and impacts components?

Research sub-questions related to comparison of principal and teacher samples

4. Is there a statistically significant difference in the perceptions of GNH Education as measured by common indicators of self-efficacy, importance, support systems, and actions and impacts between principals and teachers in conjunction with various demographic characteristics (school location, level, gender, type, system, qualification, their years of experience, age, length of time in the school, teaching subject/s, teaching class and religion)?

Research sub-questions related to principal sample-specific components

5. What levels of perceptions do principals hold with regard to principal sample-specific components?
6. Is there a statistically significant difference in principal perceptions of principal sample-specific components with respect to various demographic characteristics (level of school, location of school, size of school in terms of number of teachers and number of students, years of experience, gender, age, qualification, teaching subject/s, length of time in the school, service status, nationality and religion)?

Research sub-questions related to teacher sample-specific components

7. What levels of perceptions do teachers hold with regard to teacher sample-specific components?
8. Is there a statistically significant difference in teacher perceptions of teacher sample-specific components with respect to various demographic characteristics (level of school, location of school, size of school in terms of number of teachers and number of students, years of experience, gender, age, qualification, teaching subject/s, length of time in the school, service status, nationality and religion)?

Research sub-questions related to prediction of Principal-Teacher Actions, Principal-Teacher Impacts, and Student Impacts for GNH Education

9. Do demographic variables and common components of self-efficacy beliefs, school collective Efficacy beliefs, perceptions of importance for GNH Education, and perceptions of support system for GNH Education predict Principal-Teacher Actions, Principal-Teacher Impact and Student Impact scores for GNH Education? Which variables and components are better or worse predictors?

The discussion begins with the overall School Collective Efficacy Beliefs (SCEB) for GNH Education.

5.2 Research sub-questions related to school collective efficacy beliefs for GNH Education

The school collective efficacy beliefs (SCEB) items in each of the Principal and Teacher questionnaires were condensed into two composite variables, each through principal component analyses as presented in Chapter Four (see Table 4.17, p. 101). However, there was one common component to both principal and teacher perceptions of school collective efficacy related to the ability of a school in modelling and promoting values. The principal-teacher comparative analyses of SCEB were based on this common component while the other sample-specific components are dealt later in the chapter.

5.2.1 Sub-question 1: Level of school collective efficacy beliefs for GNH Education

To determine the level of SCEB for GNH Education, the principal and teacher scores on the common component were aggregated and a mean score was computed for each school. This led to the creation of a school-level database where all school-level demographic characteristics, as well as school-level collective efficacy scores, were represented. The school-wise mean for all the sample schools ($n = 155$) showed that schools had a moderate to a very high mean for SCEB (see Appendix 5.1 for means of all the sample schools). The lowest mean for a school on the five point rating scale was 3.66 and the highest was 4.80, much higher than the centre point of 2.5. More than 75% of the sample schools had mean scores of 4.00 or above. This was an indication that three quarters of the sample schools showed relatively high perceptions of collective efficacy for GNH Education particularly in their ability to model and promote GNH values in students. However, this was a more general overview of the level of school collective efficacy for GNH Education. Statistical analyses beginning with hierarchical clustering analysis and following up with ANOVA, cross tabulations and MANOVA were carried out to seek further insights into the SCEB for GNH Education.

5.2.1.1 Hierarchical clustering analysis based on SCEB score

A Hierarchical Clustering Analysis (HCA), using Ward's Method with Squared Euclidean distance (Cooksey, 2007) as the distance (or dissimilarity measure), was conducted using the standardised school scores for the SCEB component as the clustering variable. Cluster analysis was employed in order to identify subgroups at natural breakpoints along the collective efficacy continuum within the school-level database. A visual inspection of the dendrogram (see Appendix 5.2) from the HCA identified four distinct clusters of schools based on their collective efficacy beliefs. Cluster one comprised of 66 schools (42.6%), cluster two 21 schools (13.5%), cluster three 40 schools (25.8%) and cluster four 28 schools (18.1%).

A line graph comparing the four clusters in terms of their mean SCEB scores is shown in Figure 5.1. Visual inspection of this line graph showed that schools in the four clusters differed substantively in terms of collective efficacy beliefs for GNH Education. Clusters 2 and 3 consisted of schools that showed comparatively higher collective efficacy beliefs in terms of modelling and promoting values than clusters 1 and 4. Cluster 2 contained schools reporting very high collective efficacy beliefs (mean z-score = 1.74 – collective efficacy beliefs nearly 2 standard deviations above

the school sample mean), cluster 3 contained schools reporting relatively high collective efficacy beliefs (mean z-score = 0.55 – collective efficacy is a half standard deviation above the school sample mean); cluster 1 contained schools reporting relatively lower collective efficacy beliefs (mean z-score = -0.3 – a third of a standard deviation below the school sample mean in collective efficacy) and cluster 4 contained schools reporting, relatively speaking, the lowest level of collective efficacy beliefs (mean z-score = -1.39 = about one and a third standard deviations below the school sample mean in terms of collective efficacy). Consequently, schools in cluster 2 reflected Much Higher School Collective Efficacy Beliefs (labelled as the ‘Much Higher SCEB’ cluster), cluster 3 Moderately Higher School Collective Efficacy Beliefs (‘Mod Higher SCEB’), cluster 1 Moderately Lower School Collective Efficacy Beliefs (‘Mod Lower SCEB’) and cluster 4 Much Lower School Collective-Efficacy Beliefs (‘Much Lower SCEB’).

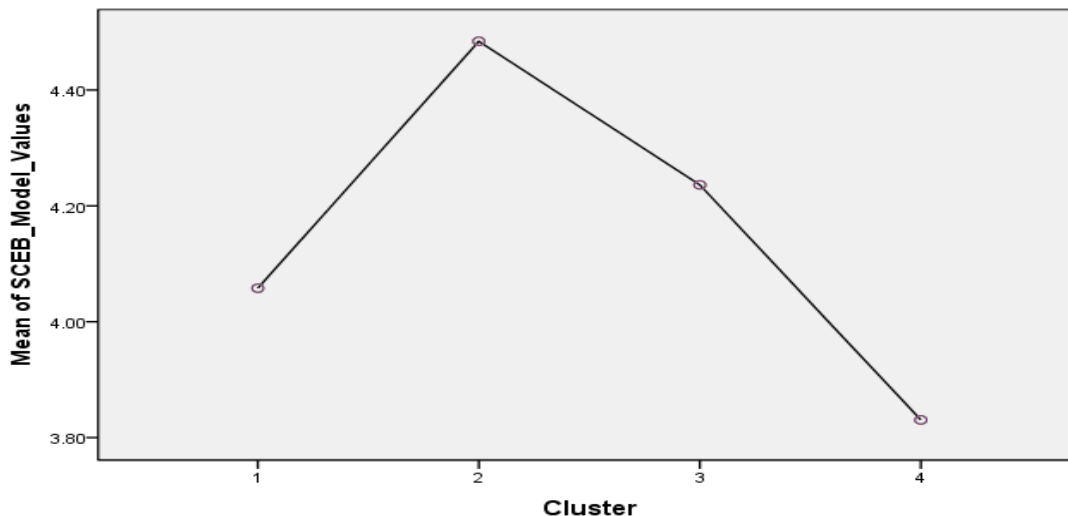


Figure 5.1 A line graph showing mean school collective efficacy beliefs by cluster

5.2.1.2 ANOVA results comparing four clusters

To confirm the mean differences observed visually in Figure 5.1, a one-way analysis of variance (ANOVA) was conducted with clusters as the independent variable and school collective efficacy component as the dependent variable. Levene’s test of homogeneity of variance was found to be significant, $F(3,151) = 11.99, p < .001$. However, inspection of the cluster standard deviations (Mod Lower SCEB cluster, $SD = 0.05$, Much Higher SCEB cluster, $SD = 0.13$, Mod Higher SCEB cluster 3, $SD = 0.05$, and Much Lower SCEB cluster, $SD = 0.08$) revealed that the non-homogeneity was not severe as all standard deviations tended to be very small. An ANOVA comparison of the four

clusters on their standardised collective efficacy scores revealed surprisingly, that the clusters were significantly different and explained 88% of the variability in collective efficacy beliefs ($F(3,151) = 373.40, p < .001, \eta^2 = 0.88$). In order to further identify where among the four clusters group mean differences lie, a posthoc multiple comparison Tukey's HSD test was conducted. The results of the Tukey's HSD test, which evaluated all possible pairs of cluster means showed that all four clusters were significantly different ($p < .001$) from each other (Mod Lower SCEB cluster, $M = 4.06, SD = 0.05$; Much Higher SCEB cluster, $M = 4.48, SD = 0.13$; Mod Higher SCEB cluster, $M = 4.24, SD = 0.05$; and Much Lower SCEB cluster, $M = 3.83, SD = 0.08$).

5.2.2 Sub-question 2: SCEB based on school level, location, size, system and type

Examination of cross tabulations (using Pearson's chi-Square) between clusters and school characteristics (school level, location, system, type, size in terms of number of teachers and size in terms of number of students) did not show any significant patterns (all $p > .001$). So, interestingly membership of the sample schools in collective efficacy clusters was not associated with their geographical location (urban, semi-urban or rural), level (secondary or primary), system (government or private), size (by number of teachers and students) or type (boarding or day-school).

5.2.3 Sub-question 3: Comparison of clusters with the nine common components

As discussed in the previous section, schools in the four collective efficacy clusters showed substantive differences in their perceived collective ability to model and promote GNH values to students. A Multivariate Analysis of Variance (MANOVA) was conducted to further understand and probe deeper in terms of each of the nine common components (two self-efficacy related, four perceptions of importance related, two support systems related and one actions and impacts related) between the four clusters.

5.2.3.1 MANOVA comparing clusters on the nine common components

MANOVA was conducted to further understand collective efficacy cluster differences in terms of the other common components. A one-way between subjects multivariate analysis of variance was conducted using clusters as the independent variable and the nine common components as dependent variables: i) self-efficacy to design and teach GNH values lessons; ii) self-efficacy to influence values in students; iii) perceptions of importance of GNH Education in terms of student learning processes;

iv) importance in terms of academic education and societal impact; v) importance in terms of supporting four GNH pillars; vi) importance in terms of teachability of human values and happiness skills; vii) their perceptions of external support schools received for implementing GNH Education; viii) perceptions of internal support and collaboration that existed within the school; and ix) perceptions of student impacts resulting from GNH Education).

Inspection of multivariate Box’s M Test showed significance ($M= 322.16$, $F(135, 17687.62) = 2.054$, $p < .001$) indicating that the variance – covariance homogeneity assumption among dependent variables had been violated. However, differences in standard deviations among various groups were minimal (less than 1 scale unit). This test outcome was likely due to the large sample size making the test too sensitive. Examination of Levene’s test for homogeneity of variance for each of the dependent variables did not show any significant differences with $p > .001$ for all the components. This result suggested that the assumption of homogeneity of variance had not been violated. The overall multivariate test showed that four clusters differed significantly when all the nine components were considered simultaneously (Wilks’ lambda = .537, $F(27, 406) = 3.578$, $p = .001$, $MV \eta^2 = .187$). Given the significant multivariate test, univariate F-tests were then evaluated for significance. Table 5.1 shows that the clusters differed significantly on each of the nine common components.

Table 5.1 Univariate Follow-up Tests of between-subjects effects for clusters with common components

Source	Dependent Variable	df	Error	F	Sig.	Partial Eta Squared
Clusters	SEB_Teach_GNHlessons	3	147	12.810	< .001	.207
	SEB_Influ_Values	3	147	14.833	< .001	.232
	Imp_Stu_Learning_Pro	3	147	9.436	< .001	.161
	Imp_Aca_Educ_Socie_Imp	3	147	7.066	< .001	.126
	Imp_Sup_4Pillars	3	147	5.949	< .001	.108
	Imp_Teach_Values	3	147	7.882	< .001	.139
	Ext_Support	3	147	6.125	< .001	.111
	Int_Support	3	147	10.549	< .001	.177
	Stu_Impacts	3	147	10.305	< .001	.174

Further investigation employing posthoc Tukey’s HSD multiple comparisons tests were conducted to identify differences between schools in different clusters for each of the nine dependent variables (see Table 5.2). Cluster-wise mean differences were examined for each significant result to understand the characteristics of each cluster in terms of the common components related to GNH Education.

Table 5.2 Significant ($p < .001$) posthoc Tukey HSD multiple comparisons tests between clusters and common components

Dependent Variable	(I) Cluster	(J) Cluster	Mean Difference (I-J)	Std. Error
SEB_Teach_GNH lessons	Mod Lower SCEB	Much Higher SCEB	-.2576*	.06021
	Much Higher SCEB	Much Lower SCEB	.4193*	.06946
	Mod Higher SCEB	Much Lower SCEB	.2283*	.05895
SEB_Influ_Values	Mod Lower SCEB	Much Higher SCEB	-.1788*	.04624
	Much Higher SCEB	Much Lower SCEB	.3229*	.05335
	Mod Higher SCEB	Much Lower SCEB	.2353*	.04527
Imp_Stu_Learning_Pro	Much Higher SCEB	Much Lower SCEB	.3283*	.06626
Imp_Aca_Educ_Socie_Imp	Much Higher SCEB	Much Lower SCEB	.2697*	.07128
	Mod Higher SCEB	Much Lower SCEB	.2363*	.06048
Imp_Sup_4Pillars	Mod Higher SCEB	Much Lower SCEB	.2638*	.06998
Imp_Teach_Values	Much Higher SCEB	Much Lower SCEB	.3509*	.07503
Ext_Support	Mod Lower SCEB	Much Higher SCEB	-.4240*	.10562
	Much Higher SCEB	Much Lower SCEB	.4602*	.12186
Int_Support	Mod Lower SCEB	Much Higher SCEB	-.4243*	.07794
	Much Higher SCEB	Mod Higher SCEB	.3198*	.08383
Stu_Impacts	Mod Lower SCEB	Much Higher SCEB	-.2386	.05987
	Much Higher SCEB	Much Lower SCEB	.3732*	.06907

* The mean difference was significant at the .001 level

5.2.3.2 Interpretation of cluster-wise mean differences for 2 self-efficacy dependent variables

For self-efficacy related to principal-teacher ability to *design and teach GNH values lessons*, the mean for the Much Higher SCEB cluster as shown in Table 5.3 was found to be significantly higher than the means for the Mod Lower SCEB cluster and the Much Lower SCEB cluster. The mean for the Mod Higher SCEB cluster was found to be significantly higher than the Much Lower SCEB cluster. However, the mean for the Mod Lower SCEB cluster did not significantly differ from the mean for the Mod Higher SCEB cluster and the Much Lower SCEB cluster.

Table 5.3 Cluster-wise mean and SD for self-efficacy to design and teach GNH values lessons

Cluster	(2) Much Higher SCEB	(3) Mod Higher SCEB	(1) Mod Lower SCEB	(4) Much Lower SCEB
Mean	4.01	3.82	3.75	3.59
SD	.32	.24	.18	.26

The mean differences observed between the clusters reflect the trend that schools in the Much Higher SCEB cluster also showed significantly higher levels of self-efficacy to design and teach GNH values lessons relative to schools reporting lower levels of SCEB. Note, though, that only 13.5% of the sample schools ($n = 155$) represented the Much Higher SCEB cluster ($n = 21$). The schools reporting the lowest level of SCEB also reported the lowest levels of self-efficacy to design and teach GNH values lessons.

For principal-teacher self-efficacy related to their ability in influencing values development in students, the mean for the Much Higher SCEB cluster as shown in Table 5.4 was found to be significantly higher than the means for the Mod Lower SCEB cluster and the Much Lower SCEB cluster. The mean for the Mod Higher SCEB cluster was found to be significantly higher than the mean for the Much Lower SCEB cluster. However, the mean for the Mod Lower SCEB cluster showed a marginal significant difference ($p = .004$) from the mean for the much lower SCEB cluster. The mean for the Much Higher SCEB cluster did not significantly differ from the mean for the Mod Higher SCEB cluster.

Table 5.4 Cluster-wise mean and SD for self-efficacy to influence values development in students

Cluster	(2) Much Higher SCEB	(3) Mod Higher SCEB	(1) Mod Lower SCEB	(4) Much Lower SCEB
Mean	4.30	4.21	4.12	3.98
SD	.24	.14	.15	.24

The mean differences discussed in the previous paragraph indicated that principals and teachers in the much higher collective-efficacy schools showed higher levels of self-efficacy in their ability to influence values development in students than any other clusters. However, as indicated in the previous page schools in this cluster made up only 13.5% of the sample schools. The Mod Higher SCEB cluster and Mod Lower SCEB cluster both showed higher levels of self-efficacy to influence values development in students compared to the Much Lower SCEB cluster. This pattern in both the self-efficacy components showed that individual self-efficacy for GNH Education had a direct link to school collective efficacy for GNH Education. This suggests that self-efficacy of individuals may reflect the robustness of collective-efficacy of a school.

5.2.3.3 Interpretation of cluster-wise mean differences for 4 perceptions of importance of GNH Education dependent variables

For perceptions of importance of GNH Education in terms of *student learning processes*, the mean for the Much Higher SCEB cluster, as shown in Table 5.5, was found to be significantly higher than the mean for the Much Lower SCEB cluster. The mean for the Mod Lower SCEB cluster and the Mod Higher SCEB cluster were found to be marginally significantly different ($p = .003$ and $.002$, respectively) from the means for the Much Higher SCEB cluster and the Much Lower SCEB cluster respectively.

Table 5.5 Cluster-wise mean and SD for student learning processes

Cluster	(2) Much Higher SCEB	(3) Mod Higher SCEB	(1) Mod Lower SCEB	(4) Much Lower SCEB
Mean	4.19	4.08	3.99	3.87
SD	.25	.20	.22	.26

The mean differences observed in Table 5.5 indicated that the schools with higher collective efficacy also tend to have stronger perceptions of the importance of GNH Education in terms of student learning. This indicated that schools with higher collective efficacy beliefs also tend to perceive that the introduction of GNH Education in the Bhutanese schools has the potential to benefit students in other key learning areas.

For perceptions of importance of GNH Education in terms of enhancing *academic education of students and societal impact*, the means for the Much Higher SCEB cluster as shown in Table 5.6 and the Mod Higher SCEB cluster were significantly higher than the mean for the Much Lower SCEB cluster. However, the mean for the Mod Lower SCEB cluster did not significantly differ from means of other three clusters. The mean for the Much Higher SCEB cluster also did not significantly differ from the mean for the Mod Higher SCEB cluster.

Table 5.6 Cluster-wise mean and SD for academic education and societal impact

Cluster	(2) Much Higher SCEB	(3) Mod Higher SCEB	(1) Mod Lower SCEB	(4) Much Lower SCEB
Mean	4.17	4.13	4.02	3.90
SD	.29	.19	.22	.30

The trend indicated that principal and teacher perceptions did not differ a great deal in terms of importance they attached to the potential influence GNH Education could have on student academic performance and long term societal impacts. However, it is interesting to note that the pattern of their beliefs were again maintained as schools in the much higher SCEB cluster perceived GNH Education as more important for academic education and societal impacts, followed by the moderately higher SCEB, moderately lower SCEB and much lower SCEB clusters respectively.

For perceptions of importance of GNH Education in terms of providing support for the *four GNH pillars*, the mean for the Mod Higher SCEB cluster (Table 5.7) was found to be significantly higher than the mean for the Much Lower SCEB cluster and this was the only statistically significant result. Interestingly the pattern maintained in all the other components has been slightly changed in terms of perceptions of support for four GNH pillars with the moderately higher SCEB cluster ($N = 40$) at the top.

Table 5.7 Cluster-wise mean and SD for support for four GNH pillars

Cluster	(3) Mod Higher SCEB	(2) Much Higher SCEB	(1) Mod Lower SCEB	(4) Much Lower SCEB
Mean	4.34	4.31	4.18	4.07
SD	.23	.38	.25	.32

For perceptions of importance of teachability of human values and happiness skills, the mean for the Much Higher SCEB cluster as shown in Table 5.8 was significantly higher than the mean for the Much Lower SCEB cluster and was marginally significantly higher ($p = .003$) than the mean for the Mod Lower SCEB cluster. However, the mean for the Mod Higher SCEB cluster did not significantly differ from the mean of the Much Lower SCEB cluster and the two lower SCEB clusters did not significantly differ from each other.

Table 5.8 Cluster-wise mean and SD for teachability of human values and happiness skills

Cluster	(2) Much Higher SCEB	(3) Mod Higher SCEB	(1) Mod Lower SCEB	(4) Much Lower SCEB
Mean	4.49	4.33	4.26	4.14
SD	.23	.21	.23	.30

Similar to other common components, the much higher collective efficacy schools were inclined to show stronger perceptions of teachability of human values and happiness skills to students followed by moderately higher, moderately lower and much lower SCEB clusters.

5.2.3.4 Interpretation of cluster-wise mean differences for 2 perceptions of support systems for GNH Education dependent variables

In terms of school-based perceptions of support received from the *external agents* such as teacher training colleges, curriculum and research department of the Ministry of Education, District Education Office, the School Monitoring and Support Services Division, the mean for the Much Higher SCEB cluster was found to be significantly higher than the means for Mod Lower SCEB cluster and Much Lower SCEB cluster. However, the mean for the Mod Lower SCEB cluster did not significantly differ from the means of the Mod Higher SCEB and Much Lower SCEB clusters. The mean for Much Higher SCEB cluster also did not significantly differ from the mean for Mod Higher SCEB cluster (see Table 5.9).

Table 5.9 Cluster-wise mean and SD for external support

Cluster	(2) Much Higher SCEB	(3) Mod Higher SCEB	(1) Mod Lower SCEB	(4) Much Lower SCEB
Mean	3.51	3.17	3.09	3.05
SD	.46	.47	.33	.46

The much higher collective efficacy cluster showed stronger perceptions of support from external agents followed by moderately higher, moderately lower and much lower collective efficacy clusters. Note that means for the external support of all the four clusters were comparatively lower compared to the other components. Such findings are likely to negatively impact the implementation process of GNH Education. However, this finding needs to be cautiously interpreted as indicated by the missing values analysis in Chapter Four.

For perceptions of the *internal school level support and collaboration*, the mean for the Much Higher SCEB cluster as shown in Table 5.10 was found to be the only significant result. It was significantly higher than the means of all the other three clusters.

Table 5.10 Cluster-wise mean and SD for internal support and collaboration

Cluster	(2) Much Higher SCEB	(3) Mod Higher SCEB	(1) Mod Lower SCEB	(4) Much Lower SCEB
Mean	4.34	4.02	3.91	3.92
SD	.28	.32	.29	.33

The pattern of principal and teacher perceptions of internal support and collaboration were also closely aligned with the school collective efficacy beliefs: the higher the collective efficacy beliefs, stronger the perceptions of the existence of internal support and collaboration. However, the mean differences are not very large.

5.2.3.5 Interpretation of cluster-wise mean difference for perceptions of actions and impacts of GNH Education dependent variable

For school-based perceptions of actions and impacts of GNH Education related to *student impact*, once again the mean for the Much Higher SCEB cluster as shown in Table 5.11 was found to be significantly higher than the means of the Mod Lower SCEB cluster and Much Lower SCEB cluster. The mean of Mod Higher SCEB cluster was marginally significantly higher ($p = .005$) than the mean of Much Lower SCEB cluster. The Much Higher SCEB cluster did not significantly differ from the mean of Mod Higher SCEB cluster and the two lower SCEB clusters did not differ from each other.

Table 5.11 Cluster-wise mean and SD for student impact

Cluster	(2) Much Higher SCEB	(3) Mod Higher SCEB	(1) Mod Lower SCEB	(4) Much Lower SCEB
Mean	3.88	3.70	3.64	3.51
SD	.30	.23	.19	.28

While the mean difference for the student impacts component is not much between schools of different clusters the trend seems to be maintained. As observed in other components, the trend showed that the schools with higher collective efficacy were inclined to possess stronger perceptions of impact GNH Education can make on students.

5.2.3.6 Summary of cluster-wise mean differences for nine common components

From the mean differences discussed above for all the common components amongst clusters of schools, it became obvious that there was some association between school collective efficacy and

principal/teacher individual self-efficacy, their perceptions of importance of GNH Education, support systems, and actions and impacts. The stronger the collective efficacy schools possessed, the higher their self-efficacy beliefs tended to be and the stronger their aggregated perceptions of importance, support systems, and actions and impacts of GNH Education tended to be. However, it is worthwhile to note that schools in the Much Higher SCEB and Mod Higher SCEB clusters represented only 39.3% of the sample schools whereas the majority (60.7%) of the sample schools in the Mod Lower SCEB and Much Lower SCEB clusters had relatively lower self-efficacy and weaker perceptions of importance of GNH Education, support systems, and actions and impacts.

The examination of the grand mean for each of the nine common components as shown in Table 5.12 revealed that, at the school-level, principals and teachers had the strongest perceptions of importance that human values and happiness skills were teachable in the schools followed by their perceptions of importance that GNH Education had the potential to support four GNH pillars. This indicated that, at a school level, principals and teachers in the sample were supportive of GNH

Table 5.12 Cluster grand means for the nine common components in rank order

Common component	Grand mean
Perceptions of importance on teachability of human values and happiness skills	4.31
Perceptions of importance on support for four GNH pillars	4.23
Self-efficacy to influence values development in students	4.15
Perceptions of importance on academic education and societal impacts	4.05
Perceptions of internal support and collaboration	4.05
Perceptions of importance on student learning processes	4.03
Self-efficacy to design and teach GNH values lessons	3.79
Perceptions of student impacts	3.68
Perceptions of external support	3.21

Education. However, the grand mean for self-efficacy components, especially the self-efficacy related to designing and teaching GNH values lessons appeared to be not as robust. Also, when comparisons are made schools appeared to relatively show weakest perceptions on external support and the impacts of GNH Education on students. Without a robust sense of self-efficacy to design and teach GNH values lessons and timely support from the relevant stakeholders, principals and teachers are likely to consider that they cannot make a lasting impact on their students with regard to GNH Education. This finding suggests potential difficulties for GNH Education implementation despite their importance to the Bhutanese people.

5.3 Research sub-questions related to comparison of principals and teachers

Differences between individual principal and teacher perceptions of GNH Education, in conjunction with the potential influence of relevant demographic characteristics (location, level, type, system, gender, qualification, experience, age, length of time in the school, religion, teaching subject and teaching class) were also explored with respect to nine common components. Two of the components were related to principal and teacher self-efficacy; four importance of GNH Education related; two support systems for GNH Education related and; one GNH Education actions and impacts related.

5.3.1 Research sub-question 4: Comparison of principal-teacher perceptions of GNH Education in conjunction with twelve demographic characteristics

A total of twelve Two-Way MANOVAs were conducted using the nine common components as dependent variables and each of the twelve demographic characteristics (location, level, type, system, gender, qualification, experience, age, length of time in the school, religion, teaching subject and teaching class) as independent variables in separate analyses. The Teacher-Principal (Tr0_Pr1) variable was added as the second independent variable in each MANOVA so that differences between principal and teacher samples as well as the interaction between the teacher-principal variable and the demographic variable of interest could be clearly explored. This means that each MANOVA had one main effect (Tr0_Pr1) that was common to all analyses (therefore, very similar patterns for this main effect were to be expected), one unique main effect (linked to the demographic variable that was being examined) and the unique two-way interaction between Tr0_Pr1 and that demographic variable. The interpretation of the MANOVAs occurs in a block-type format, where all outcomes from the Tr0_Pr1 by demographic variable interactions are discussed first, followed by the demographic variable main effects and finally the Tr0_Pr1 main effects.

Inspection of multivariate Box's M Test showed significance with $p < .001$ for all the MANOVAs indicating that observed covariance matrices of all the dependent variables were not equal across groups. Nevertheless, examination of standard deviations for all the groups showed that differences were minimal (less than 1 scale unit of SD). Levene's tests for each of the dependent variables were produced to check the homogeneity of variances (Manning & Munro, 2007). While most of the dependent variables were not significant ($p < .001$) for each MANOVA, there were a small number of significant results. However, inspection of the standard deviations for those variables with significant Levene's tests revealed that the non-homogeneity was not severe as all

standard deviations tended to be very small. Again, it is more likely that the patterns of significance on these tests arose simply because of the sample size available for the tests. This was an indication that MANOVA could be carried out with confidence (Manning & Munro, 2007).

5.3.1.1 Two-way interaction effects between teacher-principal and demographic variables

Results of Multivariate F-tests: Examination of multivariate F-tests based on Wilk's Lambda as shown in Table 5.13 indicated no significant interaction effects between teacher-principal (Tr0_Pr1) and any of the demographic variables. This result clearly showed that principals and teachers did not significantly vary in their self-efficacy beliefs (design and teach GNH values lesson and self-efficacy to influence values development in students), perceptions of importance (in terms of student learning,

Table 5.13 MANOVA results for 2 way interaction effects between Tr0_Pr1 and demographic variables

Effect	Wilks' lambda a	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Location	.985	1.101 ^a	18.000	2552.000	.344	.008
Level	.994	.893 ^a	9.000	1278.000	.531	.006
Type	.989	1.566 ^a	9.000	1267.000	.121	.011
System	.989	1.550 ^a	9.000	1278.000	.125	.011
Gender	.990	1.406 ^a	9.000	1277.000	.180	.010
Qualification	.984	1.134 ^a	18.000	2528.000	.311	.008
Experience	.982	1.287 ^a	18.000	2532.000	.186	.009
Age	.989	.771 ^a	18.000	2550.000	.737	.005
Length of time	.987	.923 ^a	18.000	2514.000	.550	.007
Teaching subject	.981	.878	27.000	3692.174	.647	.006
Teaching class	.977	1.659 ^a	18.000	2536.000	.040	.012
Religion	.986	1.966 ^a	9.000	1263.000	.040	.014

academic education, support for four GNH pillars and teachability of human values and happiness skills), perceptions of support systems (external and internal support), and actions and impacts (student impact) conditional on the particular category of any of the demographic variables.

5.3.1.2 Demographic variables main effects

Results of Multivariate F-tests for the demographic variables main effects: Examination of multivariate F-tests based on Wilk's Lambda, across the 12 MANOVAs, showed one significant outcome for the teaching subject main effect (see Table 5.14), while all other main effects for school

location, level, type, system, gender, qualification, experience, age, length of time in the school, religion and teaching class were not significant with $p > .001$.

Table 5.14 MANOVA results for demographic variables main effect

Effect	Wilks' lambda	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Location	.978	1.594 ^a	18.000	2552.000	.053	.011
Level	.988	1.711 ^a	9.000	1278.000	.082	.012
Type	.990	1.384 ^a	9.000	1267.000	.190	.010
System	.989	1.565	9.000	1278.000	.121	.011
Gender	.989	1.546 ^a	9.000	1277.000	.127	.011
Qualification	.988	0.849 ^a	18.000	2528.000	.643	.006
Experience	.979	1.519 ^a	18.000	2532.000	.074	.011
Age	.986	1.012 ^a	18.000	2550.000	.442	.007
Length of time	.982	1.259 ^a	18.000	2514.000	.205	.009
Teaching subject	.955	2.154	27.000	3692.174	< .001	.015
Teaching class	.979	1.504 ^a	18.000	2536.000	.079	.011
Religion	.986	1.966 ^a	9.000	1263.000	.037	.014

Results of the univariate F-test for the *teaching subject* main effect indicated that the type of subject/s principals-teachers taught significantly differed in their self-efficacy to influence values development in students ($F(3, 1272) = 1.356, p < .001, \text{partial } \eta^2 = .017$). No significant differences were observed for the remaining eight common components. Further, posthoc Tukey HSD multiple comparisons tests revealed that that principals and teachers teaching Dzongkha had a significantly higher mean ($M = 4.34, SD = .41$) compared to other principals-teachers teaching General subjects at the primary level ($M = 4.16, SD = .46$) and those teaching Humanities (History, Geography, Social Studies, English) at the secondary level ($M = 4.10, SD = .42$). The mean of principals and teachers teaching Humanities was also significantly lower than the mean of principals-teachers teaching Sciences such as Biology, Chemistry, Physics, Mathematics, IT, and Business Studies ($M = 4.26, SD = .42$). Traditionally Dzongkha teachers have been responsible for teaching traditional customs and values and disciplining students. Furthermore, Dzongkha textbooks at all levels of schools are alive with value-laden texts, perhaps this is one of the reasons why principals and teachers teaching Dzongkha have higher self-efficacy beliefs for influencing values development in students.

5.3.1.3 Teacher-Principal (Tr0_Pr1) main effects

The multivariate test for teacher-principal main effects was significant in each of the 12 MANOVAs conducted. The partial η^2 explained by this main effect ranged from .017 (in the MANOVA with the

Age variable) to .108 (in the MANOVA with the Experience variable). Univariate F-tests showed that principals and teachers displayed significant differences on only five dependent variables, depending upon which MANOVA was examined (see Table 5.15). For instance, principals and teachers showed significant differences in their self-efficacy to *design and teach GNH values lessons* in terms of all the twelve demographic variables. Examination of principal and teacher means showed that principal means were significantly higher for all the five significant dependent variables than the teacher means. This result indicated that principals in the sample had higher self-efficacy perceptions related to their ability in designing and teaching GNH values lessons and influencing values development in students, and also stronger perceptions of student learning processes, external support, and internal support and collaboration.

Table 5.15 Teacher-Principal Univariate F-Test patterns showing significant differences

Dependent Variable	Demographic Variable											
	Location	Level	Type	System	Gender	Qualification	Experience	Age	Length of time	Teaching Subject	Class	Religion
Design and teach GNH values lessons	*	*	*	*	*	*	*	*	*	*	*	*
Influence values development in students	*									*		
Student learning processes	*	*	*		*							
External support	*	*	*		*	*	*		*	*		
Internal support and collaboration	*	*	*	*	*	*	*		*	*	*	*

*Indicates a significant univariate F-test was observed ($p < .001$).

A possible reason for principals showing higher self-efficacy beliefs related to their ability in *designing and teaching GNH values lessons* and *influencing values development in students* and also much stronger perceptions in terms of *student learning processes*, *external support systems*, and *internal support and collaboration* could be attributed, at least in part, to the Paro GNH Education workshop that was provided to all the principals. Perhaps this workshop played a substantive role in raising the efficacy beliefs of the principals.

5.3.1.4 Summary of teacher-principal comparisons

The two-way interactions effects between teacher-principal and the demographic variables showed no significant differences for any of the nine dependent variables. However, for the demographic variables main effect, teaching subject of the teacher-principal revealed significant differences with respect to *self-efficacy to influence values development in students* dependent variable. The univariate F-test and posthoc multiple comparison tests found that teacher-principal teaching Dzongkha had significantly higher self-efficacy beliefs, related to their ability in *influencing values development in students*, when compared to teacher-principal teaching general subjects at primary level and humanities subjects at the secondary level. Teacher-principal teaching Humanities subjects were also found to have lower self-efficacy related to ability in influencing values development in students compared to their counterparts teaching Science subjects. Although promotion of values in students would be more relevant to Humanities subjects, it cannot be certain why teacher-principal teaching Science subjects showed higher self-efficacy in this study. This finding will necessitate more research in the future to determine the cause-effect relationship.

For the Teacher-Principal main effect, significant differences in five dependent variables were found, while the other four dependent variables were not significant. For all the significant dependent variables, principal mean scores were higher than the teacher mean scores indicating that principals were relatively efficacious in implementing GNH Education compared to the teachers. Such findings could also be partly attributed to the Paro GNH Education workshop for the principals as it was mainly targeted to prepare the school principals to roll out the GNH Education programme. Furthermore, teachers and principals exhibited equally strong perceptions of importance of GNH Education (in terms of academic education and societal impacts, four pillars of GNH and teachability of human values and happiness skills). One obvious finding, resulting from these tests is that both teachers and principals showed weaker perceptions of student impacts. While possible reasons for this are immediately obvious, and noting that GNH Education was only in its initial stages of implementation, perhaps one reason could be because both teachers and principals found it difficult to ascertain any measurable outcomes from their students. However, findings from the phase 2 case studies provide some possible explanations for such low perceptions (see next chapter).

5.4 Research sub-questions related to principal sample-specific components

A total of seven principal sample-specific components were identified through Principal Component Analysis as presented in the previous chapter. Two of the seven components were related to principal self-efficacy beliefs (leading GNH Education and training on GNH Education), one to school collective efficacy beliefs (schools influencing values development in students), one to perceptions of importance (teaching and administrative burden), one to perceptions of support systems (Paro GNH Education workshop) and two to perceptions of actions and impacts (Principal actions and Principal impacts). The focus of this section is on the examination of principal perception levels of these seven components (sub-question 5) and principal perceptions based on various demographic variables (sub-question 6).

5.4.1 Sub-question 5 – Level of principal perceptions of 7 principal sample-specific components

The seven principal sample-specific components related to self-efficacy beliefs (leading GNH Education and training on GNH Education), SCEB (schools influencing values development in students), perceptions of importance (teaching and administrative burden), perceptions of support systems (Paro GNH Education workshop), and perceptions of actions and impacts (principal actions and principal impacts) for GNH Education with their means and standard deviations are provided in Table 5.16. The means for SCEB in influencing values development in students and principal perceptions of their GNH Education impacts were comparatively higher than the means for other five components. Principal perceptions of support provided by the Paro GNH Education workshop and training to implement GNH Education had relatively the lowest means and larger standard deviations. However, for a five point Likert scale with a centre point of 3, these means were just slightly above neutral to relatively high indicating that the Principals ($n = 244$) in the sample schools had moderate self-efficacy beliefs for leading GNH Education and training on GNH Education; very high school collective efficacy beliefs in influencing values development in students; high perceptions of importance related to teaching and administrative burden, and moderate perceptions of support provided by the Paro GNH Education workshop; and high perceptions of principal actions and impacts. Any significant differences among principal respondents in their perceptions of the seven unique components are addressed in the following sections.

Table 5.16 Principal sample-specific components with means and SD in rank order

Components	Mean	SD
Schools influencing values development in students	4.30	0.42
Principal impact	4.10	0.43
Principal actions to implement GNH Education	4.04	0.56
Teaching and administrative burden	4.00	1.02
Leading GNH Education	3.96	0.53
Training on GNH Education	3.28	1.06
Paro GNH Education workshop support	3.25	1.62

5.4.2 Sub-question 6- Principal perceptions of 7 principal sample-specific components compared on 15 demographic characteristics

A total of fifteen one-way MANOVAs were conducted between seven principal sample-specific components: i) leading GNH Education; ii) training on GNH Education; iii) schools influencing values development in students; iv) teaching and administrative burden; v) Paro GNH Education workshop support; vi) principal actions; and vii) principal impacts as dependent variables and fifteen demographic characteristics (level of school, location of school, type of school, school system, current post, size of school in terms of number of teachers, size in terms of number of students, years of experience, gender, age, qualification, teaching subject/s, length of time in the school, teaching class and religion) as independent variables to explore if there were any statistically significant differences in the seven dependent variables.

Inspection of multivariate Box's M Test showed significance in terms of *current post*, *qualification*, *age*, *experience*, *teaching subject*, *school system* and marginal significance for *size of the school by number of students* indicating that homogeneity of covariance matrices of all the dependent variables were not equal across groups. However, examination of standard deviations for all the groups showed that differences were minimal. Levene's tests for each of the dependent variables were produced to check the homogeneity of variances. While five of the dependent variables were not significant ($p > .001$) for each MANOVA, principal perceptions of support provided by the Paro GNH Education workshop (in terms of gender, current post, experience and qualification) and principal perceptions of actions (in terms of age) showed significance ($p < .001$). However, inspection of the standard deviations for support provided by the Paro GNH Education workshop and principal actions revealed only relatively small differences between various grouping variables.

5.4.2.1 Results of multivariate F-tests

The overall multivariate F-tests showed that *Gender* (Wilk's Lambda = .857, MV F(7, 218) = 5.214, $p < .001$, partial $\eta^2 = .143$) and *Current Post* (Wilk's Lambda = .847, MV F(7, 216) = 5.595, $p < .001$, partial $\eta^2 = .153$) were significantly different and *Qualification* (Wilk's Lambda = .871, MV F(14, 424) = 2.168, $p = .008$, partial $\eta^2 = .067$) and *Experience* (Wilk's Lambda = .850, MV F(14, 424) = 2.555, $p = .002$, partial $\eta^2 = .078$) were marginally significantly different on the seven principal sample-specific components. Multivariate differences on the other independent variables (level, type, system, location, size by number of teachers, size by number of students, age, length of time, religion, teaching subject and teaching class) were not significant.

5.4.2.2 Results of univariate F-tests

Following the significant multivariate F-tests for principal gender and current post and marginal significance for experience and qualification, univariate F-tests were examined to identify which principal sample-specific components contributed to the significance. For independent variables with more than two categories, posthoc Tukey multiple comparisons tests were scrutinised to identify which categories were significantly different.

According to the results of univariate F-tests as shown in Table 5.17, principal *Gender*, *Experience* and *Qualification* showed statistically significant differences ($p < .001$) on only one principal sample-specific component (support provided by Paro GNH Education workshop) whereas *Current Post* showed significant differences on two components (support provided by Paro GNH Education workshop and leading GNH Education) and marginal significance ($p = .007$) on one component (GNH Education training).

Table 5.17 Selected Tests of Between-Subjects Effects for principal sample-specific components with significant results

MANOVA Effect	Dependent Variable	df	Error	F	Sig.	Partial Eta Squared
Gender	Paro GNH Education workshop	1	224	17.513	< .001	.073
Current Post	Paro GNH Education workshop	1	222	31.662	< .001	.125
	Leading GNH Education	1	222	11.127	= .001	.048
	GNH Education training	1	222	7.340	= .007	.032
Experience	Paro GNH Education workshop	2	218	12.028	< .001	.099
Qualification	Paro GNH Education workshop	2	218	8.696	< .001	.074

The examination of effect size as measured by Partial Eta Squared generally explained a small portion of variability of scores for each grouping variable implicated (see Table 5.17). Inspection of means and standard deviations for each of the grouping variables showed the following results:

- In terms of principal *Gender*, the male principals' mean for their perceptions of support provided by the Paro GNH Education workshop was significantly higher ($M = 3.58$, $SD = 1.39$) than for female principals ($M = 2.55$, $SD = 1.78$).
- With regard to *Current Post* of the principal respondents, the Principal means for the three implicated components in Table 5.17– *Paro GNH Education workshop* ($M = 3.91$, $SD = 1.12$); *leading GNH Education* ($M = 4.08$, $SD = .44$) and *GNH Education training* ($M = 3.48$, $SD = 1.02$) were significantly higher than the means for Assistant/Vice Principals ($M = 2.84$, $SD = 1.69$, $M = 3.84$, $SD = .59$ and $M = 3.11$, $SD = 1.06$, respectively).
- For principal *Experience*, consultation of Posthoc Tukey multiple comparison tests showed that the mean perception of the support provided by the Paro GNH Education workshop for principals with long term experience ($M = 4.10$, $SD = .88$) was significantly higher than the mean for principals with short term experience ($M = 2.79$, $SD = 1.73$) and the mean for principals with medium term experience ($M = 3.55$, $SD = 1.43$) was marginally ($p = .002$) higher than the mean for principals with short term experience.
- With regard to the principal *Qualification*, consultation of Posthoc Tukey multiple comparison tests showed that the mean for principals with certificate qualification ($M = 4.02$, $SD = .83$) was significantly higher than the mean for principals with bachelor qualification ($M = 3.06$, $SD = 1.69$).

5.4.2.3 Summary of principal sample-specific components

Overall, the perceptions of support provided by the Paro GNH Education workshop was relatively weaker among female principals compared to their male counterparts, vice principals compared to principals, short term experience principals compared to medium term and long term experience principals and principals with bachelors qualification compared to certificate and postgraduate qualifications. Furthermore, principals showed higher self-efficacy for leading GNH Education and GNH Education training compared to their vice/assistant principals. These findings could be partly attributed to the fact that 46% of the principal respondents were vice principals who did not get the

opportunity to participate directly in the Paro GNH Education workshop. In terms of gender, 21% of the principal participants were females and most of these female participants were vice principals. In terms of qualification, principals with certificate were relatively more experienced compared to principals with Bachelors qualification. So the trend showed that the more experienced principals exhibited stronger perceptions of support provided by Paro GNH Education workshop.

5.5 Research sub-questions related to teacher sample-specific components

A total of five teacher sample-specific components were identified through Principal Component Analysis, as indicated in in the previous chapter. One of the five components was related to school collective efficacy beliefs (schools creating an appropriate context for GNH Education), one to perceptions of importance (GNH Education as a separate subject), one to perceptions of support systems (GNH Education workshop, e.g., SBIP), and two to perceptions of actions and impacts (Teacher actions and Teacher impact). This section particularly focuses on the perception levels of the five teacher sample-specific components (sub: question 7) and teacher perceptions based on various demographic variables (sub: question 8).

5.5.1 Sub-question 7 – Level of teacher perceptions of 5 teacher sample-specific components

The five teacher sample-specific components related to SCEB (schools creating an appropriate context for GNH Education), perceptions of importance (GNH Education as a separate subject), perceptions of support system (GNH Education workshop, e.g., SBIP), and perceptions of actions and impacts (teacher actions and teacher impact) for GNH Education with their mean and standard deviations are provided in Table 5.18.

Table 5.18 Five teacher sample-specific components with mean and SD in rank order

Component	Mean	SD
Schools creating an appropriate context for GNH Education	4.16	0.55
Teacher actions to implement GNH Education	3.89	0.57
Teacher impact	3.84	0.59
GNH Education as a separate subject	3.49	1.02
GNH Education workshop (e.g., SBIP)	3.43	1.08

The means for SCEB in creating an appropriate context for GNH Education was comparatively higher than the means for other four components. This result indicated that teacher perception of school collective efficacy beliefs in creating an appropriate context for GNH Education was moderately high. On the other hand, teacher perception of the support provided by the workshop (e.g., SBIP) to implement GNH Education and teacher perceptions of importance in terms of introducing GNH Education as a separate subject had relatively the lowest means. The means for teacher perceptions of their actions and impacts of GNH Education were considered to be at a moderate level. For a five point Likert scale with a centre point of 3, most of these means were just slightly above neutral. Any significant differences among teacher respondent demographics in their perceptions of the five unique components are addressed in the following sections.

5.5.2 Sub-question 8 – Teacher perceptions of 5 teacher sample-specific components compared on 14 demographic characteristics

A total of fourteen one-way MANOVAs were conducted between five teacher sample-specific components: i) schools creating an appropriate context for GNH Education; ii) GNH Education as a separate subject; iii) SBIP on GNH Education; iv) teacher actions; and v) teacher impact as dependent variables and fourteen demographic characteristics (location of school, system, type, level, gender, qualification, years of experience, teaching subject/s, age, length of time in the school, religion, teaching class, nationality and service status) as independent variables to explore if there were any statistically significant differences in the scores of the dependent variables.

Inspection of multivariate Box's M Test showed significance ($p < .001$) for most of the MANOVAs (location, system, experience, religion, teaching class, nationality and service status) and marginal significance for school level, teaching subject, and age indicating that observed covariance matrices of all the dependent variables were not equal across groups. However, examination of standard deviations for various groups showed that differences are minimal. Inspection of Levene's tests for each of the five dependent variables to check the homogeneity of variances revealed several significant and marginally significant results. Inspection of the standard deviations for the dependent variables with significant and marginally significant results showed relatively small differences between the grouping categories, which suggested that violation of the assumption of homogeneity of variances had not been very serious. This finding indicated that the MANOVAs could be interpreted.

5.5.2.1 Results of Multivariate F-tests

The overall multivariate F-tests showed that school location, system, teaching experience, age, nationality and service status were significantly different on all the five teacher sample-specific components (see Table 5.19). School type and length of time in the current schools were also marginally significant on the five teacher sample-specific components. Differences for all other independent variables (level, type, system, location, size by number of teachers, size by number of students, age, length of time, religion, teaching subject and teaching class) were non-significant.

Table 5.19 MANOVA results showing significant differences on teacher sample-specific components

Effect	Wilks Lambda	F	Hypothesis df	Error df	Sig.	Partial η^2
Location	.964	4.228	10.000	2298.0	< .001	.018
System	.938	1.150	5.000	15.221	< .001	.062
Experience	.951	2.286	10.000	5.866	< .001	.025
Age	.951	2.294	10.000	5.855	< .001	.025
Nationality	.978	1.150	5.000	5.131	< .001	.022
Service status	.982	1.086	5.000	3.965	= .001	.018
Type	.984	1.140	5.000	3.678	= .003	.016
Length of time	.977	2.268	10.000	2.666	= .003	.012

5.5.2.2 Results of Univariate F-tests

Following significant multivariate F-tests for school location, system, teaching experiences, age, nationality, and service status and marginal significance for type and length of time in the current school, univariate F-tests were examined to identify which teacher sample-specific components contributed to the significance. For independent variables with more than two categories, posthoc Tukey HSD multiple comparisons tests were consulted to identify which categories were significantly different.

According to the results of univariate F-tests as shown in Table 5.20, school location, system, teaching experience, age, nationality, service status and school type showed statistically significant or marginally significant differences on several of the teacher sample-specific components. However, examination of the effect size as measured by Partial Eta Squared (see Table 5.20) for all the significant variables indicated that the actual variance explained in the mean values (largest was 2.9%) between various categories were very small.

Table 5.20 Tests of Between-Subjects Effects for teacher sample-specific components with significant results

MANOVA Effect	Dependent Variable	Type III Sum of Squares	df	Error df	F	Sig.	Partial Eta Squared
Location	SBIP on GNH Education	26.972	2	1154	11.821	< .001	.020
System	GNH Education as separate subject	29.619	1	1154	29.967	< .001	.025
Experience	Creating an appropriate context	3.362	2	1147	5.510	= .004	.010
	SBIP on GNH Education	21.236	2	1147	9.231	< .001	.016
	Teacher Actions	10.657	2	1147	17.343	< .001	.029
Age	GNH Education as separate subject	14.691	2	1151	7.320	= .001	.013
	SBIP on GNH Education	16.817	2	1151	7.314	= .001	.013
Nationality	Teacher actions	8.230	2	1154	13.327	< .001	.023
	SBIP on GNH Education	9.429	1	1154	8.163	= .004	.007
Service status	SBIP on GNH Education	16.190	1	1090	14.224	< .001	.013
Type	SBIP on GNH Education	13.630	1	1144	11.811	= .001	.010
	Teacher actions	3.291	2	1138	5.292	= .005	.009

First, teacher perceptions of *support provided by SBIP* to implement GNH Education significantly differed in terms of school *Location*, *Teaching Experience*, *Age*, *Service status* and *Type of school*. *Nationality* of the teacher participants showed a marginally significant difference (see Table 5.20). For school *location*, consultation of Posthoc Tukey HSD multiple comparison test for SBIP on GNH Education dependent variable showed that the mean for urban teachers (Mean = 3.57, SD = 1.00) was significantly higher than the mean for rural teachers (Mean = 3.21, SD = 1.19). In terms of *teaching experience*, Posthoc Tukey HSD multiple comparison tests for SBIP on GNH Education showed that the mean for long-term experience (Mean = 3.64, SD = 1.03) teachers was significantly higher than the mean for short-term experience teachers (Mean = 3.28, SD = 1.67). For *age* of the teacher participants, Posthoc Tukey HSD multiple comparison tests for SBIP on GNH Education showed that the mean for senior teachers (Mean = 3.69, SD = .98) was significantly higher than the mean for younger teachers (Mean = 3.34, SD = 1.13). In terms of *service status*, the SBIP on GNH Education mean for expatriate teachers (M = 3.75, SD = .95) was observed to be significantly

higher than the mean for regular teachers ($M = 3.40$, $SD = 1.08$). In terms of *school type*, the SBIP on GNH Education mean for day school teachers (Mean = 3.49, $SD = 1.04$) was significantly higher than the mean for boarding school teachers (Mean = 3.23, $SD = 1.18$). With regard to the *nationality* of the teacher sample, the SBIP on GNH Education mean for non-Bhutanese nationals ($M = 3.72$, $SD = .91$) was marginally higher than the mean for Bhutanese nationals ($M = 3.41$, $SD = 1.09$).

Second, scores for teacher perceptions of *importance to introduce GNH Education as a separate subject*, significantly differed in terms of *school system* and *teacher age* (see Table 5.20). The mean for private schools (Mean = 3.96, $SD = .79$) was significantly higher than the mean for government schools (Mean = 3.46, $SD = 1.02$). In terms of *age*, posthoc Tukey HSD multiple comparison test for GNH Education as a separate subject showed that the mean for younger teachers (Mean = 3.64, $SD = .95$) was significantly higher than the mean for middle age teachers (Mean = 3.44, $SD = 1.04$).

Third, scores for teacher perceptions of *SCEB in creating an appropriate context for GNH Education* showed marginally significant difference only for *teacher experience* (see Table 5.20). Consultation of posthoc Tukey HSD multiple comparison tests showed the mean for long-term (16 years and above) experienced teachers (Mean = 4.27, $SD = .46$) was significantly higher than the mean for short-term (less than 5 years) experienced teachers (Mean = 4.12, $SD = .58$).

Finally, scores for teacher perceptions of their *actions to implement GNH Education* showed significant differences by *teacher experience* and *nationality* (see Table 5.20). Teacher actions also showed marginal significance with *school type*. In terms of experience, posthoc Tukey HSD multiple comparison tests for teacher actions showed that the means for both medium (Mean = 3.99, $SD = .54$) and long (4.04, $SD = .54$) term *experience teachers* were significantly higher than the mean for short (Mean = 3.81, $SD = .58$) term experience teachers. For *nationality* of the teacher participants, the teacher actions mean for non-Bhutanese nationals (Mean = 4.03, $SD = .48$) was significantly higher than the mean for Bhutanese nationals (Mean = 3.92, $SD = .57$). For *type of school*, the teacher actions mean for day school (Mean = 3.96, $SD = .56$) was marginally higher than the mean for boarding schools (Mean = 3.86, $SD = .55$).

5.5.2.3 Summary of teacher sample-specific components

The overall multivariate results indicated that teachers from rural areas, short-term experience, younger, teachers with regular service status and boarding schools showed weaker perceptions of

support provided by SBIP on GNH Education. Teachers from government schools and teachers in the middle age category did not support the idea of introducing GNH Education as a separate subject. This finding tends to support the idea that, from a teacher's perspective, GNH needs to be infused within existing syllabi. Short-term experience teachers also showed weaker perceptions of SCEB to create an appropriate context for GNH Education. In terms of teacher perceptions of their actions to implement GNH Education, teachers with short-term experience, Bhutanese nationals and boarding school teachers were found to be expending less effort in the process of implementing GNH Education. However, significant differences for some of the independent variables such as nationality, service status, school type and system could be attributed to differences in the sample size as teachers with Bhutanese nationals, regular service status, from day school and government school were comparatively more than the non-Bhutanese nationals, teachers on contract, from boarding and private schools.

5.6 Research sub-question related to prediction of principal-teacher actions and impacts and student impacts scores based on five predictor sets

Hierarchical Multiple Regression (HMR) analyses were conducted to predict three separate dependent variables (Principal-Teacher Actions, Principal-Teacher Impact and Student Impact). For each analysis, predictor sets were entered in the following order:

1. Demographic variables (twelve predictors) were assumed to exist prior to survey participation and therefore had their influence accounted/controlled for first;
2. Self-efficacy beliefs components (two predictors) were considered next as contributions from the level of the individual;
3. Collective efficacy beliefs component (one predictor) were considered next as a contribution from the school level;
4. Perceptions of importance for GNH Education components (four predictors) were considered next as reflections of the interface between schools and the wider educational system; and finally
5. Perceptions of support systems for GNH Education components (two predictors) for were considered as reflections of the extent to which GNH Education was supported at the school level and educational system levels.

This order of predictor set entry was based on a quasi-temporal and system-level (individual level to school level and wider) logic. The outcomes for the analysis of each of the three Dependent Variables are discussed below in the following sections.

5.6.1 Research sub-question 9a – HMR results for principal-teacher actions

For the *Principal-Teacher Actions* dependent variable, all the five predictor sets made significant contributions (see Table. 5.21) with self-efficacy beliefs predictor set making the highest impact. All relevant indicators for the assumptions of multiple regressions were inspected with no anomalies being identified. There were, however, a small number of outliers identified ($n = 12$), most of which indicated extreme over-prediction ($n = 10$) by the final regression model and the remainder reflecting severe under-prediction ($n = 2$). A further investigation into these cases found that all data were appropriately coded and accurately entered; there was no obvious explanation for the extremity of over- or under-prediction of these cases as being due to anomalous factors. Relative to the overall sample size, the number of outliers was very small, and not outside what a normal distribution for that size of sample would comprise. Therefore, all these cases were retained in the dataset, as no justifiable reason was apparent for excluding them from the analysis.

For model 1, the demographic variables, as a set, were found to be significantly predictive of Principal-Teacher Actions scores, explaining 3% of their variance. Within this predictor set, both type of respondent (Teacher respondent) and type of school (Government school) were marginally significant and significant individual contributors respectively to prediction of Principal-Teacher Actions. The prediction pattern for the teacher respondent variable was for teachers to show a marginally significantly lower score (0.132 points) for Principal-Teacher Actions compared to principals. The prediction pattern for Government schools was for government schools to show a significantly higher score (0.187 points) for Principal-Teacher Actions compared to private schools.

For model 2, the addition of the two SEB components as a predictor set, over and above the demographic variable set, resulted in a significant improvement in prediction, explaining an additional 31.4% of the variance in Principal-Teacher Actions scores. Within this predictor set, both SEB components – SEB to design and teach GNH values lessons and SEB to influence values development in students were significant individual contributors to prediction of Principal-Teacher Actions. For SEB to design and teach GNH values lessons every unit increase in SEB to design and

Table 5.21 Hierarchical regression statistics for predicting Principal-Teacher Actions (DV) showing all predictor set contributions and only the significant and marginally significant individual predictor contributions within each set (only reported if the set overall made a significant contribution to prediction).

Model	Predictor set	Change Statistics					Predictor	Unstandardised Coefficients		Standardised Coefficients		t	Sig.	Squared semi-partial correlations
		R Square Change	F Change	df1	df2	Sig. F Change		B	Std. Error	Beta				
1	Demographic characteristics	.030	3.95	12	1558	< .001	Teacher respondent	-.132	.044	-.080	-3.04	.002	0.152	
							Government school	.187	.049	.105	3.79	<.001	0.009	
2	Self-Efficacy Beliefs	.314	372.43	2	1556	< .001	Designing & teaching GNH values lessons	.541	.028	.510	19.05	<.001	0.153	
							Influencing values development	.126	.035	.097	3.63	<.001	0.006	
3	School Collective Efficacy Beliefs	.025	60.81	1	1555	< .001	Schools modelling & promoting values	.217	.028	.187	7.80	<.001	0.025	
4	Perceptions of Importance	.072	50.03	4	1551	< .001	Student learning	.210	.029	.216	7.35	<.001	0.019	
							Academic education	.151	.030	.147	5.03	<.001	0.009	
5	Perceptions of Support System	.074	118.92	2	1549	< .001	External support	.076	.015	.107	5.01	<.001	0.008	
							Internal support	.258	.022	.285	11.79	<.001	0.044	

Overall Model: $R^2 = .515$, adjusted $R^2 = .508$, $F(21, 1549) = 78.338$, $p < .001$

$p < .001$ considered significant

$.001 < p < .005$ considered marginally significant

SPSS part correlation values were squared to obtain values for squared semi-partial correlations

teach GNH values lessons predicted a 0.541 unit increase in the Principal-Teacher Actions score. For SEB to influence values development in students, every unit increase predicted a 0.126 unit increase in the Principal-Teacher Actions score.

For model 3, the addition of SCEB component as a predictor set in addition to the demographic variable and SEB component sets added a significant but relatively small (about 2.5%) amount to the variance accounted for in Principal-Teacher Actions scores. Within this predictor set, only the SCEB component (Modelling and promoting values) was found to be a significant predictor of Principal-Teacher Actions. Every unit increase in SCEB to model and promote values predicted a 0.217 unit increase in the Principal-Teacher Actions score.

For model 4, the addition of four Principal-Teacher perceptions of importance components as a predictor set in addition to the demographic variable, SEB component and SCEB component sets resulted in a significant improvement in prediction of variability in Principal-Teacher actions score (by 7.2%). Within this predictor set, two components – student learning processes, and academic education and societal impacts were found to be significant predictors of Principal-Teacher Actions. For Principal-Teacher perceptions of importance for student learning processes, every unit increase predicted a 0.210 unit increase in the Principal-Teacher Actions score. For Principal-Teacher perceptions of importance for academic education and societal impacts, every unit increase predicted a 0.151 unit increase in the Principal-Teacher Actions score.

At the final step of predictor set entry (model 5), the addition of support systems components as a predictor set over and above the demographic variable, SEB component, SCEB component and perceptions of importance component sets resulted in a significant improvement in prediction of variability in Principal-Teacher Actions score (by 7.4%) bringing the total percentage of explained variance to 51.5%. Within this predictor set, both the principal and teacher perceptions of support systems components – external support and internal support and collaboration were found to be significant predictors of Principal-Teacher Actions. For Principal-Teacher perceptions of external support, every unit increase predicted a 0.076 unit increase in the Principal-Teacher Actions score. For Principal-Teacher perceptions of internal support and collaboration, every unit increase predicted a 0.258 unit increase in the Principal-Teacher Actions score.

Findings from the prediction of the Principal-Teacher actions further confirmed that teachers are likely to put in less effort compared to the principals in implementing GNH Education. Furthermore, to see more actions from principals and teachers in implementing GNH Education,

various stakeholders need to intervene in enhancing their sense of self-efficacy beliefs, school collective efficacy beliefs, perceptions of importance related to how GNH Education can benefit students' academic learning and provision of efficient and continuous support.

5.6.2 Research sub-question 9b – HMR results for principal-teacher impact

For the *Principal-Teacher Impact* dependent variable, all the five predictor sets made significant contributions (see Table. 5.22). All relevant indicators for the assumptions of multiple regressions were inspected with no anomalies being identified. There were, however, a small number of outliers identified ($n = 12$), most of which indicated extreme over-prediction ($n = 10$) by the final regression model and the remainder reflecting severe under-prediction ($n = 2$). Only one case (case no. 1373) that was over-predicted was found to be a common outlier between the Principal-Teacher Actions and Principal-Teacher Impact analyses. A further investigation into these cases found that all data were appropriately coded and accurately entered; there was no obvious explanation for the extremity of over- or under-prediction of these cases as being due to anomalous factors and in a sample of this size, this number of outliers was not unexpected. Therefore, all these cases were retained in the dataset as no justifiable reason could be developed for excluding them from the analysis.

For model 1, the demographic variables, as a set, were found to be significantly predictive of Principal-Teacher Impact, explaining about 3% of their variance. Within this predictor set, only teacher respondent was a significant individual contributor to prediction of Principal-Teacher Impact. The prediction pattern for Teacher respondent was for teachers to show a significantly lower score (0.269 points) for Principal-Teacher impact compared to principals.

For model 2, the addition of SEB components as a predictor set as well as the demographic variable set resulted in a significant improvement in prediction, explaining an additional 24.7% of the variance in Principal-Teacher impact. Within this predictor set, SEB to design and teach GNH values lessons was the only significant individual contributor to prediction of Principal-Teacher impact where every unit increase in SEB to design and teach GNH values lessons predicted a 0.512 unit increase in the Principal-Teacher impact score.

Table 5.22 Hierarchical regression statistics for predicting Principal-Teacher Impact (DV) showing all predictor set contributions and only the significant and marginally significant predictor contributions within each set (only reported if the set overall made a significant contribution to prediction)

Model	Predictor set	Change Statistics					Predictor	Unstandardised Coefficients		Standardised Coefficients		t	Sig.	Squared semi-partial correlations
		R Square Change	F Change	df1	df2	Sig. F Change		B	Std. Error	Beta				
1	Demographic characteristics	.029	3.83	12	1558	< .001	Teacher respondent	-.269	.045	-.158	-6.01	<.001	0.023	
2	Self-Efficacy Beliefs	.247	264.64	2	1556	< .001	Designing & teaching GNH values lessons	.512	.031	.469	16.69	<.001	0.130	
3	School Collective Efficacy Beliefs	.019	41.99	1	1555	< .001	Schools modelling & promoting values	.196	.030	.164	6.48	<.001	0.019	
4	Perceptions of Importance	.069	42.10	4	1551	< .001	Student learning	.187	.031	.187	5.97	<.001	0.015	
							Academic education	.102	.033	.097	3.10	.002	0.004	
5	Perceptions of Support System	.034	43.68	2	1549	< .001	Internal support	.196	.025	.210	7.80	<.001	0.024	

Overall Model $R^2 = .397$, adjusted $R^2 = .389$, $F(21, 1549) = 48.64$, $p < .001$

$p < .001$ considered significant

$.001 < p < .005$ considered marginally significant

SPSS part correlation values were squared to obtain values for squared semi-partial correlation

For model 3, the addition of SCEB component as a predictor set on top of the demographic variable and SEB component sets added a relatively small (about 2%) amount to the variance accounted for in Principal-Teacher impacts scores. Within this predictor set, SCEB component (modelling and promoting values) was found to be the only significant predictor of Principal-Teacher impacts where every unit increase in SCEB to model and promote values predicted a 0.196 unit increase in the Principal-Teacher impacts score.

For model 4, the addition of four Principal-Teacher perceptions of importance components as a predictor set in addition to the demographic variable, SEB component and SCEB component sets resulted in a significant improvement of prediction (about 7%). Within this predictor set, only two components, student learning processes and academic education and societal impacts, were found to be significant and marginally significant predictors respectively to prediction of Principal-Teacher impacts. For Principal-Teacher perceptions of importance for student learning processes, every unit increase predicted a 0.187 unit increase in the Principal-Teacher impacts score. For Principal-Teacher perceptions of importance for academic education and societal impacts, every unit increase predicted a 0.102 unit increase in the Principal-Teacher impacts score.

At the final step of predictor set entry (model 5), the addition of support systems components as a predictor set on top of the demographic variable, SEB component, SCEB component and perceptions of importance component sets resulted in a significant improvement in prediction of variability in Principal-Teacher Impact score (by 3.4%) bringing the total percentage of explained variance to 39.7%. Within this predictor set, only principal-teacher perception of internal support and collaboration was found to be a significant predictor of Principal-Teacher impact. Here, every unit increase in perceived internal support and collaboration predicted a 0.196 unit increase in the Principal-Teacher impact score.

Again the prediction pattern for the Principal-Teacher impact showed that teachers are likely to show minimal impact compared to the principals. Furthermore, in order to make profound impact on the principals and teachers they need to possess – a robust sense of self-efficacy beliefs to design and teach GNH values lessons, a robust sense of school collective efficacy beliefs to model and promote values, stronger perceptions of importance related to student learning processes and how GNH Education can benefit students' academic education that has the potential to make lasting impact in the society, and very good internal support and collaboration at the school level.

5.6.3 Research sub-question 9c – HMR results for student impact

For the *Student Impact* dependent variable, only four predictor sets (SEB, SCEB, perceptions of importance and support systems) made significant contributions but not the demographic variables (see Table. 5.23). All relevant indicators for the assumptions of multiple regressions were inspected with no anomalies being identified. There were, however, a small number of outliers identified ($n = 4$), two of which indicated extreme over-prediction by the final regression model and the other two reflecting severe under-prediction. All the four cases with outliers were different from the outliers of the Principal-Teacher Actions and Principal-Teacher Impact analyses. A further investigation into these cases found that all data were appropriately coded and accurately entered; there was no obvious explanation for the extremity of over- or under-prediction of these cases as being due to anomalous factors and, relative to sample size, their number was not unexpected. Therefore, again, all these cases were retained in the dataset as no justifiable reason could be developed for excluding them from the analyses.

For model 1, the demographic variables, as a set, were found not to significantly contribute to prediction of Student Impact.

For model 2, the addition of SEB components as a predictor set over and above the demographic variable set resulted in a significant improvement of prediction, explaining an additional 24.2% of the variance in Student Impact. Within this predictor set, both SEB components, SEB to design and teach GNH values lessons and SEB to influence values development in students, were significant individual contributors to prediction of Student Impact. For SEB to design and teach GNH values lessons every unit increase predicted a 0.501 unit increase in the Student Impact. For SEB to influence values development in students, every unit increase predicted a 0.129 unit increase in the Student Impact score.

For model 3, the addition of SCEB component as a predictor set as well as the demographic variable and SEB component sets added a relatively small (about 2.8%) amount to the variance accounted for Student Impacts score. Within this predictor set, the SCEB to model and promote values was found to be a significant predictor of Student Impacts. For SCEB to model and promote values, every unit increase predicted a 0.246 unit increase in the Student Impacts score.

Table 5.23 Hierarchical regression statistics for predicting Student Impact (DV) showing all predictor set contributions and only the significant and marginally significant predictor contributions within each set (only reported if the set overall made a significant contribution to prediction)

Model	Predictor set	Change Statistics					Unstandardised Coefficients		Standardised Coefficients		t	Sig.	Squared semi-partial correlations
		R Square Change	F Change	df1	df2	Sig. F Change	Predictor	B	Std. Error	Beta			
1	Demographic characteristics	.012	1.518	12	1558	.111							
2	Self-Efficacy Beliefs	.242	251.73	2	1556	< .001	Designing and teaching GNH values lessons	.501	.032	.441	15.46	<.001	0.115
							Influencing values development in students	.129	.039	.093	3.27	.001	0.005
3	School Collective Efficacy Beliefs	.028	59.84	1	1555	< .001	Schools modelling and promoting values	.246	.032	.198	7.74	<.001	0.028
4	Perceptions of Importance	.070	42.06	4	1551	< .001	Student learning	.235	.033	.227	7.15	<.001	0.021
							Academic education	.168	.035	.153	4.85	<.001	0.010
5	Perceptions of Support System	.063	83.80	2	1549	< .001	External support	.159	.018	.208	8.86	<.001	0.030
							Internal support	.144	.026	.149	5.61	<.001	0.012

Overall Model $R^2 = .415$, adjusted $R^2 = .407$, $F(21, 1549) = 52.24$, $p < .001$

$p < .001$ considered significant

$.001 < p < .005$ considered marginally significant

SPSS part correlations values were squared to obtain values for squared semi-partial correlation

For model 4, the addition of four Principal-Teacher perceptions of importance components as a predictor set in addition to the demographic variable, SEB component and SCEB component sets resulted in a significant improvement of prediction (by 7%). Within this predictor set, only two components – student learning processes and academic education and societal impact were found to be significant predictors of Student Impact. For Principal-Teacher perceptions of student learning processes, every unit increase predicted a 0.235 unit increase in the Student Impact score. For Principal-Teacher perceptions of importance for academic education and societal impact, every unit increase predicted a 0.168 unit increase in the Student Impact score.

At the final step of predictor set entry (model 5), the addition of Principal-Teacher perceptions of support systems components as a predictor set on top of the demographic variable, SEB component, SCEB component and perceptions of importance component sets resulted in a significant improvement of prediction if variability in Student Impact score (by 6.3%) bringing the total percentage of explained variance to 41.5%. Within this predictor set, both the Principal-Teacher perceptions of support systems – external support, and internal support and collaboration were found to be significant predictors of Student Impact. For Principal-Teacher perceptions of external support, every unit increase predicted a 0.159 unit increase in the Student Impact score. For Principal-Teacher perceptions of internal support and collaboration, every unit increase predicted a 0.144 unit increase in the Student Impact score.

For GNH Education to make deep impact on students, relevant stakeholders need to provide extra attention to enhance self-efficacy beliefs of principals and teachers to design and teach GNH values lessons as well as influence values development in students. Furthermore, without a robust sense of school collective efficacy to model and promote GNH values, stronger perceptions of importance related to the potential of GNH Education in making an impact in the key learning areas improving students' academic education. Conditions for both external and internal support systems in the schools also need to be strengthened.

5.6.4 Summary of the hierarchical multiple regression analyses

The presentation of results from hierarchical multiple regression analyses in the preceding sections showed that all five independent variable sets (demographic variables, SEB components, SCEB component, perceptions of importance components and perceptions of support system components) contributed significantly in predicting the Principal-Teacher Actions and Principal-Teacher Impact dependent variables while for the Student Impact dependent variable only four

(SEB components, SCEB component, perceptions of importance components and perceptions of support system components) independent variable sets contributed significantly.

Overall the patterns for all the predictors were positive such that an increase in predictor scores predicted an increase in Principal-Teacher Actions, Principal-Teacher Impact and Student Impact scores. However, the prediction pattern for teacher respondents was negative, such that being a teacher respondent predicted a decrease in Principal-Teacher Actions score relative to a principal respondent. Further, the regression analyses showed that self-efficacy beliefs of principals and teachers accounted for a fairly large percentage of the variance in Principal-Teacher Actions, Principal-Teacher Impact and Student Impact compared to other predictor sets. The Principal-Teacher perceptions of importance for GNH Education and their perceptions of support systems for GNH Education also explained substantial amounts of variance. Hence, if one were to infer a causal relationship between GNH Education actions and impacts and Principal-Teacher self-efficacy beliefs and their perceptions of importance and support systems for GNH Education, it could be useful to consider potential interventions designed to enhance the self-efficacy beliefs of principals and teachers, their perceptions of importance and support systems for GNH Education. However, care must be taken with such inferences, because the single-shot survey-based design for this research has not met all logical requirements for inferring causality.

5.7 Chapter summary

Hierarchical cluster analysis (see section 5.2.1.1 p. 105) grouped the entire 155 sample schools into four clusters based on SCEB scores (two with relatively higher collective efficacy and two with relatively lower collective efficacy). Only 39.3 % of sample schools showed a relatively higher collective efficacy for GNH Education. A main finding was that school collective efficacy for GNH Education had positive relationships with principal and teacher self-efficacy, their perceptions of importance of GNH Education, support systems, and actions and impacts. Principals generally showed higher self-efficacy compared to teachers. There were some significant differences between self-efficacy of principals and vice/assistant principals. In terms of teacher self-efficacy for GNH Education there were some variations observed based on teacher qualification, religion, teaching subject, service status and gender.

This chapter also presented statistically significant findings from analyses of both the principal and teacher sample-specific components. In terms of the principal sample-specific components, perceptions of support provided by the Paro GNH Education workshop differed statistically significantly by gender, principal type, experience and qualification. In terms of

teacher sample-specific components, their perceptions of support provided by SBIP differed statistically significantly by school location, experience, age and school type. Teacher perceptions of importance to introduce GNH Education differed statistically significantly by school system and age, perceptions of SCEB to create a dynamic vision for GNH Education differed by experience and perceptions of teacher actions differed by experience, nationality and school type.

Finally, hierarchical multiple regression analyses based on the five independent variables of demographic, SEB, SCEB, importance and support systems showed statistically significant improvement in the prediction of scores for Principal-Teacher actions, Principal-Teacher impact and Student impact.

In phase two of this study, four case studies were carried out to gain an in-depth understanding of principal and teacher experiences of implementing GNH Education at particular schools. In the next chapter (Six) analyses of each case study data mainly obtained from semi-structured interviews and teaching observations is presented, followed by a cross case analysis in Chapter Seven.

CHAPTER SIX: PHASE TWO - WITHIN-CASE ANALYSES

6.1 Chapter introduction

The previous chapter presented findings based on the quantitative data gathered during the first phase. In phase two, case studies of four selected schools were conducted to gain a more in-depth understanding of the implementation process of GNH Education in Bhutanese schools. This chapter presents details of the location of each case study school in terms of clusters and within-case analyses of the four case study schools (see p. 53 for a description of data gathering and p. 70 for approaches to data analyses). The within-case data are presented so as to address the overarching qualitative question:

What are the lived experiences of principals and teachers at each of the four case study schools with regard to the implementation of GNH Education?

First, the locations of the four case study schools with respect to the overall distribution of School Collective Efficacy Beliefs (SCEB) for all 155 schools are presented. SCEB is based on one common component between principal and teacher participants – the school’s ability to promote GNH values, such as kindness, responsibility, respectfulness, caring, honesty, and carefulness, to students, through role modelling.

6.2 SCEB location of the four case study schools relative to the sample

Expert advice from the preliminary phase was employed for the selection of two case study schools (as explained in Chapter Three, p. 53) while the other two were selected based on the preliminary analyses of school collective efficacy belief (SCEB) scores from a partial but majority sample of schools in phase one ($n = 124$ schools that had survey respondents at the time case selection was undertaken). The choice of these four case study schools was subsequently validated using the complete sample results on SCEB scores ($n = 155$). The location of each case study school, based on the overall SCEB score in terms of their mean z-score and mean rank, is summarised in Table 6.1. As shown by the Hierarchical Cluster Analysis (see Chapter Five, p. 105) the four case study schools just happened to fall one school each in the four clusters.

For ethical reasons each case study school is referred to by a pseudonym as shown in column one of Table 6.1. In this chapter and thereafter, the school principal participants are referred to as ‘WHSS Principal’ for case study school 1 principal and so on. The two teacher participants in each case study school are referred to as Teacher 1 and Teacher 2, and are preceded

by the initials of their school name. For instance, Teacher 1 from case study school one is referred to as ‘WHSS Teacher 1’.

Table 6.1 Mean z-score and mean rank of 4 case study schools in the overall SCEB data ($n=155$)

Pseudonyms	Cluster number	Cluster name	Total number of schools	Selection process	Category of Collective Efficacy Beliefs	Over all mean SCEB z-score	Over all school rank ($n=155$)
Wangchuk Higher Secondary School (WHSS)	1	Moderately lower SCEB	66	Expert advice	‘Inefficacious’	0.30	102 nd
Guru Lower Secondary School (GLSS)	4	Much lower SCEB	28	SCEB data	‘Inefficacious’	1.39	145 th
Sangay Lower Secondary School (SLSS)	2	Much higher SCEB	21	SCEB data	‘Efficacious’	1.74	3 rd
Zhabdrung Primary School (ZPS)	3	Moderately higher SCEB	40	Expert advice	‘Efficacious’	0.55	42 nd

A detailed contextual presentation and analysis of the four case studies is provided in the following sections. In order to understand the background of each case study school, efforts to provide sufficient details have been made, however, for ethical reasons, some specific contextual information is avoided to mitigate against revealing the identity of the schools. In presenting each of the four cases, quoted materials from the interviews have been used to support or refute the argument.

6.3 Wangchuk Higher Secondary School (an ‘inefficacious’ school)

Wangchuk Higher Secondary School (WHSS) was identified as an ‘inefficacious’ school in terms of beliefs about implementing GNH Education. The school was ranked 102 out of 155 and was in cluster 1, one of the 66 schools with a ‘moderately lower’ school collective efficacy belief for GNH Education (see Table 6.1).

6.3.1 Setting the context

WHSS is a semi-urban high school in Western Bhutan located about twelve kilometers away from the district headquarters. This school has one of the largest campuses (43 acres) compared to other schools in Bhutan (CERD, 2008). The school had around 800 students from grades 9 to 12 and about 40 teachers in the 2010 academic year. About 25 percent ($N = 10$) of the teachers at WHSS were expatriate, comparatively more in this school than the other three case study schools. All the

expatriate teachers were Indian nationals with teaching experience in Bhutanese schools ranging from two to fifteen years. This school is a co-educational government boarding school with more than 500 students residing on campus. Most of these students came from the six feeder schools in the district after completing their lower secondary school (Grade 8). All six feeder schools were located in the semi-urban and rural communities indicating that most of these students came from essentially a rural background.

The vision and mission statements of WHSS were examined to determine if there were any signals indicative of GNH Education.

[WHSS] is envisioned to be the centre of academic excellence. The school believes that the education process must be rooted in [the] country's tradition and culture. To that extent the school aspires to instil in the learners the motto 'ever victorious' by moulding them into citizens with sound characters, balanced personalities, inner discipline and strength, dedicated to duty and work and possessing patriotic outlook. (WHSS, 2011)

While tradition and culture represents one of the four pillars of GNH, this school's vision statement is apparently 'silent' about the other three GNH pillars: i) sustainable and equitable socio economic development; ii) preservation and sustainable use of the environment; and iii) good governance. However, the combined phrase, "culture and tradition" has such a comprehensive meaning in Bhutan that vision carved around tradition and culture may well encompass all the others implying an implicit weighting of importance amongst the four pillars. For instance, Bhutanese beliefs are so much associated with preservation of the environment as many places are abodes and citadels of deities and spirits; around the Buddhist philosophy of *Ley Jumdrey* (meaning cause and effect – the individual's present action will determine the future outcomes) and *Tha Damtshig* (honour and sacred commitment between various pairs of relationship such as parent and child, teacher and pupil, husband and wife, master and servant) can be developed based on the philosophy of Good Governance (Wangyel, 2001). Similarly lessons related to sustainable and equitable socio-economic development can be drawn from observing how village elders managed natural resources such as water, forest and public land as well as labour input in the form of community (voluntary) services.

The WHSS's aspiration of instilling in students the motto of 'ever victorious' was articulated in their mission statement as:

[WHSS] is committed to produce well in-formed, skilled, responsible, loyal, dedicated and productive citizens by providing an effective teaching learning atmosphere, incorporating wholesome education. Ingrained in our motto of 'ever victorious' is the spirit of excellence and competition that the school will strive to instil in the minds of learners. (WHSS, 2011)

The mission statement clearly indicated that the school strove to promote GNH values and principles through provision of a “wholesome education” to the students, a concept introduced in the Bhutanese education system in the mid 1980s to provide an emphasis on the all-round development (physical, mental, cultural and social) of a student as discussed in the first chapter (see p. 3). While all the four pillars of GNH are not specifically mentioned in the vision and mission statement of the school, it could be assumed that the school’s aspiration to provide wholesome education is intended to address the four pillars of GNH as the latter covers all aspects of a citizen’s growth and development (MoE, 2010a). If these arguments are correct both the vision and mission statements are broadly consistent with the four GNH pillars. While there are some aspects of GNH Education evident in the vision and mission statements of WHSS, there is also evidence of strong emphasis upon academics.

The female Principal obtained Masters in Education from North America and had eleven years of principalship experience. The two vice principals (one male and one female) assisted her in the day-to-day administration and academic matters. It was the Principal’s first year at WHSS. Two teachers (one female and one male) from this school participated in interviews and teaching observations. Teacher 1 taught English and had ten years teaching experience and Teacher 2 taught Biology with eight years experience. Teacher 2 was the GNH Education Coordinator of the school as he had attended the week-long national level Paro GNH Education workshop in the place of the former principal who was transferred and the new principal had not yet joined the school. Following the Paro workshop, at the beginning of the 2010 academic session, this teacher had, on returning to her school, provided a one-day School-Based In-service Programme (SBIP) for all WHSS teachers in preparation for implementing GNH Education in this school.

Whether the school had been guided or not by its vision and mission statements in its day to day functioning and whether the Paro GNH Education workshop for the principals and SBIP for the teachers made an impact on the Principal and two teacher participants are discussed in the following section. Further, some possible signals for the low collective efficacy score for GNH Education in this school are also revealed through the lived experiences of the school principal and the two teacher participants. This lived experience is presented as the five themes that follow.

6.3.2 Discussion of themes

The lived experiences of implementing GNH Education in WHSS is presented through the following emerging themes: i) pre- and post- GNH Education programmes; ii) perceptions and actual practices in GNH Education; iii) teacher resistance; and iv) conflicting attitudes.

6.3.2.1 Pre- and post- GNH Education programmes

WHSS provided focus on infusion of GNH values through various programmes that were extra-curricular in nature. Such programmes included: school greening (such as plantation of ornamental and shade trees), waste management (such as allocation of designated garbage pits), cultural promotion (through mask and traditional dances), sports (such as soccer, basketball, volleyball, and athletic days), daily meditation sessions for students, and student support and care services (such as counselling, health and hygiene, and student mess).

A three-minute meditation (popularly known as mindfulness training) session for students in their classrooms was the only new programme WHSS implemented after the introduction of GNH Education (WHSS Teacher 2, 11/05/11). However, with the implementation of GNH Education, WHSS had changed its approach to organisation of all other school activities that existed before GNH Education. Discussing how the school now organised activities for their students, the Principal mentioned that, “the purpose and values attached to each school activity are [now] identified and we encourage our students to participate with a purpose and practice the values identified.” She further commented that, in the past, “things were simply done because the directives said so” (WHSS Principal, 13/07/11).

Teacher 2, who was the GNH Education Coordinator of the school, claimed that the implementation of GNH Education had helped the school to focus on GNH values and principles that were not evident in the past. More precisely, the GNH Co-ordinator said:

In the past we did not have clear objectives in our minds. We did not know why and how we conducted these activities. We were not sure why we organised cultural and sporting activities. Now different coordinators [for each activity] set objectives with the view to infuse GNH values. For instance, by organising [a] cultural show certain values will be achieved. We [now] conduct activities keeping GNH values in mind. (WHSS Teacher 2, 11/05/11)

WHSS activities were in line with the idea of advancing GNH through a holistic school approach. Each of these programmes was linked to one or two of the four GNH pillars, nine domains and values (see Table 6.2). For instance, the daily meditation session is linked to two of the four GNH pillars (preservation and promotion of cultural heritage and sustainable and equitable socio-economic development) that address two of the nine GNH domains (psychological well being and health domains). These domains have the potential to promote in students some core GNH values such as compassion, generosity, calmness, empathy, vitality, prevention, fitness and precaution. The school’s greening programme has a direct link to environmental preservation that has the potential to improve ecological literacy of their students

Table 6.2 WHSS activities and GNH pillars, domains and values

WHSS Activity	GNH Pillar	GNH Domain	Values
Meditation	Promotion and preservation of culture and tradition	Psychological well being	Compassion, generosity, forgiveness, calmness, gratitude, empathy, truthfulness
	Sustainable and equitable socio-economic development	Health	Fitness, vitality, self-worth, prevention, precaution, non-malignance
School greening programme	Environmental preservation	Ecological literacy	Eco-consciousness, sustainability, aesthetic, naturalistic, reverence,
Waste management	Environmental preservation	Ecological literacy	Eco-consciousness, sustainability, aesthetic, naturalistic, reverence,
Cultural promotion (mask and traditional dances)	Promotion and preservation of culture and tradition	Cultural diversity	Identity, dignity, non-alienation
		Time Use	Freedom from stress, serenity, tranquillity, bonding, healthy lifestyles
Student support and care services (such as counselling, health and hygiene, and student mess)	Promotion & Preservation of Culture	Psychological Well-being	Compassion, generosity, forgiveness, calmness, gratitude, taking account of karma, empathy, truthfulness
		Community Vitality	Altruism, trust, reciprocity, fairness, fidelity, family, closeness, equality, solidarity, unity, hospitality, cooperation, honour, sociability
		Health	Vitality, fitness, soundness, self-worth, prevention, precaution, non-malignance
	Sustainable & Equitable Socio-Economical Development	Education	Creativity, openness, diligence, insightfulness, perseverance, patience, creative thinking
		Good governance	Integrity, trust, justice, professionalism, wisdom, far sightedness, competence, empowerment, commitment
	Good governance	Good governance	Integrity, trust, justice, competence, professionalism, wisdom, far sightedness, empowerment, non discrimination, commitment
Sports	Sustainable & Equitable Socio-Economical Development	Health	Vitality, fitness, soundness, self-worth, prevention, precaution, non-malignance
		Education	Creativity, openness, diligence, insightfulness, perseverance, patience, creative thinking

Source– (MoE, 2010c)

by learning values such as eco-consciousness, sustainability, aesthetic, naturalistic and reverence (see Table 6.2).

All the three participants and in particular the Principal claimed that the school had been working towards creating a good and happy physical ambience for the entire school community not just a rigorous academic curriculum. The school community had apparently undertaken efforts to continue maintaining a ‘green campus’ inspired by the concept of “green schools for green Bhutan” (MoE, 2010d, p. 88) besides undertaking various other activities to promote the concept of GNH (see Figures 6.1, 6.2 and 6.3). One of the main goals of GNH Education is to promote the concept of ‘green schools for green Bhutan’. One of the eight dimensions of a ‘green school’ is to maintain the ‘environmental greenery’ making the school environment conducive for teaching and learning (for eight dimensions of a green school, see Chapter One, p. 6). One important observation made was that the school was litter-free, which was probably the result of the school’s waste management activities in pursuit of promoting the concept of “green schools for green Bhutan” – a fundamental aspect of GNH Education (Field notes, 19/5/2011). WHSS had been successful in maintaining the campus green with ornamental and shade trees, gardens and prayer flags, which were considered to exhibit characteristics of a conducive learning centre (Figures 6.1 and 6.2). Besides, prayer flags also reflect cultural tradition – one of the important pillars of GNH. Although these programmes were initiated before GNH Education, there was evidence to show that the school had made consistent efforts to maintain and further improve congruence with GNH philosophy.



Figure 6.1 Prayer flags in the school compound



Figure 6.2 Campus greening with canopies for students to rest and study

The four pillars of GNH written on rocks (see Figure 6.3) and placed in front of the school building was one of the post-GNH Education activities initiated at WHSS. They served as a reminder not only to the students but also to the entire school community and to the school visitors. Visiting the school, the anecdotal realisation was reached that such physical reminders were useful in terms of raising awareness as most Bhutanese and especially the students who may not be able to recall the four pillars of GNH.



Figure 6.3 Four Pillars of GNH written on rocks in front of the school building

6.3.2.2 Perceptions and actual practices in GNH Education

This section highlights some of the apparent mismatches observed between the participant perceptions and actual practices of the two teachers and the Principal. To begin with, the Principal identified herself as a facilitator and a role model in implementing GNH Education in her school by being fair, punctual, honest, transparent, responsible, accountable, caring, receptive to feedback (from teachers and parents) and democratic in her day-to-day administration (WHSS Principal, 13/07/11). The purpose of GNH Education is, “to understand the very purpose of our existence, respect and value the diversity of life and use all our potentials in [the] day-to-day life in a meaningful way in order to enable [us] to live happily and satisfactorily” (WHSS Principal, 13/07/11). The principal further stated that GNH Education helps to “refine one’s thoughts, actions and speech” (WHSS Principal, 13/07/11). She also claimed that although the introduction of GNH Education “has become more challenging, yet it has refined my ways of administration” implying that the philosophy of GNH Education had helped improve in her leadership (WHSS Principal, 13/07/11).

Such a positive mind-set in a key change agent could play an important role in achieving the vision of GNH Education. As discussed in the previous section some of the changes in the Principal’s outlook towards daily administration of the school were clear indications of her perception of the transformation of her mind-set in relation to her leadership role in the school. Such transformation of mind-set, if true, in the school principal would be an influential move to accomplish ‘good governance,’ which is one of the four pillars of GNH. It has the potential to promote GNH values such as integrity, trust, justice, professionalism, wisdom, far sightedness, competence, empowerment and commitment.

Contrarily, there were teacher participants who reported that they experienced lack of school leadership support for GNH Education in this school. For instance, Teacher 2 showed signs of frustration at his perceived lack of the Principal’s support when he mentioned, “I don’t see a serious effort from her [the Principal’s] side. I feel that we conduct different activities just to fulfil the requirements [rather] than to promote GNH values” (WHSS Teacher 2, 11/05/11). Such teacher feedback is a clear indication of an existing mismatch between principal’s perceptions and the perceptions of at least one other about her practices. The lack of leadership support, among other things, indicated that this Principal, who missed the Paro GNH Education workshop, did not have a good understanding of the vision of GNH Education.

Interview data showed that both Teachers 1 and 2 had high levels of self-efficacy beliefs for GNH Education. For instance, sharing his perception of the future of GNH Education, Teacher 2 mentioned that, “I have a different mind-set now [after attending the Paro GNH Education

workshop] and I feel that one day we will be able to achieve GNH” (Interview, 11/05/11). Perhaps this personal transformation was stimulated by the Paro GNH Education workshop or it could be for some other reason. Similarly, Teacher 1 also had experienced some positive developments individually as well as at the school level even though it was just the beginning of second year of implementation. For example, Teacher 1 confidently articulated that she had become more aware of GNH values and felt that it:

[Brought] positive change in children’s outlook, for instance, preservation of [the] environment and also because of the awareness they could co-relate their life with the GNH philosophy and also make text to life connection bringing out the values from the lesson taught. (WHSS Teacher 1, 31/05/11)

If true, associating students’ life experiences with GNH philosophy and ‘making text to life connection’ of values in the teaching-learning process as expressed by Teacher 1 is a substantial achievement for GNH Education. Often in the Bhutanese education system students are taught abstract concepts without making connections to real life experiences. Discussing the experiences of infusing GNH values into her English lessons, Teacher 1 deliberated that GNH values and principles could be very much integrated in her English lessons without much effort. Teacher 1 further exhibited efficaciousness for GNH Education when she claimed that:

We are now aware and conscious of what we are teaching. The value-laden lesson from the text can be well connected to the GNH philosophies and make it more realistic with the day-to-day life experiences [of the students]. (WHSS Teacher 1, 31/07/11)

Whether these teachers have been able to follow their beliefs in the daily classroom teaching or not is a completely different matter. In order to gain an overview of how GNH values and principles are infused by the teachers into their academic teachings, two teaching lessons were observed with each of the two teachers.

The first lesson for Teacher 1 was an English lesson related to a story titled, “He-y, Come on Ou-t” by a Japanese author, Shinichi Hoshi, for grade 10 students. Some of the strategies used to present the lesson were group presentation, discussion and a question-answer. At the end of the lesson, an observation was made that this story was redolent with values that discuss the merits of compassion, trust, love and care, honesty, and environmental protection and the demerits of crime, revenge, power, corruption, materialism and modernisation which are all a part of GNH values (Observation form, 10/05/11). The teacher related these values to the present Bhutanese context where commentators have indicated a degradation of the environment, littering, rise of crime and corruption, competition for power, lack of love and care, and increasing materialism at a very surface level (Observation form, 10/05/11). Judging from the student comments and

responses to questions asked by the teacher, the lesson definitely created some awareness in her students. However, opportunity for a more in-depth analysis through critical reflection and discussion of these values would have been more likely to produce an immediate and long term impact especially if this lesson included a discussion of how values impact on the daily lives of students and their relationship to GNH philosophy.

The second lesson for Teacher 1 involved a poem called “Amalkanti” by a Bengali author, Nirendranath Chakraborty, for grade 9 students. Student volunteers were asked to read a stanza from the poem and the teacher asked questions to check their understanding, followed by teacher explanation. As observed, some of the values that were apparent in this lesson were hard work and one’s ambition to match capability or to be reasonable with one’s ambition. Through a question-answer session between the teacher and students, it became evident that these students realised that it was a waste of time and energy to aim for something that is impossible like the main character in the poem (who aimed to become sunlight and ended up working in a poorly lit printing room) and also that one has to work hard to achieve one’s dream (Observation form, 31/05/11). Although no explicit connections to GNH philosophies were made, exposure to values such as hard work and being reasonable with one’s ambitions are crucial for growing children in achieving success and happiness and hence contributing to GNH. It is evident that there was some dislocation between Teacher 1’s perceptions of infusing GNH values into her academic lessons and her actual classroom practices especially in the second lesson.

The first observation for Teacher 2 was of a Biology lesson for grade 9 students related to the topic “Hygiene – A key to healthy life” (Observation form, 10/05/11). The topic was taught mainly through teacher explanation and a question-answer session. The main value discussed was personal hygiene with special focus on regular brushing of one’s teeth and how it contributes to one’s healthy life. Students’ commitment at the end of the lesson was that they would maintain their personal hygiene in order to lead a healthy and happy life. While it is evident from the students’ commitment that some connection to their daily living was made, no explicit connections were made to GNH philosophies that would have helped students consolidate their understanding of the concept of GNH. However, in this particular lesson, Teacher 2 was able to go one step further than Teacher 1 when students were able to learn the values associated with personal hygiene and how it will lead to both healthy and happy life. Such learning experiences help address the issue of personal health, which is one of the nine domains of GNH (see Chapter Two, p. 27).

The second lesson observed was also a biology lesson for the same class on the topic “Economic Importance of [the] Housefly”. The topic was basically taught through teacher

explanation of how houseflies spread diseases and ways of controlling houseflies with the help of writing some key points on the green board. Although this lesson involved inherent learning of values associated with controlling houseflies and how it helps prevent the spread of diseases, it was noted that, “no values in particular were linked to GNH philosophies” (Observation form, 11/05/11). Although this teacher previously claimed that he provided more focus on values while teaching his academic lessons, observation of two teaching lessons did not show any such substantive focus (WHSS Teacher 2, 11/05/11).

Analysis of these teachers’ teachings apparently showed a lack of in-depth and explicit discussion of values and, in some lessons, no discussion of values at all. In three of the four lessons observed, these teachers apparently missed making explicit connections of values that emerged in the lesson to GNH philosophies and to students’ daily living, although they claimed to do so. Not being able to effectively infuse GNH values into their teaching lessons to some extent depicted low self-efficacy of these teachers. Findings from the lesson observations and also from the teacher feedback about the Principal suggested that there was some considerable incongruence between the perceptions of the Principal and two teachers interviewed and the same two teachers’ perceptions and their actual classroom practices with regard to GNH Education.

6.3.2.3 Teacher resistance

Teacher resistance was one of the key issues that seemed to have created a barrier in successful implementation of GNH Education at WHSS in particular relation to infusion of GNH values and principles into academic lessons. Sharing some of the initial difficulties related to teacher resistance, the Principal expressed that, “I experienced a kind of resistance from some of the teachers because GNH Education changed the ways we prepare our plans, the ways we implement our plans and so on – meaning extra work and getting away from old practices” (13/07/2011). However, on a positive note, the Principal agreed that such complications are initially expected when implementing any educational reforms (Fullan & Stiegelbauer, 1991).

Teacher resistance was also evident in the fact that the school had to change the allocation of meditation session frequently – the school’s only new programme. Initially the meditation was conducted in their classrooms at the beginning of each lesson. Later it was changed to just once before start of the day’s first lesson. Finally it was moved to the evening prayer immediately after the academic sessions were over for all including the day students. Conducting meditation sessions at the beginning of every lesson was a problem as all the classes were not able to start at the same time because all the teachers were not able to come to the class at the same time. As a result, while some classes would have already finished their meditation session, some other

classes would have just begun, which was a source of disturbance to each other. From the frequent changes that the school made and from discussion, it became evident that teacher resistance as well as some logistical difficulties were experienced with the meditation sessions. However, having received some positive feedback on the impact of meditation from their students, WHSS had finally combined their meditation session with the afternoon prayer session directly following the last session so that even the day students could attend (WHSS Teacher 2, 11/05/11).

Meanwhile one of the expatriates who taught Biology also showed signs of resistance when he thought that separate mindfulness training was not necessary since all students attended everyday prayers. Having found the infusion of GNH Education values and principles complicated and confusing, one of the survey respondents (Teacher 766) from this school commented that, “It would be better if the concerned person could bring out the agenda of imparting GNH values in a simple manner” revealing some form of teacher tension and resistance.

While teacher resistance was bound to happen with such an educational innovation (Fullan, 1992), this case study revealed some social and contextual issues that appeared to act as barriers to successful infusion of GNH values and principles in the academic lessons. Each of these issues is discussed under the following sub-themes. First, evidence showed that WHSS provided *a considerable focus on academics* as indicated in their vision and mission statements and also in line with one of the key aspects of a ‘green school’ – promoting ‘academic greenery’. WHSS’s focus on academics was further supported by the case study data as very little infusion of GNH values were observed in the academic lessons. One of the possible reasons for not providing adequate time for values discussion in the class actually points at the question of syllabus coverage and teaching for examinations that have been a long time tradition for the Bhutanese education system. In an informal discussion after the interview, Teacher 2 reinforced the idea that there was too much focus on the examination results in his school – teachers concentrated on syllabus coverage and end of the year academic performance.

WHSS had been identified as one of the top 10 higher secondary schools in both 2010 and 2011 (Pem, 2011), which supports the claim made by Teacher 2. In 2010, the Ministry of Education introduced the practice of ranking schools based only on academic performance at three levels of schools – primary level (grade 6), middle secondary level (grade 10) and higher secondary level (grade 12). However, commencing 2011, the Ministry of Education started ranking the schools based on “academic learning, enabling practices in teaching and learning, and achievements on GNH practices” (Pem, 2011). As per the school website, WHSS also claimed to

have maintained their top 10 ranking in both 2012 and 2013. Moreover, records also revealed that WHSS had the highest number of high school graduates winning international scholarships provided by the government to study abroad in a wide range of fields such as medicine and engineering (CERD, 2008). Teacher 2 expressed that, when the focus is on examination results, “teachers provide ready-made notes for students to study, which helps them to achieve good marks, and as a consequence teachers are appreciated” (11/05/11). This focus on academic results is at odds with the view expressed above by the Principal and two teachers – that GNH Education as the *focus* of learning. Thus existence of such a strong focus upon academic excellence could be one of the reasons why WHSS scored poorly in collective efficacy beliefs for GNH Education.

Second, one of the indications of not being able to initiate in-depth discussion of values that emerged in the teaching lessons is apparently attributable to a *lack of knowledge, skills and strategies* for dealing with values in the class (Principal, 13/07/11; WHSS Teacher 2, 11/05/11). It was evident that many teachers including school leaders (principal and vice principals) did not have a clear concept of GNH and also did not have a strong understanding of the vision of GNH Education (Principal, 13/07/11; Teacher 2, 11/05/11). This claim was further corroborated with evidence from teaching observations that these two teachers were not able to meaningfully infuse values that appeared in the four teaching lessons. In this context, it is important to understand that like teaching of any other subject, teaching of values also requires a wide range of knowledge and innovative strategies to harness student interest and engagement in the class.

Third, besides the focus on content and examinations, previous research has also shown that teachers in Bhutan also work under a *heavy teaching load* with six to seven sessions of 40-45 minutes a day and more than 40 students in a class (Sherab & Dorji, 2013). In the past, due to a heavy workload, teachers have often resisted taking up any additional responsibilities. For instance, Sherab and Dorji (2013) found that Bhutanese teachers refused to use activity-based teaching/learning approaches because it took more time to complete a lesson impacting negatively on the syllabus coverage. Moreover, teachers in Bhutan ‘shoulder multi-tasking burdens,’ whereby they have to organise and supervise extra-curricular programmes, and supervise morning and evening study hours (especially at boarding schools). Therefore, teachers could argue that spending more time on each GNH value would have resulted in not covering the lesson content in time thereby impacting negatively on syllabus coverage, examination results and so on the teachers’ status.

The recent change in the time for meditation session in this school from the academic session to the evening prayer is an indication that meditation during the academic lesson was considered to be an interruption. Eventually teachers were able to evade from having to deal with

meditation during their academic sessions. This situation further confirmed that many teachers are likely to refuse any activity that has the potential to distract the flow of academic lessons. As demonstrated by the lessons of these two teachers and their perceptions, too much reliance on academic performance and examination oriented education system, a lack of knowledge, skills and teaching strategies, and workload posed threats to GNH values not being analysed and discussed adequately in the class.

6.3.2.4 Conflicting attitudes

All three participants interviewed at WHSS perceived that they had a positive attitude towards GNH Education. On the other hand, there were clear signs of conflict in their attitudes. Both the Principal and Teacher 2 expressed the view that all principals and teachers need to attend a Paro-style GNH Education workshop, if GNH Education is to be smoothly implemented. This statement is an indication that the Paro workshop played a significant role in motivating and raising the efficacy beliefs of school principals and that SBIP conducted in WHSS following a ‘train the trainer’ model may not have been very useful. Such attitude clearly demonstrated doubt in the efficacy of the ‘train the trainer’ model followed at WHSS.

Findings also demonstrated issues related to other participant attitudes and abilities. It was evident that many teachers including school leaders (principal and vice principals) did not have a clear concept of GNH and also lacked relevant knowledge, skills and methods to inculcate values in students (Principal, 13/07/11; Teacher 2, 11/05/11). They attributed this lack of knowledge, skills and methods to lack of training opportunities for the teachers as well as for the leaders of this school. The GNH Education Coordinator, who provided a one-day SBIP in the school, considered that it was inadequate for the teachers to digest a week’s materials that were covered at the national level Paro GNH Education workshop. As a GNH Coordinator, he expressed signs of frustration when he stated that:

I feel it is a good programme, but the way it is being carried out is not very good. As I mentioned earlier, teachers were not trained. As a result of this, different teachers have different ways of doing and understanding things. When different teachers have different understanding and approach things differently it becomes very difficult. (WHSS Teacher 2, 11/05/11)

Apparently the GNH Education coordinator was not able to make an impact out of the SBIP that he had provided to the entire faculty at WHSS. Besides, some research (Bax, 2002; Ross, 1994) has also shown that a short one-off in-service for teachers using a cascade model of teacher professional development has not been very effective. For instance, Ross (1994) found that a short

one-off in-service for teachers to implement cooperative learning was not able to raise teacher efficacy.

It can be reasonably assumed that there would be GNH Education leadership issues at other schools especially where principals missed the Paro workshop. However, empirical evidence would be necessary in order to authenticate such a claim. Being able to carry out the task practically is a completely different matter than being able to efficaciously talk to someone about the task in hand. But as a beginning principal in the school the new forms of leadership would no doubt take some time to have an effect and moreover educational reforms such as this are bound to encounter adversities and complications (Fullan, 1992).

During one of the field visit days to this school, an informal session was observed in the school common room where all the teachers and vice-principals came for morning tea. This situation provided an opportunity for the researcher to talk to the teachers including some expatriates. One of the science expatriate teachers for class 12 said, “Class 12 syllabus for science is very vast. I concentrate on completing the syllabus, so GNH values are forgotten.” Such reactions from a teacher showed that the vision of GNH Education was apparently not clear to many teachers. Although it would mean some extra effort from both teachers and students, GNH Education is all about dealing with values in a subtle way without impact on the content learning. Having had such an interesting response from this expatriate teacher during the tea break, other expatriate teachers were spoken to on the next day to determine expatriates’ views on GNH Education. This time it was a biology teacher who had taught in the school for the last ten years. He expressed the view that “values are already there but [it was] just a matter of recognising [them]. For example, care of students.” There is some indication in this statement that the vision of GNH Education has not completely filtered down to the individual teacher level.

The two expatriate Indian teachers appeared to be signalling that there were different views about GNH Education – not all teachers were ‘pulling’ in the same direction. One of the survey respondents (Teacher 786) from WHSS also argued in an open-ended survey/questionnaire comment that, “It is not only the teachers who are to be blamed for students who act dishonestly at this school. Students also learn behaviour from [the] external environment such as at homes, towns, friends and relatives.” This statement demonstrates an indication that for many teachers the teaching of values cannot be entirely dependent on schools as school children spend more than half of their time outside of school. It might also mean that, for this teacher at least, teaching values is a responsibility that lies outside the work of teachers. Such teacher beliefs have the potential to negatively impact on the vision of GNH Education. Such concerns related to

implementation of GNH Education shared elsewhere in this case study report are likely to have contributed to low school collective efficacy beliefs for GNH Education.

6.3.3 Summary of the WHSS case

WHSS had obviously taken initiatives to introduce a new ECP and invigorate old ECPs to promote GNH values and principles. However, not much effort had been made to meaningfully infuse GNH values and principles that appeared in their teaching lessons. Varied opinions and levels of understanding about the GNH Education amongst the teachers and principal of this school confirmed that self- and collective efficacy beliefs for GNH Education at WHSS were not particularly robust. While individually all three participants attempted to speak well about GNH Education in this school, there were signs of confusion and conflict elsewhere, which were likely to affect the successful implementation of the latest educational innovation in the school. Existence of conflict indicated that the vision of the government and the Ministry of Education with regard to GNH Education had not been clearly translated into practice in this school. Importantly, evidence from the interviews and especially teaching observations showed that relatively few values were taught or discussed in the classrooms. Such classroom experiences that were observed indicated lack of transformative learning through critical reflection of their beliefs, assumptions, values and practices about GNH values and principles.

The results of the phase two in-depth case study of WHSS confirmed the findings of the quantitative phase, as well as the expert advice, that the school had lower school collective efficacy beliefs for GNH Education. Furthermore, the case study data provided indicators that explained the reasons for WHSS being a GNH ‘inefficacious’ school. The Principal of this school pointed towards teacher resistance as the major obstacle while she also acknowledged the fact that she needed to attend an in-service programme to effectively deal with the GNH Education implementation process (es). Teacher 2 had higher personal self-efficacy. However, his perception of school collective efficacy was not very robust either and he mainly attributed this to the absence of quality in-service programmes for both the Principal/Vice Principals and teachers of this school. Clearly there was some sign of poor visioning and possibly of an ineffective SBIP.

Findings were based on three participants and four lesson observations, yet despite the low number, there is some indication that the perceived high self-efficacy of these teachers and the Principal may not necessarily lead to successful implementation of GNH Education, especially with respect to infusion of GNH values and principles into academic lessons.

6.4 Guru Lower Secondary School (an ‘inefficacious’ school)

The Guru Lower Secondary School (GLSS, as shown in Table 6.1, p. 143) was a representative of an ‘inefficacious’ school in terms of beliefs about implementing GNH Education. GLSS had the final school collective efficacy score of mean rank of 145th (out of 155 schools), and was in cluster 4, one of the 28 schools with ‘much lower’ school collective efficacy beliefs for GNH Education.

6.4.1 Setting the context

GLSS is an urban lower secondary school in Southern Bhutan, located near its district headquarters. Comparatively, it is a small urban town where not many infrastructure development activities have taken place for almost two decades. GLSS is a government day school with over 60 teachers (4 expatriates) and more than 1400 students studying from pre-primary to grade eight in the 2010 academic year. This school was recently upgraded to a lower secondary school with some additional infrastructure to take in graduates from neighbouring primary schools. Due to the large number of students and limited space, this school was managed on two shifts with a separate team of teachers for the morning and afternoon shifts. The morning shift began at 7 am and finished at 12.15 pm and the afternoon shift began at 12.15pm and finished at 6.15 pm in the evening. While half of the students came from the town with the majority of their parents working (either in public or private sectors) and some in small scale businesses, the other half were mainly the children with farming backgrounds from the adjacent villages. The children with farming backgrounds were mainly Lhotshamkha-speaking and there were also children with working and business backgrounds were of mixed language background (Dzongkha – the national language of Bhutan, Lhotshamkha – language spoken by people in the south and Sharchopkha – language predominantly spoken by people in the eastern parts of Bhutan).

GLSS was headed by a male principal with a Dzongkha Teaching Certificate and had 16 years of principalship and teaching experience. The Principal was supported by two vice principals (one male and one female) in the administration of the school as well as academic matters. The Principal was responsible for day-to-day management of the school, while one vice principal was specifically assigned to look after the morning shift and the other to manage the afternoon shift. The Principal and two teachers (one male and one female) participated in interviews and teaching observations. An interview with the Principal was conducted in Dzongkha whereas for the two teacher participants it was in English. Teacher 1 taught Mathematics in grade two and Geography in grade seven. He was in his first year in teaching.

Teacher 2 taught Science in grade five and English in grade eight. She had six years of teaching experience.

The Principal of GLSS, jointly with the principals of two neighbouring schools who attended the Paro GNH Education workshop, provided a two-day in-service programme at the beginning of the 2010 academic session to prepare all the teachers of these three schools to implement GNH Education in their respective schools.

The GLSS vision stated that it “aspires to produce and provide to the nation responsible and productive citizens” and the mission is:

To provide quality wholesome education to every student.

After the completion of primary schooling, we expect our students:

- i) To have basic knowledge on reading, writing and speaking in Dzongkha and English and
- ii) To have learnt important Bhutanese values as well as some universal values. (GLSS, Vision and Mission, 2011)

As articulated in the school’s mission statement, it is understood that besides academic achievement this school also like WHSS aspired to teach and inculcate Bhutanese as well as universal values in pursuit of wholesome education for every child.

6.4.2 Discussion of themes

The lived experiences of implementing GNH Education in GLSS is presented through the following emerging themes: i) pre- and post- GNH Education programmes; ii) perceptions and actual practices in GNH Education; iii) role of the hidden curriculum; iv) conflicting attitudes; v) lack of infrastructure facilities; and vi) impact of GNH Education.

6.4.2.1 Pre- and post- GNH Education programmes

One of the first programmes this school had initiated as a part of the GNH Education implementation process was the compulsory daily meditation at the beginning of the day’s first class, at the end of the last class and once a week during the evening prayers. The other three activities that GLSS had initiated as a part of the post-GNH Education were putting in place a ‘GNH Board’, installing waste bins and a GNH values briefing for parents. Sports competitions (such as soccer, volleyball, and athletics) and literary activities (such as debates, quizzes, and extempore speeches) were two of the pre-GNH Education ECPs initially implemented to provide wholesome education and later to promote GNH values.

According to the Principal, meditation at the beginning of the first class provided opportunities for children to prepare their mind for the day’s classes and activities and meditation at the end of the day helped students to reflect on what they have done for the entire day before they go home. A ‘GNH Board’ (see Figure 6.4), was used to disseminate GNH-related information collected from newspapers, magazines and other documents with a view to educate the wider school community on diverse aspects of GNH Education. Such initiative signifies an important characteristic of a learning centre in the community.



Figure 6.4 GNH board at GLSS

Waste bins (see Figure 6.5) have been useful as they helped to control littering in the school and contribute towards fulfilling the vision of GNH Education. Such a practice was not very common in the schools in Bhutan during the pre-GNH Education period. So these initiatives indicate a substantial development in what is a resource poor school.



Figure 6.5 Waste bins at GLSS

The school had also made attempts to brief parents on GNH values during the parent-teacher meetings to create awareness amongst parents who also play a crucial role in inculcating values in children (GLSS Principal, 19/05/11). The Principal considered parental briefing fundamental because parents and the home environment are important to successfully implement GNH Education. Children spend only about one third of their time at school under the care of teachers while two third of their time is spent out-of-school where they learn different values. So the school considered it to be crucial to make home and the school values complementary. Such principal leadership would go a long way in bringing the school and parents closer. In Bhutan such an emphasis upon parent school relationships is very minimal at present.

The programmes implemented at GLSS have the potential to address a wide range of GNH pillars, domains and values (Table 6.3). For instance, organisation of sporting activities addresses ‘good governance’ and ‘sustainable and equitable socio-economic development’ through consistent focus on three important domains of good governance, health and education. These three domains in turn have the potential to promote in their students various values such as integrity, trust, competence, non-discrimination, fitness, self-worth, creativity, patience, diligence and perseverance. Learning such important values right from a young age would provide a solid foundation for these students to lead a moral life later during their adulthood. It might be noted that the list of activities are more or less equal in number to WHSS and contain mostly activities that are ‘normal’ in schools in Bhutan (except for the school community relations initiative).

Table 6.3 GLSS activities showing major linkages to GNH pillars, domains and values

GLSS Activity	GNH Pillar	GNH Domain	Values
Meditation	Promotion and preservation of culture and tradition	Psychological well being	Compassion, generosity, forgiveness, calmness, gratitude, empathy, truthfulness
	Sustainable and equitable socio-economic dev.	Health	Fitness, vitality, self-worth, prevention, precaution, non-malignance
Sports competitions (volleyball, soccer, athletics, etc.)	Good governance	Good governance	Integrity, trust, justice, competence, professionalism, wisdom, far sightedness, empowerment, non-discrimination, commitment
	Sustainable & equitable socio-economical development	Health	Vitality, fitness, soundness, self-worth, prevention, precaution, non-malignance
		Education	Creativity, openness, diligence, insightfulness, perseverance, patience, creative thinking
Literary activities (debates, quizzes, extempore speeches, etc.)	Literary activities have the potential to address all the 4 pillars, 9 domains and 72 indicators depending on the focus of each activity		
Waste bins	Environmental preservation,	Ecological literacy	Eco-consciousness, sustainability, aesthetic, naturalistic, reverence
	Sustainable & equitable socio-economical development	Health	Vitality, fitness, soundness, self-worth, prevention, precaution, non-malignance
GNH Board (see Fig. 6.5)	The GNH Board has the potential to address all the 4 pillars, 9 domains and 72 indicators depending on the type information put up on the board		
Briefing for parents	Parental briefing also has the potential to address all the 4 pillars, 9 domains and 72 indicators depending on the type of briefing schools provide		

6.4.2.2 Perceptions and actual practices in GNH Education

This section highlights some of the mismatches evident in the participant perceptions and their actual practices about GNH Education. Both the teacher participants from GLSS expressed the view that they did try to infuse whatever values appear in their teaching topics. “I try to stress that theoretical learning is not enough and that what is more important is putting them into daily use, I mean practicing them in their day to day life. For instance, it is important for students not to lie and [to] be honest” (GLSS Teacher 1, 17/05/11). Similarly Teacher 2 appeared to be caring when she remarked, “the atmosphere that our students grow makes it necessary that they need to have certain values” (Interview, 17/05/11). For Teacher 2, every lesson in her English and Science sessions involved values for her students, she said. “They learn something new each day. Even a single word or a sentence makes a difference in their life. So I thought that GNH was there before only. The only thing that lacked was the term- [GNH]” (Interview, 17/05/11). Such understanding may or may not suggest that this teacher was not well oriented to what GNH Education is all about. If some teachers continue considering that GNH was there in the system previously and leave it for implicit learning, they are not likely to bring about change with the present GNH Education initiative because many students will not see the connection. Teacher 2 further claimed that with the introduction of GNH Education, “we have a separate column in the lesson plan where we have to reflect the values to be inculcated. It reminds us of the values that needs to be discussed in the class” (GLSS Teacher 2, 17/05/11). This is an interesting idea and goes some way to showing how planning for GNH Education can take place.

To obtain an overview of how these teachers infuse GNH values and principles into their academic teaching, a total of four teaching lesson were observed. As presented above, observation of their teaching lessons indicated a considerable mismatch between their perceptions and actual classroom practices, including with Teacher 2. The first lesson for Teacher 1 was a Mathematics lesson for grade two on the topic ‘weight.’ The lesson began by the teacher writing on the board ‘1 kilogram = 1000gm’ and then asked students “if Sherab is 25 kilograms, how much is his weight in grams?” The teacher helped to solve this problem by asking several students and then further asked questions such as “name one thing that does not have weight? And list things in the class that have weight.” It was more or less a question-answer session in which several students were asked to respond to the above questions that were basically recall type of questions. No values in particular were focused in this lesson (Observation form 16/05/11). It is understandable that some topics, especially in subjects like Mathematics, may not have appropriate values to discuss, but teachers need to be aware that anything they do in the class, including their behaviour and attitudes, have the potential to bring some impact on their students’ lives.

The second observation for Teacher 1 was conducted during a Geography lesson for grade 7 on the topic “The living forest.” Again the lesson was dominated by a question-answer and explanation by the teacher. Questions such as, “name some living things? Discuss the importance of a forest? What are the types of forest?” were asked. The teacher wrote points contributed by the students on the green board, and explained the value of forests such as that it provides food, shelter and clothing. Besides discussion of some general importance of forests, no connections were made with GNH philosophy. For instance, the teacher may have used this lesson as an opportunity to connect this lesson to some of the important aspects of GNH such as the 4th pillar’s environmental conservation and sustainable development. The vision of GNH Education makes it clear that it is important that school students understand such concepts from an early age (MoE, 2010d) but this did not happen in this lesson.

The first teaching observation for Teacher 2 was a Science lesson for grade five on the topic “Cattle”. The teacher asked students to open the text and explained the uses of cattle, with the help of asking questions. Students responded by saying that the cattle provide curd, milk, cheese, butter, meat and are used for ploughing. Interestingly some students pointed out that the cattle are not meant for meat. Having observed that the teacher did not focus on discussion of any pertinent values in the lesson, I have noted that the teacher “could have related this lesson to importance of values such as compassion and kindness not only between human beings but also to the animals” (Observation form, 16/05/11). It is, from the perspective of the GNH philosophy important, that growing children are offered the opportunity to discuss, reflect and clarify such values in relation to their daily living. Such instances in the teaching of academic subjects also provide opportunities to discuss values dilemmas that children face in their actual life. For instance, killing animals is prohibited as per the Buddhist teachings, but most Buddhists eat meat. How do students view such a values dilemma?

Her second lesson was centred around the poem titled, “Certain choices.” The poem was about a friend who was a drug addict and ultimately died of an overdose. All students in the class were asked to think of a close friend that he or she had in the past and write about him or her in a few words. Later some students were provided the opportunity to share their writing with the class. This poem was basically taught by the teacher reading out the poem twice and asking students to read on their own. Then the teacher wrote synonyms for difficult words on the board and students were asked to make sentences using the words. Again to think of this lesson from a GNH point of view, no values were discussed in the class. The teacher could have converted this lesson to a meaningful GNH lesson without losing the focus of the content. For instance, discussing and clarifying the value of friendship and implications of drug abuse would have been

a lifelong lesson for these students which would have helped the students to remember the lesson content.

Analysis of these teachers' four lessons indicated that little about GNH values were explicitly infused into their academic teachings. Although not all lesson topics and subject areas are relevant or perhaps easy to infuse GNH values and principles, observation of the four lessons did provide these teachers with some opportunities to discuss GNH values. Lack of explicit discussion of GNH values in the class is a clear indication of the lack of intent or the lack of teaching strategies to critically inquire into the values involved. Since there is little or no critical reflection on their part, adaptive reflective is evident as implied in Figure 2.2 (see p. 47). Without critical reflection on GNH values by the Principal and teacher participants, not a great deal of change in their beliefs, assumptions, values, actions and practices is likely to take place. Further, this case supports the contention that at least these two teachers had limited knowledge and skills to infuse ideas consistent with GNH values, principles and practices in the classroom or that they were unwilling to devote time and energy other than for academic purposes as elaborated in the WHSS case study report.

6.4.2.3 Role of the hidden curriculum

Teacher 1 perceived that one of the purposes of GNH Education in the Bhutanese education system is to “incorporate sympathy and empathy” (Interview 17/05/11) in students but observation of his actual behaviour and attitude in the class indicated he did not model these attributes. The observed use of some language in the classroom by the teacher was largely contrary to the philosophy of GNH Education. The teacher frequently used impolite language and in a rude tone such as “Tashi stand up”, “keep quiet”, “sit down”, and “do not make noise” (GLSS Observation form, 16/05/11), which were all abrupt commands apparently lacking kindness and courtesy. Such negative role modelling happened in this teacher's classroom even while he had a researcher observing his teaching. The students can easily absorb such impolite behaviours.

This approach clearly indicated a lack of understanding of the GNH philosophy by this teacher or at least its practical implications for the classroom. Discussing the significance of teacher role model for their students, Yero (2010, p. 14), in pointing to the importance of the hidden curriculum, states that, “even more than what they ‘plan’ to teach, their personal values and behaviours are part of the ‘taught’ curriculum”. Teachers cannot expect students to be kind and courteous when they themselves lack kindness and courtesy in day-to-day interaction with students. With such a situation being replicated elsewhere the hope of achieving GNH would remain distant.

Another example of a negative role modelling took place at the end of Teacher 2's first lesson. One student stood up from his chair and asked for the teacher's consent to go to the toilet, but permission was not granted. Assuming the student was genuine, where is GNH in such a response? These types of responses and behaviours from both the teacher participants in this school stimulated an apparently uncaring environment for the growing children and drifted away from the philosophy of GNH Education. Teachers need to understand that most often such experiences make enduring impact on students than from abstract teaching of values.

6.4.2.4 Conflicting attitudes

Having attended the national level Paro GNH Education workshop the Principal was clearly confident when he asserted that "this programme is not likely to affect the academic activities of the schools because there is nothing extra to be done" (Interview, 19/05/11). While the Principal had a positive attitude for GNH Education, if one carefully considers such a comment, it would indicate that the vision of GNH Education had not been clearly communicated or that he had not understood its full message. Implementation of such a major educational reform would have implications for most school activities and consequently impacting on the existing culture of the entire school and its stakeholders (Fullan, 1992). This would include its academic activities.

Although the Principal was not aware, the difficulties associated with GNH Education were already evident in the school. For instance, Teacher 1, found it "difficult to implement the values appropriately" and as a result felt that there should be full time GNH Education teachers in the schools led by those "who are well versed with all the GNH values and takes independent classes" (GLSS Teacher 1, 17/05/11). This exhibited Teacher 1's apparent lack of knowledge and skills related to GNH values and principles and a desire to pass on the responsibility to others. Such attitude from a change agent would prove to be one of the stumbling blocks for successful implementation of GNH Education. Further, such an attitude also signals low self-efficacy.

The school Principal's perceptions of school collective efficacy also seemed to be inefficacious when he mentioned that "some refresher courses for the teachers would be better to keep themselves updated. [A] few hours of SBIP is not good enough for them." Perhaps this is an indication that the SBIP provided by him had failed to harness the interest and motivation of his own teachers. As discussed in the WHSS case, such a cascading model of teacher professional development does not appear to be effective.

A conflicting attitude was also portrayed in the manner Teacher 2 conducted meditation sessions for her students. Although the Principal was under the impression that the meditation session was conducted two times in a day in every classroom, for Teacher 2, meditation sessions

were conducted only when her students were tired or when students felt like having some rest. This teacher made it clear that “at other times when they [students] are active I do not ask them to meditate” (GLSS Teacher 2, 17/05/11). Thus such contradiction is a clear indication of GNH Education not being seriously or consistently taken up in this school indicative of low collective efficacy.

6.4.2.5 Lack of infrastructure facilities

The Principal’s sense of collective efficacy was also weakened by the fact that his school lacked enough classrooms and other infrastructure facilities that resulted in the introduction of the shift system. According to the Principal, the shift system:

Has posed some difficulties for both the teachers and students. We have students who have to walk up to 2 hours to school. These students have not been able to keep up with their regular class works. For these students, morning shift is too early to come to school and the evening shift is too late for them to go home. It is difficult especially for the primary section students. (Interview, 19/05/11)

The primary section of the school also included pre-primary children (officially age 6), which would be even more difficult for them to attend school early in the morning or go home after school late in the evening. Teacher 1 also articulated similar concerns when he mentioned that “our school is a lower secondary with large number of students and crammed school space” and “we have [a] limited budget to carry out other activities apart from teaching our subjects” (Interview, 17/05/11). Clearly the school was lacking in infrastructure support and visioning that goes some way in explaining the much lower school collective efficacy belief score. Lack of infrastructure may have a direct link to infusion of GNH Education through ECPs. For instance, a lack of space could be a detrimental factor for initiating sports activities or a school greening programme.

6.4.2.6 Impact of GNH Education

Discussing the impact of GNH Education, the initial reaction of the Principal was that immediate results could not be seen as GNH Education deals with human values and takes time to have an effect. The Principal believed that the real impact of GNH Education would be seen after eight to nine years as the “pre-primary students who joined the school last year [2010] will be reaching high school by then” (19/05/11). The Principal was looking at the long-term impact of GNH Education on individual students. After a careful thought, the Principal further commented that:

Important differences that I have observed after implementing this programme is improvement in certain things like maintaining the cleanliness of the school surroundings, use of plastics, amount of junk food used by both students and teachers, use and clearing of waste bins and peer care. (GLSS Principal, 19/05/11)

Some of the other impacts included a reduction of bullying problems such as “bigger boys stealing [from] and hitting the smaller boys” (Principal, GLSS 19/05/11). Teacher 1 was also of the opinion that GNH Education “will help ward off bad practices or influences of the students” and “make the school student friendly” (17/05/11). Furthermore, through their GNH programmes such as sporting competitions, the school had been able to discuss and promote essential life skills such as team spirit, participation, confidence, and appropriate attitudes toward winning and losing (GLSS Teacher 2, 17/05/11). All these issues are in line with the concept of ‘green school for green Bhutan’ and have been a noteworthy achievement for a much lower collective efficacy school as GLSS.

6.4.3 Summary of the GLSS case

Evidence from this case study showed that there were some visible, perhaps early, signs of positive impact of GNH Education. Principal perceptions of a significant reduction in bullying problems, which resulted in better peer care, improvement of campus cleanliness as a result of placing appropriate waste bins, and improvement of students’ concentration in the class as a result of mindfulness practice were some of the highlights of this school even though it scored “much lower” on the school collective efficacy belief scale. Within a period of one year these achievements may be seen as remarkable for a school that had a large number of students with inadequate physical infrastructure.

However, data from this case study unveiled some clear contradictions between what the school principal believed to be happening in the school and what the two teachers actually practiced in their regular classes. This situation goes quite some way in explaining the school’s much lower collective efficacy beliefs. For instance, Teacher 2 did not implement the mandated compulsory meditations at the beginning of the day’s first class and at the end of the last class. Similarly, Teacher 1 expressed that there should be separate full time GNH Education teachers instead of subject teachers having to deal with GNH Education implying lack of interest and low self-efficacy. These are clear indications of stress and confusion amongst both the Principal and the two teacher participants who were the GNH Education change agents. The Principal of this school also thought that his teachers should be provided with refresher courses to handle GNH

Education effectively. The Principal and teacher participants of this school attributed their low collective efficacy to a lack of proper physical infrastructure for such a large enrolment of students rather than attributing them to their own lack of capacity. All these issues showed that the school generally had low collective efficacy for GNH Education although there were a few benefits the school had produced after the implementation of GNH Education.

The teacher participants from this case study school did not show any substantial variation in the way they approached their daily lessons in terms of infusing GNH values, principles and practices. Findings showed that besides their main focus on the lesson content no efforts were made toward in-depth consideration of GNH values. The two teachers were reluctant to spare their content teaching time for any other purposes. Therefore, it is likely that any substantial changes observed in the students were due to promotion of values through other extra-curricular programmes rather than through curricular programmes. However, most often the nature of extra-curricular domains such as sports, literary and cultural activities, are that they engage only a limited number of students, which means the majority of the students would be deprived of an opportunity to learn and clarify values that have potential to impact rest of their lives.

Although only four lessons were observed for these two teachers, it can be concluded with some confidence that these teachers are not likely to do much to explicitly infuse GNH values in their future classes unless stakeholders intervene to transform their beliefs, values and actions. It is important that such educational reforms consider the level of readiness and preparedness of the change agents for successful implementation. Existing literature at the international (Fullan, 1992) as well as at the national level (Royal Education Council, 2009; Sherab et al., 2008; Sherab & Halloway, 2006) related to implementation of educational reforms show that little change is likely to take place without substantial attention to the on-the-ground realities indicating that the change initiatives have to provide unwavering attention to the local school culture.

6.5 Sangay Lower Secondary School (an ‘efficacious’ school)

The Sangay Lower Secondary School (SLSS, as shown in Table 6.1, p. 143) was a representative of an ‘efficacious’ school in terms of beliefs about implementing GNH Education. SLSS had the final collective efficacy belief score of mean rank of 3 (out of 155 schools), which confirmed that this school was in cluster 2, one of the 21 schools with ‘much higher’ school collective efficacy beliefs for GNH Education.

6.5.1 Setting the context

SLSS is a semi-urban government day school in a quiet small town in Southern Bhutan. It is located on a small hillock of 2.83 acres of land donated by a local resident of the area in the early 1960s and it is about 11 km away from the district headquarters (CERD, 2008). The school had 642 students (345 boys and 297 girls) from pre-primary to grade 8, and 19 teachers (all Bhutanese nationals) in the 2010 academic year. The students were predominantly from a rural community who came from the neighbouring villages. The students were required to walk to school and back home every day, with some having a short walk but there were many students who needed to walk for more than an hour each way.

A male Principal, who recently upgraded his qualification to Bachelor of Education through in-service distance education, headed SLSS. The Principal had 11 years of principalship experience and worked for six years in this school. He also taught Geography and Health and Physical Education in grades 7 and 8. The Principal participated in an interview and the two teachers (one female and one male) participated in both the interviews and teaching observations. Teacher 1 taught Mathematics in grade 8 and it was her first year having just completed a Bachelor of Education in secondary teaching. Teacher 2 taught Dzongkha after completing a Bachelor of Education in primary teaching eight years ago. The Principal attended the national level Paro GNH Education workshop in 2010. This Principal, in collaboration with the principal of a neighbouring school, conducted a one-day SBIP for all the teachers of these two schools to familiarise them with the GNH Education implementation process in their respective schools.

The vision and mission statements of SLSS were examined to determine if there were any signals indicative of GNH Education. The vision was to achieve “excellence towards quality education” and the mission was “to provide quality wholesome education” (SLSS Vision and Mission, 2010). On recollection the concept of wholesome education, as discussed in the Chapter One (see p. 3), encompasses all round development – physical, mental, social, cognitive, cultural and emotional aspects of a child through both curricular and extracurricular programmes. While GNH Education had not been specifically mentioned in the school’s vision and mission statement, it is assumed that some aspects of GNH Education is embedded in the phrase “wholesome education” (MoE, 2010a). The extent to which SLSS had been able to implement the GNH Education values, principles and practices, according to the vision of GNH Education, is discussed in the following section.

6.5.2 Discussion of themes

The lived experiences of implementing GNH Education in SLSS is presented through the following emerging themes: i) pre- and post- GNH Education programmes; ii) perceptions and actual practices in GNH Education; iii) positive attitudes; iv) role of the hidden curriculum; v) impact of GNH Education; and vi) barriers to successful implementation.

6.5.2.1 Pre- and Post-GNH Education programmes

Within just one year this school had designed and implemented a number of ECPs besides their existing ECPs (such as sports, cultural and literary activities): mind training sessions, car-free day, no plastic day, junk food free day, traditional day, staff social gatherings, creation of a GNH room, sharing of lunch among student representatives (captains), campus cleaning and briefing for parents with a goal of infusing GNH values and principles. Such a positive outlook and initiation of numerous ECPs were clear indications that this school had been working toward implementing the GNH Education values, principles and practices enthusiastically and creatively. According to the Principal, ideas for these programmes were generated mainly after the Paro GNH Education workshop for the school principals (Follow-up E-mail communications, 21/11/2012).

ECPs at SLSS had the potential to address a wide range of GNH pillars, domains and values (see Table 6.4). For instance, the mind training sessions have the potential to address two of the four pillars – Promotion and preservation of culture and tradition and sustainable and equitable socio-economic development. These pillars in turn impacts psychological well-being and health domains of GNH promoting values such as compassion, generosity, forgiveness, calmness, gratitude, empathy, truthfulness, fitness, vitality, self-worth, prevention, precaution, non-malignance. Similarly, the ‘car free day’ introduced in this school directly promoted, inter alia, the ‘environmental preservation’ (one of the four pillars of GNH) that helps to enhance ‘ecological literacy’ (one of the nine domains of GNH) not only in students and teachers but also in the school community. This approach in turn has the potential to promote GNH values such as eco-consciousness, sustainability, aesthetic, naturalistic and reverence.

Further exploration of each of these activities found that they were embedded in the school. For example, the mind training sessions were carried out three times per day – at the beginning of a day’s first class, at the beginning of the first class in the afternoon after lunch and before the last class of the day. The car-free day and no plastics day were observed on Saturdays. As a result of the introduction of the car-free day, both teachers and students walked to school and back home after the school. Later the nation-wide introduction of ‘pedestrian day’ on Tuesdays by the

Table 6.4 SLSS activities showing major linkages to GNH pillars, domains and values

SLSS Activity	GNH Pillar	GNH Domain	Values
Mind training sessions	Promotion and preservation of culture and tradition	Psychological well being	Compassion, generosity, forgiveness, calmness, gratitude, empathy, truthfulness
	Sustainable and equitable socio-economic dev.	Health	Fitness, vitality, self-worth, prevention, precaution, non-malignance
Car –free day	Environmental Preservation	Ecological Literacy	Eco-consciousness, sustainability, aesthetic, naturalistic, reverence
No plastic day	Environmental Preservation	Ecological Literacy	Eco-consciousness, sustainability, aesthetic, naturalistic, reverence
Junk food free day	Sustainable and equitable socio-economic dev.	Health	Fitness, vitality, self-worth, prevention, precaution, non-malignance
Traditional day	Promotion and preservation of culture and tradition	Cultural diversity	Identity, dignity, non-alienation
Staff social gatherings	Promotion & Preservation of Culture	Psychological well-being	Generosity, forgiveness, calmness, gratitude
		Community vitality	Reciprocity, family, closeness, equality, solidarity, unity, hospitality, cooperation, sociability
GNH room	Sustainable & Equitable Socio-Economical Dev.	Education	Creativity, openness, diligence, insightfulness, perseverance, creative thinking
Student rep Sharing lunch	Promotion & Preservation of Culture	Community vitality	Reciprocity, family, closeness, equality, solidarity, unity, hospitality, cooperation, sociability
Campus cleaning	Environmental Preservation	Ecological literacy	Eco-consciousness, sustainability, aesthetic, naturalistic, reverence
	Good governance	Good governance	Integrity, trust, competence, professionalism, empowerment, commitment
Briefing for parents	Parental briefing has the potential to address all the 4 pillars, 9 domains and 72 indicators depending on the type of briefing schools provide		

government in August 2012 provided further reinforcement to SLSS's idea of car-free day. All teachers and students were also not allowed to bring plastics in any form to the school on Saturdays to help minimise the use of plastics in the school campus and ultimately reduce the non-degradable waste and littering in the school. The junk food free day held every Thursday had been introduced to help create awareness amongst the entire school family on the health consequences and the ill effects of junk food consumption (SLSS Principal, 17/05/11). The traditional day was observed on Mondays. "Every Monday both students (above grade 4) and teachers attend morning assemblies with *kabney*³ and *rachu*⁴ [and] assembly speeches are made pertaining to GNH values related topics" (SLSS Principal, 17/05/11). Students were encouraged to speak on any of the topics related to the four pillars, nine domains, and GNH values such as care for environment, equality and promotion of culture (Follow-up E-mail interview, SLSS Principal, 13/09/12). This school had also instituted staff social gatherings once a month "to bring every staff [member] closer and to promote a sense of community in the school" (SLSS Principal, 17/05/11).

The creation of a GNH room was another initiative. Meetings related to GNH Education were conducted in this room and it was also used for keeping GNH-related resources such as newspapers and magazines for students and teachers to read. This room also has an altar for inculcating cultural values (SLSS Principal, 17/05/11). The room was basically created to provide students, staff and visitors something different from other rooms in the school. The GNH room also had a green board with information concerning the four pillars, nine domains and 72 indicators of GNH (see Figure 6.7). While resources related to GNH would be a source of information and encouragement for both students and teachers to learn about GNH, the maintenance of a Buddhist altar in the GNH room might generate complications. Although Bhutan is predominantly a Buddhist country, there are citizens following other faiths. So such practice as maintaining a Buddhist altar in a common room has the potential to marginalise other religious groups.

There were other initiatives. The school also provided an opportunity for all the school captains to gather at one place during lunch on Fridays where they shared their packed lunches with each other and had informal discussion on any issues related to students. Campus cleaning was one of the highlights of this school. The Principal mentioned that, "students carry out campus

³ Scarf for men.

⁴ Scarf for women. (In the Bhutanese tradition, *kabney* and *rachu* are worn during official ceremonies, while visiting government offices where there are national flags flying and while visiting temples).

cleaning every morning without teachers' supervision" and "teachers join students on Saturdays" in doing this (SLSS, 17/05/11).



Figure 6.7 Notice board showing GNH information in the GNH room at SLSS

A briefing for parents was an activity that had taken the school one step ahead in educating the wider community on GNH values and principles in addition to their own students and teachers. Briefings for parents were conducted during the parent-teacher meetings in the form of information input such as explaining the concept of GNH, four pillars and nine domains and also sharing the GNH programmes that the school had implemented (Follow-up E-mail interview, SLSS Principal, 13/09/12). Parents were also encouraged to practice in their daily life some of the school's GNH programmes such as restricting the use of plastics, walking to the school on a car-free day and being time conscious.

The GNH Education-related programmes implemented by SLSS within just over one year showed that the school devoted much time and effort in implementing GNH Education through ECPs. The Principal and two teacher participants of this school agreed that the implementation of GNH Education in their school had been going well and much awareness had been raised. Such beliefs and experiences were clear pointers to high principal and teacher self-efficacy for GNH

Education, contributing to, much higher collective efficacy. According to Bandura's (1997) efficacy theory, high efficacy facilitates and enhances effort, persistence, resilience and motivation (see Chapter Two Figure 2.2, p. 47). While this school had been doing well in terms of infusing GNH values and principles through ECPs, it would be interesting to know how these teachers have been coping with the infusion of GNH values and principles in their teaching subjects.

6.5.2.2 Perceptions and actual practices in GNH Education

Both the teacher participants from SLSS supported the idea of infusing GNH values and principles in the teaching subjects in principle. For instance, Teacher 1 commented that:

When I was a trainee at the teacher training college, there used to be morning assembly talks by some lecturers on how to integrate GNH values with various subjects. That time it sounded like it will be an extra work for the teachers. But now when it comes to actually doing it practically I don't feel like there is anything extra that teachers have to do to inculcate values to students. It is nothing different; values are already there in teaching and learning. Whatever we teach to our students, we always have to tell or discuss with examples of values. I don't think teachers would require extra training to deal with values in the schools. If we have the will I think we could easily integrate values in our teaching.
(SLSS Teacher 1, 18/05/11)

At a glance, this statement of Teacher 1 seemed to be encouraging and supportive but further analysis based on teaching observations, indicated that this was a naïve statement. Implementation of such a demanding educational innovation as GNH Education would have implications on time, resources, knowledge, skills and overall work culture. Such naïveté apparently showed that the vision of the government for initiating and implementing GNH Education had not been filtered down to this teacher. Teaching observations of Teacher 1 showed that not much GNH Education was being done in her teaching (Observation form, 18/05/11).

For Teacher 2, who taught Dzongkha, integrating values in his subject was not a problem according to him. "Values have been already there in teaching and learning. I think that in the past it was not really stressed. Now I feel confident discussing values related topics in my class" (SLSS Teacher 2, 18/05/11). Perhaps, this is true because Dzongkha books for all class levels were full of texts with moral, cultural, religious and spiritual values. As a result many Dzongkha teachers may be finding it easier to infuse values in their teachings compared to teachers of other subjects (Teacher 2, 18/05/11). Besides teaching Dzongkha language, traditionally Dzongkha teachers are also responsible for teaching Bhutanese traditions, human values, religion and

discipline to their students. In fact, the opportunity for Dzongkha teachers to discuss values in the class must be a reinforcement of what they do to maintain students' discipline and teach religion. Furthermore, Dzongkha teachers have their educational background from institutions related to Buddhist studies and as discussed in Chapter Two, GNH values are basically underpinned by Buddhist philosophy. Thus, leading to higher self-efficacy and relevant infusion of GNH values and principles in his teachings. Teacher 2 thought that GNH Education would benefit the entire nation, not only the education system (Interview, 18/05/11).

To obtain some general idea of how values were infused in the teaching, two teaching lessons were observed for each of the two teacher participants. The first teaching observation for Teacher 1 was a Mathematics lesson in grade 8 on the topic "Relating Fractions and Decimals – Naming fractions and mixed numbers as decimals" (Observation form, 17/5/11). Before the start of the lesson the class carried out a one-minute meditation session (see Figure 6.6). This figure also showed how students sat in the class. The lesson began with a question-answer session and then the teacher provided a problem for everyone in the class to solve. After that the teacher explained the concepts and provided more questions from the text for students to solve. The teacher moved around the class correcting students' work, and that was the end of the class. At the end of the lesson a note was made on the observation form) – "No values were overtly taught or discussed" (Observation form, 17/05/11).



Figure 6.6 Meditation session in the class at SLSS

Her second lesson was also a Mathematics lesson for grade 8 students on the topic, “Order of Operations with Integer” (Observation form, 18/05/11). After the meditation session was over, I was invited by the teacher to talk to the students if I wished to. Having provided this opportunity, I decided to ask a couple of questions to the students. My first question was, “what do you think of during the meditation?” Some of the students said that they think of nothing except they concentrate on breathing. Then I asked, “How do you feel after the meditation?” Again some of the students spontaneously responded that they ‘feel fresh’. Individual students were asked to solve questions from the text and the teacher spent her time monitoring and correcting students’ work. So no values were discussed per se.

The first observation for Teacher 2 was a short story lesson in Dzongkha for grade 8 on the topic “*Chi Sem*” meaning “Common Mind” (Observation form, 17/05/11). The lesson began by asking volunteer students to read aloud a paragraph to the class while other students were required to listen carefully followed by teacher explanation of the text. Some important values such as “*Goen Khag*” meaning “mindfully taking up one’s responsibility in life”, “*Chi Sem*” meaning “common mind which is equivalent to thinking of common benefit not individual selfish benefit”, and “*Ya Rab*” often referred to as someone with good human qualities – doing good deeds and helping others. After the explanation of the story, the students were given two questions to discuss in their group and then they were asked to share their responses with the class. The questions were: “What did you learn from the story?” and “Think of a good deed”. Some of the common responses from the groups were – we should not tell lies, helping others in need, thinking of actions that would benefit everyone not for personal benefit and overall being a kind and good human being – someone who is a “*Ya Rab*”. So this lesson was intrinsically about GNH values and the teacher stressed on how each value would benefit students. Such explicit infusion of values is what GNH Education is all about.

His second Dzongkha lesson, again taught in Dzongkha, was for grade 7 on the topic “*La Yok Dam Kha*” meaning “Choosing one’s job” (Observation form, 18/05/11). After a brief revision of the topic from the previous lesson, students were asked to read the text. The teacher started reading the text again and explained each line in a more traditional format in which teachers are considered to be the source of information and students as passive listeners. The story revolved around identifying individual ambition and kinds of skills required to fulfil the ambition. Students were asked to discuss their career ambitions in life and find out what kinds of knowledge and skills each would require. This was a worthwhile exercise as it provided some guidance about the different types of skills required for different professions. Many students realised that they need to nurture the necessary skills based on the profession they want to take up in the future.

Such realisations are important for students as it helps to remind them of their purpose in life and the vision of GNH Education. It is worthwhile noting too that the learning was related to student real life experiences.

Analysis of teaching observations indicated that no values were discussed in Teacher 1's Mathematics lessons while Teacher 2 did successfully infuse various values in his two Dzongkha lessons. There has been some incongruence in the perception of Teacher 1 and her actual classroom practices. However, it is important to understand that it is not always possible to infuse GNH values in all the topics and this would be particularly so in Mathematics. On the other hand, Teacher 2 was observed to put his perceptions into practice in the classroom with his students. Students have been able to learn a wide range of values such as responsibility, being good to others, thinking of common benefit and being reasonable with one's ambition, which according to Buddhist philosophy will ultimately lead to individual and collective happiness. As discussed in the literature chapter, Payutto (1994, p. 4) stated that, "it is not the end which justifies the means, but rather the means which condition the end." Therefore, it is important for these growing children to understand that their thoughts, words and deeds are directed to benefit all sentient beings not just for self. Discussing such values in the classroom also helped to further reinforce the values that are inherent in the ECPs. Otherwise just focussing on ECPs to infuse GNH values could be uncertain because such inherent values may go unnoticed. Clearly, Teacher 2 and students at SLSS were involved in transformational learning as the discussion of values such as responsibility, kindness and being reasonable with one's ambition involved critical reflection and change in their beliefs and assumptions.

6.5.2.3 Positive attitudes

Both the teachers and the Principal exhibited a positive sense of attitude about GNH Education. The Principal, who seemed to have been convinced by the Paro GNH Education workshop, stated that, "I try to conduct school activities as per the workshop [Paro GNH Education workshop] directives" (SLSS Principal, 17/05/11). In conveying the GNH concept to teachers, students and the community at large, the Principal considered that he had to be a good role model. Similarly the two teacher participants from SLSS exhibited positive attitudes for GNH Education and they were confident that it would bring positive changes in their students. For instance, Teacher 2 who taught Dzongkha mentioned, "In my subject most of the topics are related to GNH values. There isn't much of a problem teaching values to students" (Interview, 18/05/11).

Even in terms of resources, both teacher participants from SLSS agreed that GNH could be infused into their academic teachings without any additional resources. For instance, the first

teacher's perspective when considering resources was that, "instilling GNH values in education system is not like [a] scientific experiment where we need maximum resources ... nurturing and promoting of GNH values is about managing feelings and emotions. So it can be worked out with limited resources" (SLSS Teacher 1, 18/05/11). Similarly, the second teacher viewed the issue of resources very positively when he commented that "Bhutan is full of resources and I am confident to use them" (SLSS Teacher 2, 18/05/11). Especially for a Dzongkha teacher, this could be true as the subject matter lent itself more to GNH Education as discussed in the previous section on 6.5.2.2. Such positive attitude at SLSS towards resources is in contradiction with the situation at GLSS, where resource was seen as a stumbling block for successful implementation of GNH Education.

Demonstration of such a positive teacher attitude would be a source of energy and motivation for the school to move ahead with the process of implementing GNH Education. Furthermore, such a positive attitude of key change agents is also an indication of clarity of the programme and its vision (Fullan, 1992; Kilcher, 1994). A positive attitude is one of the signals of higher teacher self-efficacy and school collective efficacy at SLSS.

6.5.2.4 Role of the hidden curriculum

As observed in the GLSS case study, the roles that the hidden curriculum played also became evident in this case study. For instance, the Principal implied that values could be successfully inculcated through role modelling in the form of hidden curriculum rather than through formal classroom teaching when he mentioned in his open-ended comments in the survey:

I found GNH value [s] need not [be] taught separately allocating time as it can be incorporated in every action and activity. Role model[ing] is [of] much more value than teaching in a class. For example, I picked [up] papers on the way and children also picked up following me. So, I concluded that action is much more important than speech-compelling [students] to pick up. (Principal 163, survey questionnaire)

Learning from role modelling is one of the important sources of efficacy information (Bandura, 1997). It is essential that teachers and principals exhibit positive role modelling for their students. As discussed previously, effective role modelling has the potential to bring lifelong impact on students.

Although there was no explicit discussion of values in Teacher 1's lesson, the observations of her interactions with students in the class showed that she was able to intrinsically convey some of the important values to her students such as keeping on task, diligence, helping others in the group, care for student learning, prompt feedback on student work and provision of

opportunity to clarify their doubt (Observation form, 17/05/11). Role modelling of such important values through hidden curriculum by the teacher would go a long way in fulfilling the vision of GNH Education. Teacher 1 was also observed to be strictly following the meditation session (see Figure 6.6) for her students as directed by the school authority (Observation form, 18/05/11). From these observations and from what she said in the interview it is clear that Teacher 1 exhibited some degree of commitment and dedication to GNH Education.

On the other hand, while students were able to learn some important GNH values and principles in Teacher 2's Dzongkha lessons, his use of feedback in the class were not very encouraging. For instance, Teacher 2 provided discouraging feedback when some of the students had reading difficulty such as "you don't know how to read also" and "how did you reach class [grade] 7" (Observation form, 18/05/11). Such negative teacher feedback may discourage students from future participation and more importantly some students are likely to exhibit such behaviours later in their life. So hidden curriculum can have both negative and positive impact on students. Teachers need to be very careful about their speech and behaviour in front of their students. The Principal's idea of modelling GNH Education values was not always evident in Teacher 2s interactions with his students despite his subject matter.

6.5.2.5 Impact of GNH Education

Evidence from this case study showed that implementation of GNH Education had made some impact in the school. Discussing the impact of GNH Education, all three participants observed some visible transformations in the behaviour and attitude of themselves and other teachers and students. The Principal claimed that he had become mindful of his actions, more compassionate and time conscious (SLSS Principal, 17/05/11). Due to his transformation of mind-set and attitude towards others, he assumed that he did not face any problems with his staff and students. For instance, before the implementation of GNH Education he had a difficult time with a lack of teacher interest in attending the evening ECPs in the school. In the context of Bhutan, teachers are required to attend after school ECPs such as sports, literary and cultural competitions to provide moral support and encouragement for their students. This issue is no longer a problem for the school. GNH Education had been instrumental in creating conducive teaching and learning environment, inculcating responsibilities in students, instilling the concept of dignity of labour, enhancing healthier life styles, improving time management, helping set transparent assessment criteria and increasing self-esteem according to SLSS Teacher 1 (18/05/11). Similarly, Teacher 2 said he had learned to value others' lives, respect others and had become more compassionate. The Principal also shared that the school had been successful in inculcating a sense of time with

parents, as ‘time use’ is one of the important components of GNH. He stated that, “all the parents come on time to attend gatherings [meetings, social events, or to witness sports competitions and cultural performances] in the school. We feel proud of this achievement although it is a small change” (SLSS Principal, 17/05/11).

According to the Principal, some of the changes associated with students were, inter alia, a reduction of disciplinary problems (such as indulging in gang fights, drugs, alcohol, and missing classes), bringing their *kabney* during the evening prayers, carrying out campus cleaning without a teacher’s supervision, carrying out meditation sessions even during the absence of their teachers and that they had become more compassionate. Such values as compassion, responsibility, honesty, care and sincerity are important GNH values that need to be nurtured from a young age.

Overall GNH Education had helped to promote child-centred learning through promotion of love, care and equity according to the SLSS Principal (17/05/11). As an administrator of the GNH School, the Principal had also realised that the democratic process of administration was more conducive to achieving GNH principles than the top-down administration. Such a realisation is a significant transformation in the Principal’s beliefs and values as the general practice of school administration in Bhutan is top-down. Such demonstration of positive attitudes, knowledge, skills and commitment by the Principal, teachers and students of SLSS would go a long way in fulfilling the vision of GNH Education.

6.5.2.6 Barriers to successful implementation

There were some contextual issues that were perceived to be impeding the implementation process at SLSS.

First, while there was evidence to show that the Principal’s sense of both self- and school collective efficacy were high, the perception that teachers needed *additional GNH Education workshops* and *lack of reference books* appeared to have weakened his sense of school collective efficacy (SLSS Principal, 17/05/11). For instance, one of the teachers from this school showed concern when he mentioned that, “teachers in this school need special training to teach values” indicating that much still needed to be learned (Teacher 1144, survey questionnaire).

Second, some *senior teachers* seemed to have further aggravated the issue of teacher preparedness when the Principal mentioned that senior teachers were unsupportive and difficult to deal with (SLSS Principal, 17/05/11). While there are no empirical studies carried out, there is anecdotal evidence to show that schools in Bhutan with much younger principals have had some problems with senior teachers. Apparently there were teachers in this school who had been teaching for more than 25 years. Therefore, in the Bhutanese context, seniority in the service

could be one possible reason, among many others, for the cause of such conflict. However, due to a short duration of the case study period the researcher did not observe such conflicts. This conflict is a potential area for future research.

Third, the principal's sense of self-efficacy seemed to have been also diminished due to the fact that he was also mandated to *teach exam-oriented subjects*, which hindered teaching of GNH values and principles (SLSS Principal 163, survey questionnaire). This is an indication that, like in WHSS and GLSS, SLSS also provided a strong focus on academic performance.

6.5.3 Summary of the SLSS case

Findings from this case study showed that there is adequate evidence to support the view that SLSS had a 'much higher' school collective efficacy for GNH Education and why this was the case. The school had initiated and implemented numerous ECPs to embed GNH values and principles. All three participants in this case study showed indications of higher self-efficacy as well as higher school collective efficacy. Teacher 1 was not able to explicitly infuse any values in her two Mathematics teaching lessons, which is understandable given the nature of the topic as well as the subject however, and this is important, it did implicitly occur through the hidden curriculum in her class. Findings also showed that both the teacher participants at SLSS had a positive way of looking at the resources for implementing GNH Education that is very important for successful implementation of GNH Education.

Understanding the experiences of the Principal and two teacher participants, it became apparent that there was some evidence of transformation of their mind-set, behaviour and attitudes as a result of GNH Education. The SLSS model of attitude, knowledge, skills and understanding of GNH Education could well serve other schools. This is an indication that GNH Education appears possible even in such a large school as SLSS. The school leadership, positive attitude and commitment from both the Principal and teacher participants are to be commended although there were some instances of minor conflict evident. While SLSS had made much progress in implementing GNH Education there remains much more to be achieved. Their self-efficacy to infuse GNH values in academic teachings needs to be enhanced through adequate attention to the sources of efficacy information such as provision of professional development programmes with a focus on infusion of GNH values into daily teaching lessons, role modelling and verbal persuasion.

6.6 Zhabdrung Primary School (an ‘efficacious’ school)

The Zhabdrung Primary School (ZPS as shown in Table 6.1, p. 143) was a representative of an ‘efficacious’ school in terms of beliefs about implementing GNH Education. ZPS had the final school collective efficacy belief score of mean rank of 42 (out of 155 schools), which confirmed that this school was placed in cluster 3, one of the 40 schools with ‘moderately higher’ school collective efficacy beliefs for GNH Education.

6.6.1 Setting the context

ZPS is a private primary school in Western Bhutan. The school had 360 students from pre-primary to grade 6 and 25 teachers (three expatriates) in the 2010 academic year. Privatisation of schools is relatively new policy in Bhutan, introduced to encourage private sector development as well as to ease the burden on government schools due to the increasing number of students. The students of ZPS were mainly children of civil servants, private entrepreneurs and others from middle to high income families who could afford to pay school fees compared to the government schools where education was provided free.

A female principal who was also the proprietor of the school headed the ZPS. She had a Master’s degree in Teaching of English as a Foreign Language, and currently taught English and Music. She has worked as the Principal of ZPS since the school opened in 1999. According to the Principal, most of the teachers at ZPS were not formally certificated, however, the teachers were provided with regular in-house training to prepare them to cope with the challenges of teaching-learning processes confidently (Interview 26/05/11). The Principal who attended the national level Paro GNH Education workshop provided an in-service programme to all the teachers at ZPS to prepare them to implement GNH Education in the school.

Three teachers (one male and two females) from this school participated in interviews and teaching observations. As the female teacher who was interviewed was not available for a teaching observation, another female expatriate teacher (from the United States of America) participated in the teaching observation. The male teacher who was interviewed and also participated in one teaching observation is referred to as Teacher 1 and the female teacher who was only interviewed is referred to as Teacher 2 while the female teacher who was only observed teaching is referred to as Teacher 3. Teacher 1 taught Dzongkha in grade 3, Teacher 2 taught Social Studies in grade 6 and Teacher 3 taught English language in grade 3. It was the second year for all the three teachers teaching in this school. Both Teacher 1 and Teacher 2 were high school graduates without formal teacher training except for some in-house training provided at the school as previously mentioned and Teacher 3 had a Masters degree in Education.

The vision and mission statements of ZPS were examined for signals indicative of GNH Education. Their vision was “Educating for Universal Happiness” and the mission statement read, “Embracing Education as a pathway to achieving universal happiness” (ZPS Vision & Mission, 2010), which were conceived in 2009 and later modified in 2010 to align with the philosophy of GNH Education (ZPS Principal, follow-up E-mail interview, 28/10/12). The mention of the words ‘universal happiness’ in both the vision and mission statements of ZPS indicated that the school was more focused on primary school education that would contribute to promoting happiness not only in the school but also to the wider community. Discussing the vision of ‘universal happiness’ the Principal mentioned, “As we educate and live in a highly globalised world, it seems only fitting that we be more inclusive in our aim and hence 'universal'” (Follow-up E-mail interview 28/10/12). While such a vision seems to be a very high aspiration for a small primary school in a developing country, with the right attitude, support and motivation as practiced at ZPS, it has the potential to make an impact on others by contributing towards achieving desired human happiness. Whether ZPS had been able to realise its vision and mission statements are revealed through the examination of lived experiences of the school, particularly as represented by the Principal and three teachers who participated in this case study.

6.6.2 Discussion of themes

The lived experiences of implementing GNH Education in ZPS is presented through the following emerging themes: i) the role of autonomy; ii) pre- and post- GNH Education programmes; iii) perceptions and actual practices in GNH Education; iv) role of the hidden curriculum; v) teachers’ initial anxiety, tension and scepticism; vi) academic focus; and vii) impact of GNH Education.

6.6.2.1 The role of autonomy

The autonomy is a unique theme associated with only ZPS. According to the Principal, autonomy of the school was the key to their success in implementing GNH Education related programmes. The introduction of GNH Education into the Bhutanese education system from the 2010 academic session was considered to be a blessing for ZPS (ZPS Principal, 26/05/11). Prior to the implementation of GNH Education, ZPS had initiated various educational programmes to help realise its vision of ‘educating for universal happiness’. According to the Principal, the school’s vision is more ‘inclusive’ not just focused on their own students (Follow-up E-mail interview, 28/10/12). The Principal seemed to be relieved that all their programmes were congruent with the GNH philosophy. With much excitement the Principal commented that, “Educating for GNH has

given us more leverage, it was a kind of feedback telling us to go ahead with our activities” (Interview, 26/05/11).

According to the Principal, ZPS had been able to exercise some flexibility in initiating and implementing innovative school programmes and activities. The Principal explained this advantage in the following way:

Being a private school in Bhutan at this point in time, we do have our struggles but also tremendous opportunities I should say. We enjoy a certain degree of autonomy in the way we operate although we are aligned to the Ministry of Education’s mandate on what learning outcomes and curriculum prescriptions are. (Interview, 26/05/11)

The Principal went on to say “that being a private school provided more opportunities to be flexible and go beyond the prescribed standards of the Ministry of Education to make a difference in the lives of their students” (Interview, 26/05/11). Taking advantage of the autonomy, ZPS had established linkages with institutions both within the country as well as from other countries such as India and Australia. As a result of collaborations with other institutions, ZPS had initiated and implemented innovative and unique programmes long before the implementation of GNH Education.

Findings from this case study indicated that autonomy of the school has an important role to play in boosting the self- and collective efficacy beliefs of change agents. This finding corroborates the earlier findings of Jones (2012) that the autonomy of the intern teachers provided opportunities for them to take risks and question their own habits of mind. Such opportunities often lead to transformation of beliefs, assumptions, values, actions and practices that were also evident at ZPS especially in the leadership role played by the Principal.

6.6.2.2 Pre- and post- GNH Education programmes

Exercising the autonomy of the school, ZPS had long before implementation of GNH Education, initiated and implemented numerous innovative programmes such as ‘Democracy in action at ZPS,’ ‘Quality Class Time’ (QCT), ‘Quality School Time’ (QST), ‘ProH4’ (Project Helping Hands for Health and Happiness), and the ‘Design for Change’ (DFC) initiative. The Principal highlighted that the ‘Cushion Project’ is the latest that ZPS had launched in 2012 (Follow-up E-mail interview, 18/07/12). However, meditation was the only new programme this school had implemented as a part of GNH Education (ZPS Principal, 26/05/11). It is interesting to note that the concept of ‘Universal Education’ promoted by ZPS as their vision was rather similar to that of GNH Education in terms of actual practices.

Further explorations of what each of these programmes were about and how they were initiated found that, firstly ‘Democracy in action’ was a programme that ZPS had initiated in 2008 along with the first democratic election in Bhutan. This programme provided opportunities for ZPS students to learn democracy through action by undergoing the process of democratic elections of their school captains (ZPS Principal, 26/05/11). The whole process involved announcement of various positions to the senior students (year 6), preparation of application expressing their interest, making trial campaign speeches, receive feedback, making campaign speeches and learn about not making false promises (ZPS Principal, 26/05/11). Discussing the benefit of the ‘Democracy in action’ programme, the Principal claimed that students were “learning about democracy, how to be informed citizens, vote responsibly and [with the aim to] mature into responsible leaders of tomorrow” (Interview, 26/05/11).

Secondly, “Quality Class Time was a non-negotiable 30 minute time” provided to all students at the beginning of the first period for four days a week (ZPS Principal, 26/05/11). During QCT sessions students and the class teacher talked freely about problems or issues that bothered them such as “garbage”, “name-calling” and “bullying” in the school and discussed how to meaningfully address the problem (ZPS Teacher 2, 25/05/11). Such opportunities encouraged children to actively voice issues that directly affected their lives and create an environment conducive to learning (ZPS Principal, 26/05/11). An opportunity was presented to observe one of the QCT sessions in class 6, which was actually a continuation of the QCT session from the day before. The class teacher who was an expatriate began the session by inviting students to share the question of whether it was necessary to appoint an assistant captain for their soccer team. Advantages and disadvantages of appointing an assistant captain were deliberated. Students were observed to be very vocal in sharing their opinion and some more vocal ones even proposed self-nomination for the position of assistant captain (Observation form, 26/05/11).

Thirdly, QST was an extension of QCT sessions. The former took place once a week during the morning assembly. The QST sessions were designed to provide time for the entire school community to share the outcomes from the QCT sessions, to encourage deliberation and reflection on issues of concern with wider participation and providing meaningful feedback (ZPS Principal, 26/05/11). Both Teachers 1 and 2 agreed that ZPS had been able to solve some problems such as the garbage issue, bullying problems and help some disadvantaged people as a result of their QCT and QST sessions (Interview, 25/05/11). Providing such experiences are important to help attend the vision of GNH Education.

Fourthly, another activity that ZPS had implemented was their citizenship programme called ProH4 (Project Helping Hands for Health and Happiness). ProH4 was designed to help the less

fortunate people in the community. The Principal claimed that it was based on the value of sharing and the joy that comes from giving – a fundamental Buddhist principle. Discussing the core aim of ProH4 and how various club activities supported this, the Principal commented that:

It's NOT charity but a social responsibility for privileged children to help those in need. It's a vibrant co-curricular project that includes various skill-based club activities that are fun and creative and which generate funds for the project. None of these are one-off projects but enduring, sustainable programmes that evolve over time. The idea is to make them sustainable and embedded in real-world contexts. (Follow-up E-mail interview, 18/07/12)

Such learning opportunities for the students at ZPS would go a long way in fulfilling the vision of GNH Education.

Fifthly, the Design for Change (DFC) was one of the major programmes that ZPS had implemented as a result of collaboration with a school in India. ZPS became the country partner for:

Design for Change (DFC) Global School Contest, which is the world's largest design movement OF children, FOR children and BY children. It sends out the all-powerful message to children as young as 8 or 9 years old that (a) they matter (b) they CAN make a difference and (c) they can be the change they want to see in their world. (Principal, 26/05/11)

The DFC programme had challenged the school to look at new R's such as 'Relationship,' 'Relevance,' 'Rigour,' 'Resilience,' 'Role model,' 'Respect' and 'Reflection' which are very important for both the students and teachers besides the old R's of reading, writing and arithmetic (ZPS Principal, 26/05/11). According to Teacher 2, DFC was based on the principle that even school children can bring change to a problem in the society by providing a "forum for kids where they can sit, brainstorm and come up with different kinds of solutions" to a given problem (Interview, 25/05/11). Both the Principal and Teacher 2 clarified that DFC was a four-step strategy where children were given opportunity to "Feel, Imagine, Do and Share."

Sixthly, the ZPS's Cushion Project was launched in 2012 in which "plastic trash is turned into stuffing for cushions fashioned so beautifully that they could easily be used to adorn the living rooms" (ZPS Principal, follow-up E-mail interview, 18/07/12). Such projects were initiated to "address the issue of environmental pollution / conservation in creative and sustainable ways" (ZPS Principal, follow-up E-mail interview, 18/07/12).

Finally, meditation had become a regular practice for ZPS since GNH Education was implemented with the commencement of the February 2010 academic session. All teachers and

students gathered at their assembly ground immediately after the last session of the day and meditated for a couple of minutes (see Figure 6.7).



Figure 6.7 Meditation session at ZPS after the school is over

Motivated by the success of the school's DFC programme, ZPS had introduced another innovative programme in 2012, which is referred to as the 'Young Ambassadors of Change' (YAC) programme to establish links with rural schools (ZPS Principal, follow-up E-mail interview, 18/07/12). The Principal indicated that:

We now have three partner schools from the remote areas of Trashiyangtse [in east Bhutan] (2 community schools) and Chukha Districts [in the south] (1 community school). We try to support them and have exchange programmes that bring our urban and the rural youth together in a spirit of collaboration and kinship. (Follow-up E-mail interview, 18/07/12)

Although YAC had been initiated only in 2012, there is some potential in this programme, especially because Bhutan is witnessing an ever-widening gap between the urban and rural communities. Such interactive programme could help youths to understand and live by values associated to both the urban as well as rural life. Discussing the potential of programmes such as DFC and YAC in making a contribution towards realisation of the vision of GNH Education, the Principal said:

I really see these initiatives as great avenues to operationalise the philosophy and vision of Educating for GNH. Above all, it has allowed us to see a shift not only in the paradigm of our education practices and purpose but also in our mind-set. (Follow-up E-mail interview, 18/07/12)

Initiation and implementation of pre-GNH Education programmes that were consistent with the philosophy of GNH Education indicated that ZPS was considerably ahead of many other schools in the country in terms of promoting GNH values and principles. Findings from this case study revealed that both the Principal and teacher participants were or became passionate and enthusiastic about promoting universal happiness by making extra-curricular educational practices relevant to their students. As a result of their DFC programme, the school had undergone a major transformation in both the physical as well as the psychosocial ambience (discussed below). Furthermore, ZPS had been able to reach out to other schools and communities through its various programmes making an impact in the society.

Following the DFC four step process known as ‘Feel, Imagine, Do and Share’ students were able to come up with solutions to problems such as the garbage issue and how garbage can be eliminated through mindful consumption practices and saying ‘no to packaged food,’ observing ‘no plastic days’ and ‘food focused days’ (ZPS Principal 26/05/11). As shown in Figure 6.8, ZPS had installed waste bins at a strategic place with the message “clean Bhutan, let’s do it” and it was observed that the school was litter free. Littering was an issue that was discussed during the Paro GNH Education workshop for the school principals. Such experiences were able to connect students to their real life contexts and concerns making long-term impact in students (Lovat, 2005).



Figure 6.8 Waste bins at ZPS

All these eight programmes were closely linked to the philosophy of GNH Education (see Table 6.5) and intended to inculcate satisfaction and long-term happiness in their students from helping and sharing with others in the community. For instance, the first activity, ‘Democracy in action at ZPS’ is linked to good governance and sustainable and equitable socio-economic development pillars of GNH. These two GNH pillars have the potential to address good governance and education domains promoting numerous values such as integrity, trust, authenticity, wisdom, professionalism, justice, competence, far sightedness, empowerment, non-discrimination, commitment, creativity, openness, diligence, insightfulness, perseverance, patience and creative thinking. In a similar way, all other ECPs have the potential to promote various GNH values and principles.

6.6.2.3 Perceptions and actual practices in GNH Education

Although the school had initiated and implemented various innovative ECPs to promote values to their children and claimed to have achieved much, very little had been initiated to explicitly infuse GNH values and principles in the teaching lessons observed. For instance, Teacher 1 who taught a two hour Dzongkha lesson (block period) for grade 3 related to a story named ‘*Jamtshoi boep dang chui zing boep*’ meaning ‘Ocean frog and the pond frog’ did not overtly teach any values except for one when students made a commitment at the end of the lesson that they should not tell lies (observation form, 25/05/11). The lesson began with a prayer followed by a usual brief revision from the previous session by asking questions to the students. A total of six volunteer students were asked to read a paragraph each from the Dzongkha text in Dzongkha and rest of the class had to follow the reader in chorus. Then the teacher asked students if they understood the story followed by a brief explanation of the story. After the explanation of the story was completed, each student was asked to write what they understood about the story in their notebook and later some volunteers were requested to share their writing to the class. No values were explicitly discussed in this class.

Although Teacher 2 was not available for a teaching observation, she indicated from the interview data that she was also not able to infuse GNH values and principles in her teaching in contrast to her ability to promote values through other ECPs that have been discussed in this case study (ZPS Teacher 2, 25/05/11). To further determine if there was an infusion of GNH values into the curriculum in this school, an expatriate teacher was observed teaching an English language lesson for grade 3 on the topic ‘Possessive case’ (observation form, 26/05/11). The expatriate also did not overtly teach any values in her lesson. However, some good practices that could serve as a model were observed (see next section on the hidden curriculum).

Table 6.5 ZPS activities showing major linkages to GNH pillars, domains and values

ZPS Activity	GNH Pillar	GNH Domain	Values
Democracy in action at ZPS	Good Governance	Good Governance	Integrity, trust, authenticity, wisdom, professionalism, justice, competence, far sightedness, empowerment, non-discrimination, commitment
	Sustainable and equitable socio-economic development	Education	Creativity, openness, diligence, insightfulness, perseverance, patience, creative thinking
Quality Class Time (QCT) and Quality School Time (QST)	Good Governance	Good Governance	Integrity, trust, wisdom, professionalism, justice, competence, far sightedness, empowerment, non-discrimination
	Sustainable and equitable socio-economic dev.	Education	Creativity, openness, diligence, insightfulness, perseverance, patience, creative thinking
Project Helping Hands for Health and Happiness (ProH4)	Promotion and preservation of culture	Community vitality	Solidarity, reciprocity, trust, closeness, family, equality, unity, hospitality, cooperation, honour, cohesion, fairness, fidelity
	Environmental preservation,	Ecological literacy	Eco-consciousness, sustainability, aesthetic, naturalistic, reverence,
	Sustainable and equitable socio-economic dev.	Education	Creativity, openness, diligence, insightfulness, perseverance, patience, creative thinking
Design for Change (DFC)		Health	Vitality, fitness, soundness, prevention, precaution
	Promotion and preservation of culture and tradition	Community vitality	Solidarity, reciprocity, trust, closeness, family, equality, unity, hospitality, cooperation, honour, cohesion, fairness, fidelity
	Good Governance	Good Governance	Integrity, trust, wisdom, professionalism, justice, competence, far sightedness, empowerment, non-discrimination
Cushion project	Environmental preservation,	Ecological literacy	Eco-consciousness, sustainability, aesthetic, naturalistic, reverence, non-domineering, non-utilitarian
	Sustainable and equitable socio-economic dev.	Education	Creativity, openness, diligence, insightfulness, perseverance, patience, creative thinking
Mind training sessions	Promotion and preservation of culture and tradition	Psychological well being	Compassion, generosity, forgiveness, calmness, gratitude, empathy, truthfulness
	Sustainable and equitable socio-economic dev.	Health	Fitness, vitality, self-worth, prevention, precaution, non-malignance
Young Ambassadors of Change (YAC)	Promotion and preservation of culture and tradition	Community vitality	Solidarity, reciprocity, trust, closeness, equality, unity, hospitality, cooperation, cohesion, respect

All three participants from ZPS perceived themselves to be doing a lot in terms of implementing GNH Education but in reality infusion of GNH values and principles did not take place in their teaching lessons. This is clearly an indication that an important aspect of GNH Education has been missing even at the ‘efficacious’ school as ZPS. Perhaps, like other case study schools, their efficaciousness was based partly on role modelling of GNH values through ECPs.

6.6.2.4 Role of the hidden curriculum

An observation was made that students were quite frank in Teacher 1’s class, although no values were explicitly discussed. Without any hesitation they sought support from the teacher in terms of spelling as well as the content of their writing (observation form, 26/05/11). Demonstration of such a harmonious relationship in the classroom teaching-learning processes is an indication that ‘community vitality’ and ‘education’ – the two vital domains of GNH were practiced in Teacher 1’s classroom. These learning outcomes were part of the hidden curriculum in this classroom that has potential to make lifelong impact on students.

On the other hand, the teacher was also observed providing feedback that was not helpful such as, “you don’t know how to read” when some students were not able to read the text properly (observation form, 25/05/11). Such teacher behaviour can have a negative impact on students and it is contrary to the GNH Education philosophy. Another controversial practice observed in this teacher’s class was at the beginning of the lesson students were asked to say a Buddhist prayer, indicating an apparent lack of awareness and consideration for students who may not be Buddhist. Especially for non-Buddhists, making students say such prayers every day may well be intolerable. Apparently there were some non-Buddhist students as indicated by the use of their names in the class (observation form, 25/05/11). Such practices could create dissonance thereby defeating the whole purpose of GNH Education and create complications in the system.

In terms of infusing GNH values into daily teaching lessons Teacher 1 exhibited very low self-efficacy when he mentioned that:

During my school time I did not experience GNH education and now that I am into teaching without any formal training except for some attachment programme for a couple of months, there are problems. There is a problem of relating the lesson topic to the GNH values.

(Interview, 25/05/11)

In the case of Teacher 3 who was an expatriate, the class was observed to be interactive, with much opportunity for children to raise their opinions. Further, children were also allowed to go to the toilet during the class and were allowed to drink their water when the session was in progress (observation form, 26/05/11). These practices are worth noting, as they are congruent

with the philosophy of GNH Education. Most often teachers in Bhutan would not allow students to go to the toilet or drink water in the middle of the lesson.

6.6.2.5 Teachers' initial anxiety, tension and skepticism

While the Principal was renewed and reinforced by the introduction of GNH Education, the two interviewed teacher participants revealed some sense of anxiety, tension and initial scepticism.

For instance, Teacher 2 shared the view that:

In the beginning when the government did announce that GNH would be a part of our curriculum, we were kind of taken aback, and then what do you call it, uncomfortable I guess because we have heard of GNH for many years. Everybody knows that GNH stands for Gross National Happiness and all that but the thing is – how can we implement [it] in our curriculum? (Interview, 25/05/11)

This teacher also initially thought that GNH should be taught as a separate topic, perhaps in Science or Social Studies because they are so related to the concept. Similarly Teacher 1 expressed the opinion that:

In our country when we say GNH, I have some doubt as of how we will be able to achieve GNH because big people will remain big. For instance, in Thimphu the ones who are rich have plenty and the ones who do not have [wealth], hardly get a proper meal and no proper place to stay. So in such a condition, I am wondering how we will be able to achieve GNH. I have a doubt. (Interview, 25/05/11)

However, after having attended the GNH Education workshop provided by the Principal and received the benefit of her feedback, the initial scepticism of the two teacher participants seemed to have declined as they have gained confidence in and understanding of the vision inherent in GNH Education. For instance, both Teacher 1 and Teacher 2 agreed that although they did not undergo formal teacher training, the institution of a month-long school level Teacher Professional Development Programme every year had been beneficial. Teacher 1 further commented that “our Principal has been very resourceful” and “any things that we do not know are discussed” during the professional development programmes (ZPS Teacher 1, 25/05/11). For Teacher 2, it was a relief to know that GNH Education was similar in nature to the programmes that the school had already implemented to provide wider educational experiences for the children (ZPS Teacher 2, 25/05/11).

Findings indicated that the Principal had played a significant role in convincing the two teacher participants about the vision and potential of GNH Education. Such leadership role played by the Principal would go a long way in fulfilling the vision of GNH Education.

6.6.2.6 Academic focus

From the two teaching observations and also as perceived by Teacher 2, ZPS was not able to do much to infuse GNH values into their teaching lessons. The existence of pressure for syllabus coverage became evident when the Principal commented that, “I tell my teachers, no matter what we do outside, in the classroom you are responsible for meeting the learning outcomes” (Interview, 26/05/11). Obviously not much explicit infusion of GNH values and principles could happen in ZPS classrooms when GNH Education is not part of the assessment regime. When syllabus coverage and performance in the examinations drive the teaching-learning processes, teachers are not likely to provide attention to infusion of GNH values and principles in their daily teaching. However, at ZPS, GNH Education was very evident in ECPs. Therefore, ZPS’s efficaciousness for GNH Education could be mainly attributed to their ability to infuse GNH values in ECPs. These were clear indications of, inter alia, a lack of knowledge, skills and strategies to infuse GNH values into daily teaching lessons and strong emphasis on academic performance even in such a school as ZPS.

6.6.2.7 Impact of GNH Education

The ECPs at ZPS had obviously made some impact on both their students and teachers. For instance, discussing the impact of the DFC programme, Teacher 1 agreed that there had been “a vast improvement in the students’ attitudes and behaviour” (Interview, 25/05/11) and Teacher 2 commented that “we have no plastic waste in the school and kids have realised that it is good to eat healthy food” (Interview, 25/05/11). According to Teachers 1 and 2, the students in the DFC focus group had been able to raise awareness amongst other students both within their school and in other schools and their parents on the implications of eating packaged food. At the primary school age, understanding the implications of plastic waste, learning the value of eating healthy food, value of cleanliness and creating awareness in their parents would go a long way in fulfilling the vision of GNH Education.

Besides promoting these values to their own teachers and students, ZPS had been also successful in spreading the concept and philosophy of the DFC programme to seven other schools and communities in the capital city (ZPS Teacher 2, 25/05/11). According to the Principal and Teacher 2, these seven schools have initiated their own programmes such as providing safe drinking water and even to the extent of combating corruption in the country by saying ‘no’ to the

government pool vehicles⁵ in school parking areas. Emphasising the importance of promoting values when children are in the school, the Principal stated that, “if we inculcate GNH values from the beginning then I think there will be some changes in the future” (Survey questionnaire, Principal # 192).

There is adequate evidence to demonstrate that ZPS had successfully promoted the values of compassion, empathy, sharing, kindness and others in their students through the ‘ProH4’ citizenship programme, which was introduced in 2009 (ZPS Principal, 26/07/11). According to Teacher 2, ProH4 was initiated to raise funds to support poor people (Interview, 25/05/11). Initially the funds for ProH4 were raised through student contributions and later to make it more sustainable through various clubs such as nature, cultural, knitting, cooking, documentation and various sports clubs were introduced. Besides gaining knowledge and skills, some of these club activities were geared towards raising funds for the ProH4.

The Principal, who was energetic and passionate about GNH Education, had also sought to understand the impact of meditation. She believed that every human being has the potential to show love and compassion but not many are able to practically achieve these values (ZPS Principal, 26/05/11). She argued that such values as goodness and compassion could be accomplished through the practice of meditation, which Siegel (2009, p. 146) refers to as “brushing your brain” every day for “brain hygiene” like brushing our teeth. Relating the concept of ‘brain brushing’ to children, the Principal said:

It goes so well with children. It is like brushing your teeth. You know they understand brushing their teeth. It is good for their teeth hygiene. So now for the brain hygiene you need to brush your brain and how do you do that– it is through meditation. (Principal, 26/05/11)

6.6.3 Summary of the ZPS case

In the ZPS case, it is clear that the prior history of the school, perhaps encapsulated by “universal happiness”, was an important pre-cursor for GNH Education. Evidence from this case study showed that ZPS had achieved much in terms of promoting GNH values and principles through innovative ECPs such as the DFC programme, ProH4 citizenship programme, club activities, meditation, and the most recent one being the YAC programme. Findings from this case study showed that students have gained values, knowledge and skills that could make a lifetime impact on them and to the others whom they have been able to reach through their various programmes.

⁵ In the Bhutanese context, the officers often use government pool vehicles for private purposes such as delivering their child/children to school

It has been a learning journey not only for the students but also for the teachers and the Principal. The Principal mentioned that, “it is all through practice [that] we experience, learn and evolve” (Interview, 26/05/11). Further, there was evidence to show that ZPS had made an impact on students from other schools as well as in the school community through their various innovative ECPs. Clearly ZPS is a leader in GNH Education through ECPs.

On the other hand, ZPS had not been able to overtly infuse values in the daily classroom teaching as envisioned by GNH Education. Although only two lessons were observed, these data and those from the interviews showed that teachers had low self-efficacy to infuse GNH values and principles into their classroom teaching. Further, there was also evidence to show that syllabus coverage and examination pressure played a role at ZPS, which inhibited devotion of teaching time to overtly discuss GNH values and principles.

One of the practices observed at ZPS was the modelling of a caring nature by the teachers. The classroom atmosphere appeared relaxed where children were provided opportunities to speak and contribute in classroom discussions. Further, teachers also respected children’s needs. Teachers modelling such practices in the classrooms in the form of hidden curriculum play an important role in promoting GNH values and principles. On the other hand, Teacher 1’s habit of providing negative feedback to his students while teaching and commencing lessons by making children say Buddhist prayers are two issues that needs to be considered if GNH values and principles are to be consciously modelled and promoted in students.

6.7 Chapter summary

This chapter presented within-case analysis of the four case study schools – two representing ‘efficacious’ and two ‘inefficacious’ schools in terms of collective efficacy beliefs for implementing GNH Education with particular emphasis on role modelling. Each case study analysis focused on sharing the relevant contexts and the lived experiences of the Principal and two teacher participants based on various emerging themes. Overall findings from within-case analyses indicated that GNH Education has begun to make impact but there are variable impacts on students, principals, and on the school in general. However, there are also indications that there remains much more work to be undertaken in order to fully realise the vision of GNH Education especially in some schools.

Examination of contexts and lived experiences of case study schools implementing GNH Education indicated that there were some similarities and significant differences among the four case study schools. Further, there is evidence of infusion of GNH values and principles through

ECPs while very little has been achieved through daily teaching lessons. Important differences were also observed between 'efficacious' and 'inefficacious' cases in terms of both number and quality of ECPs. The next chapter concerning the cross-case analysis provides a detailed comparison of the four case study schools.

CHAPTER SEVEN: CROSS-CASE ANALYSIS

7.1 Chapter introduction

The previous chapter presented within-case analyses of the four case study schools. This chapter presents the cross-case analysis, which compares and contrasts the four case studies, representing different geographical locations, school levels, school sizes and, especially, a range of collective efficacy beliefs for GNH Education. As advocated by experienced case study researchers and writers such as Yin (1981) and Eisenhardt (1989), this cross-case analysis examined themes and patterns across the four cases and goes beyond what Eisenhardt (1989, p. 541) calls “initial impressions” with the intention to draw authentic and reliable conclusions. In the process, data were “challenged, extended, supported and linked in order to reveal their full value” (Bazeley, 2009, p. 8). However, the unique aspects of each case study resulting from the differences in location, level, size and collective efficacy beliefs of the four schools are also identified.

Although findings from each of the four cases and cross-case analysis are not strongly generalisable, the design of this study with a wide variety of contextual considerations and, more importantly, that each case can be identified with a cluster, and with a group of schools as discussed in the previous chapter would certainly allow readers and key stakeholders to compare and contrast the findings with a variety of different situations. It is also considered that most of the schools in Bhutan and particularly those schools ($n = 155$) that participated in the first phase of this study, which were grouped into four clusters based on their collective efficacy score, would share some similar characteristics, especially in terms of principal and teacher self-efficacy, perceptions of importance, support systems, and actions and impacts for GNH Education.

Findings from this cross-case analysis point to important trends that is imperative for key stakeholders to reconsider in their current approach to GNH Education. Based on the findings from each of the four cases, this cross-case analysis is organised around the following categories: i) comparison of case study contexts; ii) comparison of vision and mission statements; iii) comparison of how GNH values and principles were infused through both Extra-Curricular Programmes (ECPs) and Curricular Programmes (CPs); and iv) comparison of the overall GNH Education based on the target of impact and the nature or thrust of impact.

7.2 Comparison of four case study contexts

Contexts play a crucial role in any social science research guided by interpretive/constructivist assumptions (Altheide & Johnson, 2011; Cooksey & McDonald, 2011; Denzin & Lincoln, 2011).

According to Stake (1995, p. 63) detailed description of context is important in case studies as it helps “to develop vicarious experience for the reader, to give them a sense of being there.”

Understanding the contexts is even more vital for this study because Bandura’s (1997) construct of efficacy beliefs is context specific. Flyvbjerg (2011, p. 303) further argues that case studies are most appropriate for producing “context-dependent knowledge.” While the description of the general study context is provided in Chapter One and the contexts for each case study in Chapter Six, the intent of this section is to highlight some of the key similarities and differences among the four case study contexts through the display of a cross-case comparison matrix. The first part of the context concerns mainly demographic aspects and the second part presents the vision and mission comparison.

7.2.1 Comparison in terms of demographics details

As shown in the cross-case comparison matrix (see Table 7.1), the four case study schools are represented in columns (two to five) and the different contextual aspects in terms of their clusters, demographic details and participants in rows. For instance, the first case study school was WHSS in cluster one, which contained 66 schools with a moderately lower collective efficacy belief score and a rank of 102 ($n = 155$). WHSS was selected based on expert advice and later validated by collective efficacy score. As shown in Table 7.1, efforts were made to achieve a balance in terms of demographic characteristics such as location, size, level, type and system of school. However, as elaborated in Chapter Three under the sampling section, remote and difficult to reach schools were avoided due to time limits. Furthermore, the details of both principal and teacher participants as shown in Table 7.1 also indicated some balance in gender, teaching subject, experience and qualification. Interestingly, all the four case study schools had principals with more than a decade of experience.

7.2.2 Comparison of vision and mission statements

It has become a norm for all schools in Bhutan to develop vision and mission statements (see Table 7.2 for vision and mission of the four case study schools) to guide them in their daily activities. However, there is no empirical study to show whether the school vision and mission

Table 7.1 Cross-case comparison matrix

Context	WHSS (case study one)	GLSS (case study two)	SLSS (case study three)	ZPS (case study four)
1. Cluster	One	Four	Two	Three
2. Total schools	66	28	21	40
3. SCEB level and rank (n=155)	Moderately lower ('Inefficacious') 102 nd	Much lower ('Inefficacious') 145 th	Much Higher ('Efficacious') 3 rd	Moderately higher ('Efficacious') 42 nd
4. Selection process	Expert advice and later validated by SCEB data	SCEB data	SCEB data	Expert advice and later validated by SCEB data
5. Location	Semi-Urban	Urban	Semi-Urban	Urban
6. Level	Higher Secondary	Lower Secondary	Lower Secondary	Primary
7. Size	Large	Large	Medium	Small
8. Type	Boarding	Day school	Day school	Day school
9. System	Government	Government	Government	Private
10. Principal–				
Gender	Female	Male	Male	Female
Qualification	Masters in Education	Certificate	Bachelors in Education	Masters in TEOFL
Experience	11 years	16 years	11 years	13 years
Teaching subject		Dzongkha	Geography and Physical edu.	English and Music
11. Teacher 1–				
Gender	Female	Male	Female	Male
Qualification	Masters in Education	Bachelors in Education	Bachelors in Education	High school
Experience	10 years	1 year	1 year	2 years
Teaching subject	English	Mathematics and Geography	Mathematics	Dzongkha
12. Teacher 2–				
Gender	Male	Female	Male	Female
Qualification	Masters in Education	Bachelors in Education	Bachelors in Education	High school
Experience	8 years	6 years	8 years	2 years
Teaching subject	Biology	Science and English	Dzongkha	Social studies
13. Teacher 3*				
Gender				Female
Qualification				Masters in Education
Experience				2 years
Teaching subject				English

*This expatriate teacher from ZPS participated only in one teaching observation, as Teacher 2 was not available for observation

statements are aligned with recent educational developments and whether they are being rigorously pursued. At the international level, the fundamental role of vision and mission statements in the effectiveness of educational institutions in particular (e.g., Calder, 2006; Hallinger & Heck, 2002) and organisational effectiveness in general (e.g., Bart & Baetz, 1998; Heinle, 2001; Orwig & Finney, 2007) has been well documented. Well-developed vision and mission statements of an organisation have been reported to reflect a sense of common purpose and they can be a source of inspiration for its members (Hallinger & Heck, 2002). Morphey and Hartley (2006, p. 457) contend that, “a clear mission helps organizational members distinguish between activities that conform to institutional imperatives and those that do not.” Therefore, the vision and mission statements (see Table 7.2) of all the four case study schools were examined to determine if there was any content indicative of GNH Education and further these statements were analysed to determine if there were any similarities and differences between the schools. The vision statements of the four cases were also compared based on the characteristics of an organisational vision such as “conciseness, clarity, future orientation, stability, challenge, abstractness and desirability or ability to inspire” (Kantabutra & Avery, 2010, p. 39).

Findings from the analysis of vision and mission statements of the four cases suggest that WHSS, an ‘inefficacious’ school, provided much emphasis on academic performance (see Table 7.2). This is apparent from the use of academic oriented phrases in the vision statements such as “academic excellence,” and “ever victorious” (WHSS). Apparently GNH Education appeared to be secondary for WHSS. However, this school has incorporated some of the GNH values and principles in its vision statement making it one of the lengthiest vision statements with more than sixty words. While one could argue that the WHSS vision is future oriented and has the potential to inspire, it apparently lacks Kantabutra and Avery’s (2010) key characteristics of an organisational vision such as conciseness, abstractness, challenge and stability. The vision is too focused on specifics such as patriotism, discipline and duty and provides much emphasis on academic performance.

On the other hand, the vision statements of GLSS, SLSS and ZPS are brief (less than twelve words). Each could be easily remembered, is future oriented, have an ability to inspire all the members of the school and challenging (see Table 7.2). Calder (2006, p. 82) suggests that a vision statement should be “broad in its scope and not restricting in any way.” All the three vision statements are broad in their scope and not restrictive when compared with WHSS’s vision. The use of phrases such as “responsible and productive citizens” (GLSS), “quality education” (SLSS) and “universal happiness” (ZPS) suggest that there is some aspect of GNH Education present in these three cases.

Table 7.2 Four case study schools' vision and mission

Case	Vision	Mission
WHSS	[WHSS] is envisioned to be the centre of academic excellence. The school believes that the education process must be rooted in [the] country's tradition and culture. To that extent the school aspires to instil in the learners the motto 'ever victorious' by moulding them into citizens with sound characters, balanced personalities, inner discipline and strength, dedicated to duty and work and possessing patriotic outlook	WHSS is committed to produce well informed, skilled, responsible, loyal, dedicated and productive citizens by providing an effective teaching learning atmosphere, incorporating wholesome education. Ingrained in our motto of 'ever victorious' is the spirit of excellence and competition that the school will strive to instil in the minds of learners
GLSS	Aspires to produce and provide to the nation responsible and productive citizens	To provide quality wholesome education to every student. After the completion of primary schooling, we expect our students: i) To have basic knowledge on reading, writing and speaking in Dzongkha and English. ii) To have learnt important Bhutanese values as well as some universal values
SLSS	Excellence towards quality education	To provide quality wholesome education
ZPS	Educating for Universal Happiness	Embracing Education as a pathway to achieving universal happiness

The difference in the vision statements between WHSS and GLSS, SLSS and ZPS could be attributed to, among other things, the robust culture of academic success especially within higher secondary schools in Bhutan. This academic culture is mainly evident in the competition for career opportunities including university entrance in Bhutan as there is only one university, which provides free education and also due to the government's third country scholarship scheme for high performing high school graduates. The quality of high schools in Bhutan is judged by how many third country and in-country scholarships a particular high school 'wins' in a given year.

Discussing the importance of educational vision and mission, Calder (2006, p. 81) argues that, "an educational institution and its leaders must know what path they are on – their mission – and where this path is taking them – their vision." An institutional mission statement must therefore, be able to show various paths to lead to its future and distant dream – the vision. While the mission statements of WHSS and GLSS, the two 'inefficacious' schools, show some sense of direction to fulfil their vision, the mission statements of SLSS and ZPS appeared to be rather too broad; without any sense of direction for the school staff and students to find guidance in their daily functioning. The argument is that without a clear sense of direction effort is soon dissipated.

Morphew and Hartley (2006) contend that in such situations policy offers little real direction hence all the four case study schools have indicated that GNH Education is not a part of ‘institutional imperatives’ since GNH ideas and practices do not appear in the mission statements though ZPS has a motherhood statement that is akin to a vision statement as its mission.

Although there is no mention of GNH Education specifically in the vision and mission statements of WHSS, GLSS and SLSS, there are some aspects of GNH Education incorporated as indicated by the use of various phrases such as ‘wholesome education’ with emphasis on infusing values, character building, and promotion of tradition and culture. This evidence (use of language) shows that the vision and mission statements of these case study schools may well have existed prior to the introduction of GNH Education. Although the GNH Education guide for the schools does mention designing school policy in congruence to GNH Education philosophy, there is no evidence of school vision and mission being discussed at the Paro workshop (MoE, 2010d). As discussed in Chapter One (see p. 3) the concept of ‘wholesome education’ was introduced in the Bhutanese education system in the mid 1980s to provide an all-round education through both curricular programmes (CPs) and extra-curricular programmes (ECPs). As a result, schools provided much emphasis in promoting values through ECPs such as sporting, scouting and cultural programmes. However, such ECPs as practised in Bhutan up to now (2013) were not able to involve most students, thereby ignoring the vast majority of students in any given school. While there is a lack of empirical studies into this phenomenon, there is anecdotal evidence that the introduction of the ‘wholesome education’ in the Bhutanese education system has not been able to counter various influences. This is apparent from the recent increase in the youth related problems such as street violence, sexual aberrations, teenage pregnancy, drug abuse and degrading human values in the Bhutanese society. Such social dysfunction in a small society such as Bhutan is a concern and to counteract this, GNH Education was introduced.

ZPS was the only case which has the happiness aspect of GNH Education as their immediate vision – “Educating for Universal Happiness” and they claim to embrace “Education as a pathway to achieving universal happiness.” This approach suggests that there is a significant difference in visioning and, presumably, leadership between the three government case study schools and the private case study school in this study. These findings corroborated those of an earlier study in the United States by Morphew and Hartley (2006) that examined the mission statements of close to 300 public and private colleges and universities. They found significant differences in the vision and mission statements between the public and private colleges and universities. In the Bhutanese context this difference could be perhaps attributed to a range of factors such as the degree of autonomy private schools enjoy in their daily functioning as

indicated by the Principal of ZPS (Interview, 26/05/11) or the leadership of individuals. Nonetheless, further research is necessary to examine these aspects of schooling in the Bhutanese context.

As all schools in Bhutan are required (as indicated by the Paro GNH Education workshop) to infuse GNH values and principles, it is important that they revisit their vision and mission statements to align them with the philosophy of GNH Education. As indicated by the existing literature (Hallinger & Heck, 2002; Morphey & Hartley, 2006) if the purpose of a vision and mission statements is to promote a sense of common purpose, serve as a guide and is considered to be a source of inspiration for its members, it is imperative that these case study schools consider updating their vision and mission statements.

GNH vision is undeniably something more than academic competence. The GNH Education programme does not only aim to produce academically competent graduates but also aims to promote the concept of ‘green schools for green Bhutan’ which is more holistic in addressing all aspects of individual life – natural, cultural, social, intellectual, academic, spiritual, aesthetic and moral greenery (see Chapter One, p. 6). This notion is also evident in the description of the qualities of a GNH school graduate, which encompasses attributes related to self, family, workplace, community and globally, issued by the Ministry of Education (see Fig. 7.1). It is important that all schools are aware of the MoE description. Although this portrait is included in the GNH Education guide supplied to all the schools, evidence from within-case analysis showed that case study schools, especially the two ‘inefficacious’ schools, were not aware of it. Given the existing vision and mission statements, it remains to be seen to what extent GNH Education can be seen at the four case study schools which is presented in the following section.

7.3 Comparison of how GNH values and principles were infused

Within just over one year of its implementation in 2011, the four case study schools have made varying efforts towards realisation of the government’s vision of GNH Education – ‘producing GNH-minded graduates’ (see Figure 7.1 for attributes of GNH school graduate) especially in terms of initiating and implementing innovative ECPs. For the purpose of cross-case analysis all the within-case themes have been analysed resulting in the following broad themes common to all the four case study schools: infusion through ECPs, infusion through CPs, differences related to both ECPs and CPs and the impact of GNH Education (see Figure 7.2 for a mind map showing how GNH values are infused and its impact). Within each of these broad themes, some sub-themes that are relevant to a particular case study school are also presented.



Figure 7.1 A portrait of a successful GNH school graduate (MoE, 2010d).

As shown in the cross-case comparison mind map (Figure 7.2) the infusion of GNH Education has been mainly carried out through a consistent focus on ECPs (as shown by a yellow branch in Fig 7.2) and somewhat mild focus on CPs (as shown by a dark blue branch the same Figure). A comparison of the four cases revealed that infusion through ECPs had more differences than similarities between the two ‘efficacious’ and two ‘inefficacious’ schools. Contrarily, infusion through CPs had more similarities than differences between the ‘efficacious’ and ‘inefficacious’ schools. The study also revealed some common differences that were relevant to both the ECPs and CPs which are represented in Fig 7.2 by the light blue branch that is connected by two yellow arrows. Evidence of much consistent focus on infusion through ECPs and a mild focus on CPs has been able to make some impacts as shown by the red branch. Each of the similarities and differences and the overall impact of GNH Education are elaborated in the following sections.

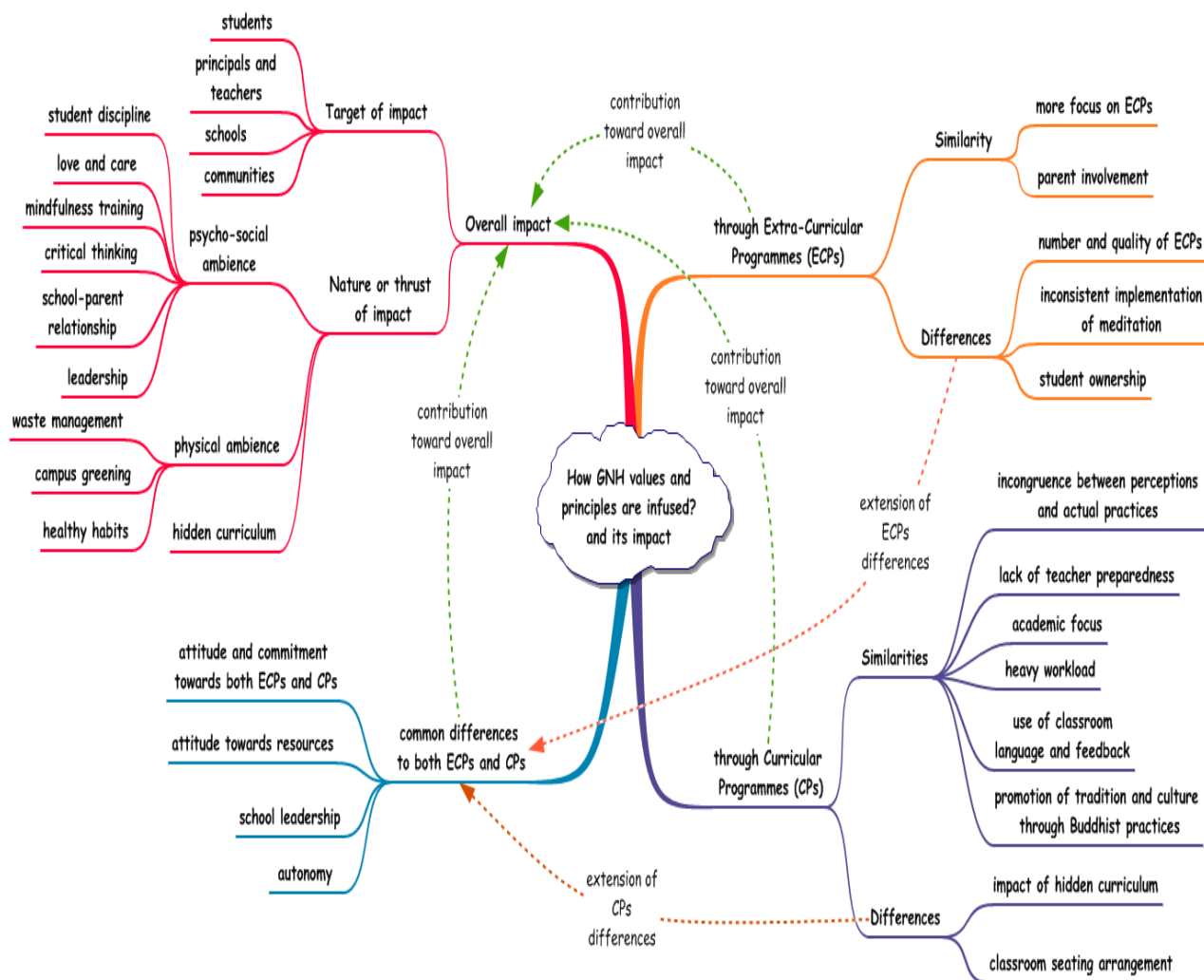


Figure 7.2 A mind map showing cross-case comparison of how GNH is infused and its impact

7.3.1 Infusion through extra-curricular programmes

Extra-Curricular Programmes (ECPs) based on various sporting disciplines, cultural activities such as mask dances, traditional and modern dances and literary activities such as debates, quizzes, extempore speeches and elocution all form an important part of the education system in Bhutan (MoE, 2010d). Such ECPs were part of the vision of the Ministry of Education to provide ‘wholesome’ education for all school students introduced in the mid 1980s. Recently, ECPs have become popular among the schools in Bhutan as a platform to infuse GNH values and principles. More than eighty percent of the papers presented at the national seminar on *Educating for GNH: Stories from schools and classrooms* (CERD, 2011), were based on experiences intended to infuse GNH values and principles through ECPs (CERD, 2011). Some of the typical papers were, “GNH and co-curricular activities in my school”, “GNH and school administration” and “GNH and sports in my school” (CERD, 2011). Findings from this seminar and the within-case analyses

demonstrated that many schools have initiated ECPs or continued old ones to infuse GNH values and principles. The following sub-sections explore some of the similarities and differences between the two ‘efficacious’ and two ‘inefficacious’ cases in terms of infusing GNH values and principles through ECPs.

7.3.1.1 Similarities associated with ECPs

The first similarity observed among all the four case study schools was the provision of much emphasis on *infusion of GNH Education through ECPs*. Some of the case study participants claimed that ECPs existed in their schools even before the implementation of GNH Education and so were not specifically focused on infusing GNH values and principles (Principal WHSS, Teacher 2 WHSS & Principal ZPS). ECPs during the pre-GNH Education (right back to the mid 1980s) were organised mainly to promote traditional and moral values through the larger goal of providing ‘wholesome education’ to every child that attended school. However, discussing the situation of ECPs during the pre-GNH Education, Rabten (2011, p. 235) notes that ECPs in Bhutanese schools were “ritualistically carried out without much emphasis on values development, and change of attitudes and behaviours of students.”

With the introduction of GNH Education participants from all four case study schools agreed that all of the ECPs that they implement are now focused on infusing GNH values. Typically, mentioning the importance of ECPs in promoting GNH values, the Principal of WHSS stated (Interview 31/07/11) that “the purpose and values attached with each school activity are identified and we encourage our students to participate with a purpose and [make them] practice the values identified.” Some of the common and also new ECPs that cut across all the four cases were meditation sessions, waste management and school greening programmes. Literary (such as debates, quizzes and extempore speeches), sports (such as soccer, athletics, basketball, volleyball and table tennis) and cultural programmes (such as traditional and modern dances, and mask dances) were the three pre-GNH Education ECPs that most schools in Bhutan organised for their students.

Second there was also some evidence of *parent involvement* in the school activities at the two ‘efficacious’ SLSS and ZPS and also at the ‘inefficacious’ GLSS (see within-case analysis in the previous chapter). Expressing the important role that communities play in the journey towards fulfilling the vision of GNH Education, the Principal of SLSS shared the view that the school also tried “to impart GNH values to parents during parent-teacher meetings.” He further claimed that the school had been successful in promoting the importance of ‘time use’, which is one of the domains of GNH by urging all parents to come on time to attend school functions.

As discussed in the within-case chapter, the ‘efficacious’ ZPS had much to offer for their parents and communities. For instance, their ECPs such as no plastics day, no junk food, and helping the poor and needy people had conveyed strong messages on the implications of plastics on the environment, junk food on one’s health and their attitude towards disadvantaged people. Similarly, even at the ‘inefficacious’ GLSS, there was evidence of parental involvement. For instance, GLSS considered home environment crucial in promoting GNH values and principles to their students. The school had been briefing parents on GNH values to create more awareness and to support the school in their journey towards GNH Education (GLSS Principal, 19/5/11). Willingness to go beyond school boundaries and bringing in parents and communities in the journey towards GNH Education would play a significant role in achieving GNH in the long run.

7.3.1.2 Differences associated with ECPs

Even though all four cases provided much emphasis on promotion of GNH values and principles through various ECPs, there were differences between the two ‘efficacious’ and two ‘inefficacious’ schools in terms of implementing ECPs. A total of three important differences are presented in the following sub-sections.

To begin with, differences were observed in terms of both the *number and quality* of ECPs initiated and implemented. WHSS and GLSS, the two ‘inefficacious’ schools, implemented only a few ECPs whereas the two ‘efficacious’ SLSS and ZPS, implemented numerous and also innovative ECPs to infuse GNH values and principles. For example, some of the SLSS specific programmes in addition to the common programmes were car free day, GNH room, traditional day, student-led campus cleaning, staff social gathering and briefing for parents. Some of the ZPS specific programmes included Design for Change (DFC), Quality Class Time (QCT), Quality School Time (QST), Project Helping Hands for Health and Happiness (ProH4), Democracy in action, food focused days, Cushion Project, Young Ambassadors of Change (YAC) and saying no to packaged food. These additional ECPs represent a telling difference between the two ‘inefficacious’ schools and the two ‘efficacious’ schools. The latter have expended more effort, were motivated, persistent and resilient in efforts to infuse GNH values and principles.

There were a number of other programmes implemented by the two ‘efficacious’ schools that were not only school focused but also had a wider community focus. For instance, the GNH room created by the SLSS was used for parent-teacher meetings and the school also provided briefings about GNH values and principles even for parents. Programmes such as ProH4, DFC and YAC (see Chapter Six, p. 186) supported not only students of ZPS to learn GNH values and principles but also reached students in other schools and communities at large. The Principal and

teacher participants of ZPS have been able to support less fortunate people in the community through their ProH4 programme. Their DFC programme had made considerable impact in the community, especially among the parents of ZPS students. The two ‘efficacious’ schools were taking the ideas of GNH beyond the boundaries of the school.

Next, the *meditation sessions* for students were one of the first activities all the four cases (schools) implemented. However, findings from this study suggest that meditation sessions were consistently implemented at both the ‘efficacious’ schools while there was evidence of inconsistency at the two ‘inefficacious’ schools. For instance, the frequent change of observance of meditation sessions for their students at WHSS from the beginning of each lesson in a day to just once at the beginning of the first lesson of the day to finally during the evening prayer suggested that there were difficulties and perhaps even a lack of commitment to maintain the original idea and purpose. In the case of GLSS, the other ‘inefficacious’ school, there was some contradiction between what the Principal believed and what Teacher 2 actually practiced. As discussed in the within-case analysis chapter, both Teachers 1 and 2 did not conduct meditation sessions regularly as opposed to the school’s policy of conducting meditation sessions before beginning the first class and the last class of the day.

Finally, difference observed between the ‘efficacious’ and ‘inefficacious’ cases was the *student ownership and school autonomy* in organising ECPs that they have implemented. For instance, at the ‘efficacious’ ZPS, most of the activities were student initiated and they were focused on the realities of both the school and community. Their DFC programme allowed students to brainstorm and devise solutions for the problems that bothered them. Brainstorming ideas were associated with both the school and the society in general. Once the problems were identified, the students had to design their own plans to address the problems. The students created awareness and also addressed a significant number of issues such as garbage in the school and community, bullying problems in the school, minimising the use of packaged food, helping the sick people in terms of financial support generated from student voluntary contributions as well as from the school club activities. Clearly there was also considerable support from the teachers and the school management. As mentioned, these innovative activities were not just confined to their school. Evidence from this study showed that ZPS had made a far-reaching impact by going beyond the school to share the concept of the DFC programme to other schools and communities.

Similarly one important achievement at SLSS, the other ‘efficacious’ school, was the student-led campus cleaning activity carried out on a daily basis. Usually in the Bhutanese school system, and even at the university level, school activities have to be supervised by the teachers.

However, at SLSS, students were not required to be supervised for their daily campus cleaning responsibility – a remarkable achievement. Such findings indicated that all school children, no matter what level, have the ability to produce change in the society and learn GNH values and principles if they are given some autonomy and opportunities in a supportive environment. Without such ownership of the change process, not much is likely to change (Fullan, 1992). Promotion of such learning experiences at a young age would go a long way in fulfilling the vision of GNH Education. Such opportunities for students to design their own programmes were more frequently evident at the two ‘efficacious’ schools when compared with the two ‘inefficacious’ schools. The way in which the two ‘efficacious’ schools had initiated the activities was also very different compared to the two ‘inefficacious’ schools. While ‘efficacious’ schools had the desire to go beyond the school campus and really make a difference by helping their communities, the prevailing attitudes in the ‘inefficacious’ schools were that such activities were undertaken as a duty if undertaken at all.

7.3.1.3 Summary of infusion through ECPs

The experiences observed in the ‘efficacious’ schools in this study indicated ways that schools in Bhutan could use to implement carefully designed ECPs to promote GNH values and principles. There was evidence of implementation of student-led ECPs at both the ‘efficacious’ schools while the two ‘inefficacious’ schools were generally satisfied with some modification of the existing ECPs to bring in the idea of GNH values and principles.

However, it is also important to understand from pre-GNH Education experiences in Bhutan that when the focus is on implicit infusion of values through ECPs, very little learning takes place. As shown by the current study, implicit infusion cannot happen without effective role models. For instance, the values education that was introduced in the Bhutanese education system in 1999 suffered the same fate. As discussed in the first chapter, values education sessions were most often replaced by other urgent and important school chores (Tandin Dorji, personal communication, 06/12/12).

Moreover, previously, when the schools thought the implementation of ECPs was important, especially through sports and cultural programmes that were based on competition, student participation became selective due to lack of skills, resources and time. Such practices undermine the very purpose of GNH Education. For instance, if ECPs such as sports are too much focused on competition, it can promote negative attitude of winning at all costs and other behaviours that are anti-GNH philosophy. So infusion of GNH values and principles cannot entirely depend on ECPs as currently practised.

7.3.2 Infusion through curricular programmes

One of the main goals of GNH Education is to imbed GNH values and principles in various academic subjects through both explicit and implicit teaching-learning experiences (MoE, 2010d). However, observation of teaching lessons at the four case study schools showed that little had been achieved through infusion of GNH values and principles into daily instruction in the class. This observation was further supported by the findings from review of the national seminar papers on ‘Educating for GNH: Stories from the schools and classrooms’ (CERD, 2011). Only about twenty percent of the seminar papers were related to the classroom infusion of GNH values and principles while majority of the papers were based on ECPs. Some of the typical classroom related papers were, ‘operationalising happiness in my classroom’, ‘moral fibres from the classroom’, and ‘GNH in the classrooms: Tough choices and hard decisions’. Interestingly most of these papers based on GNH infusion in the classroom instruction were by the lecturers from a teacher training college. However, the following sub-sections explore how infusion of GNH values through curricular programmes (CPs) was carried out explicitly as well as implicitly in the four case study schools.

7.3.2.1 Similarities associated with CPs

This section highlights some similarities observed among all the four case study schools: incongruence between perceptions and actual practices in GNH Education, lack of teacher preparedness, academic focus, use of classroom language and feedback, promotion of tradition and culture through Buddhist practices.

First, there was a considerable *incongruence between participants’ perceptions and actual classroom practices*. While the majority of case study participants seemed to agree in principle with the idea of infusing GNH values and principles in their teaching subjects, the observation of teaching lessons indicated that there was mostly incongruence between their thinking and actions. From a total of fourteen lessons observed, there was some superficial level of discussion of values in seven lessons only. No values were discussed in the other seven lessons. Four of the lessons, where there was some discussion of values, came from the ‘inefficacious’ schools and three were from the ‘efficacious’ schools. It was evident that these seven lessons provided opportunities for students to learn various GNH related values and concepts such as merits of compassion, trust, love and care, preservation of environment, hard work, personal hygiene, kindness, friendship, responsibility, not lying, ambition, empathy, and respect and demerits of corruption, killing, dishonesty, drug abuse and materialism. However, besides mere explanation of these concepts,

little effort was made by the teachers to initiate in-depth discussion of these values and exploration of them through clarification, analysis, ‘valuing process’ and other techniques.

The Asia Pacific Network for International Education and Values Education (2005) argued that values education process must now move from ‘knowing’ to ‘valuing’ and that values children experience at the cognitive level has to be converted to both affective and behaviour through interaction with others. Nevertheless, some of these lessons observed were related to Mathematics such as the concept of “weight” for grade 2 and “order of operations with integer” for grade 8, both of which were less appropriate for discussion of any GNH values connected to students’ lives.

The second similarity observed between the ‘efficacious’ and ‘inefficacious’ cases was the *lack of teacher preparedness* to move beyond what might be called their teaching comfort zone. It is important to understand that implementation of any educational innovation would require teachers to change their beliefs, understandings and practices. The mandate to infuse GNH values and principles in the daily teaching lessons is a new concept for most Bhutanese teachers. Such mandate requires adequate preparation in terms of knowledge, skills, resources, attitudes and beliefs.

In her book *Teaching in mind: How teacher thinking shapes education*, Yero (2010) explains the importance of teachers’ beliefs and values in shaping the atmosphere of the classroom and the future of education. Some research has also shown that teachers’ beliefs and what they value have positive association with their actions (e.g., Bandura, 1997; Evers et al., 2002; Ghaith & Yaghi, 1997; Haney et al., 2002). Therefore, it is important that teachers are adequately prepared to successfully handle GNH Education and to assist them to make the necessary changes. Findings from the case studies, as well as from the open-ended comments in the survey (just more than half of the principals [56%] and slightly less than half of the teachers [48%]), declared that they required training to implement GNH Education. For instance, one of the principals in the open-ended survey comments described the situation of GNH Education in the school as “an army without arms and ammunitions” (Principal 41). Similarly another Principal (42) shared that implementation of GNH Education lacked support and follow up from stakeholders. Such concerns and comments reflect the lack of will and positive energy or even understanding of the enormity of what is required by the system administrators as well as a lack of awareness and creativity of the principal and a lack of adequate capacity building. This finding corroborated the earlier findings of Sherab et al. (2008) and the Royal Education Council (2009) that reform efforts in the Bhutanese education system failed to provide the required attention to the immediate agents of change – teachers.

The third similarity observed was the *academic focus* evident in all of the four case study schools. Teachers were not willing to divert their attention away from academic matters as the success of a school in Bhutan (and the teacher's own status) was often judged by the students' academic performance. Recall: "I tell my teachers, no matter what we do outside, in the classroom you are responsible for meeting the learning outcomes" (Principal, ZPS Interview, 26/05/11). Interestingly the history of academic performance of WHSS further corroborated the claims made by these teachers (see WHSS case study, p. 143). Several other principals in their open ended comments in the survey also expressed the view that focus on syllabus coverage is one of the obstacles in their effort to implement GNH Education (e.g., Principal, 41 and 198).

A finding from the current study support findings from earlier research that the school curriculum in Bhutanese education system is 'content heavy' and also that one of the major forms of assessment is the examinations (Maxwell et al., 2010; Royal Education Council, 2009; Schuelka, 2013). Therefore, if the Bhutanese education system continues to provide rigorous focus on the examination system and regards academic performance as a higher priority than anything else, GNH Education is likely to remain an innovation without much impact. Unless GNH values and principles are included in the formal examinations, schools are not likely to make much effort.

Nevertheless, it is important to understand that GNH Education does not require forceful indoctrination of GNH values in all the topics and in all the subjects. The professional teaching of values calls for subtle and relevant dealing with GNH values according to appropriate topics rather than teaching them in isolation (MoE, 2010d). It is all about enriching the teaching-learning process, "making the curriculum and learning more enjoyable, more pleasurable and much more relevant" to the lives of children (Thinley, 2010 p. 3). It should be recognised that many lesson topics in various subjects at various grade levels offer few opportunities to overtly teach or discuss GNH values and principles, nevertheless as described in within-case analysis chapter (Six), some teacher participants were not able to seize the opportunity. Failure to discuss values appropriately during lessons may suggest, inter alia, that some teachers lacked knowledge and skills related to GNH values and principles. Such failure may also suggest that the teachers had not internalised or fully committed to the GNH imperative to the extent needed to translate belief into action. Which of these interpretations is more likely cannot be judged from the case study data at hand. Bhutan could learn from experiences of other countries and in an attempt not to follow a similar unsatisfactory pathway. Currently many countries are bearing the cost of providing an over emphasis on intellectual development and neglecting values and attitudes that results in numerous societal ills (APNIEVE, 2005; Galloway, 2007).

Fourth, a *heavy workload* for both the teachers and principals emerged as a potential issue that impedes successful implementation of GNH Education including its leadership (e.g., Principal, 41 and 198). Explaining the situation in his school one of the principals reported that, “due to teacher shortage, I keep myself engaged throughout the day teaching and I hardly get time to provide support to my colleagues” (Principal 198). Similarly, the Principal at ‘efficacious’ SLSS shared that he was not able to teach GNH values, as he was involved in teaching an academic subject. Sherab and Dorji (2013) have shown that teachers in Bhutan also work under a heavy teaching load with six to seven sessions of 40-45 minutes a day and more than 40 students in a class and that Bhutanese teachers refused to use activity-based teaching/learning approaches, which teachers believe take more time impacting negatively on the syllabus coverage. Moreover, teachers in Bhutan shoulder multi-tasking burdens whereby they are required to organise and supervise extra-curricular programmes, and supervise morning and evening study hours (especially at boarding schools). Therefore, it could be argued that spending more time on each GNH value would have resulted in not covering the lesson content in time thereby impacting negatively on syllabus coverage, examination results and so on the teachers’ status.

Fifth, the findings from the case studies seemed to indicate that the *use of classroom language and teacher feedback* has negative impact in the form of hidden curriculum. Teaching observations showed that some teacher participants often spoke impolitely to students and provided negative feedback to students about their efforts, irrespective of whether the teachers were from ‘efficacious’ or ‘inefficacious’ schools. Similarly, a year-long ethnographic study of schools in Bhutan by Schuelka (2013) also found that students were often the victim of teacher negative feedback, which is against the philosophy of GNH Education. Schuelka (2013) concluded that there has been a disconnection between the education system and Bhutanese society. Although it could be coincidental, two of the three teachers that were observed giving negative feedback and using ‘impolite language’ were Dzongkha language teachers. Such findings are a cause of concern as they are not consistent with the philosophy of GNH Education. Such negative teacher feedback and improper use of language in the class can have a deleterious impact on students potentially leading them to reproduce such behaviours later in their life which puts the future of GNH at risk. This predicament reminds educators of the importance of role modelling by principals and teachers in their effort towards realising the vision of GNH Education.

Sixth, one of the common practices noticed in all the case study schools, as well as judging from the seminar papers on *Educating for GNH: Stories from schools and classrooms* held in 2011, was the *promotion of tradition and culture through Buddhist practices* such as conducting

Buddhist prayers before the start of the lessons in the class (e.g., Teacher 1, ZPS) and maintaining a Buddhist altar in the classrooms illustrated in Figure 7.3. Although Bhutan is predominantly a Buddhist nation, it is important for schools to understand that recognition of the rights of all citizens is crucial, especially with the introduction of a Constitutional Democracy in 2008. Hence, such Buddhist practices in the classrooms could reflect insensitivity, potentially indicating an absence of respect for students as well as teachers with other religious backgrounds. Such culturally insensitive practices have the potential to create cultural dissonance, thereby defeating the whole purpose of GNH Education. In fact, this study has already identified the existence of conflict about meditation sessions when Teacher 2 from SLSS mentioned, “people think that it [meditation] is based on Buddhist religion. As a result, I have seen some reluctance from some of the teachers in this school” (Interview, 18/05/11) who would be, presumably, non-Buddhists.



Figure 7.3 Buddhist altar in one of the classrooms (CERD, 2011)

7.3.2.2 Differences associated with CPs

While explicit teaching of values has become important in the Bhutanese context, especially with the nation-wide implementation of GNH Education, research supports that much of the values can be also implicitly infused. Discussing the important role of teachers in implicit infusion of values in students, Yero (2010, p. 37) comments that, “in every action, every decision, every interaction with students, teachers are teaching values.” If this statement holds true, it is important that

teachers are mindful of their actions, decisions and interactions with their students. There were some differences observed between the ‘efficacious’ and the ‘inefficacious’ case study schools when it came to the implicit infusion of GNH values and principles in their students, that is, in their use of the hidden curriculum.

To begin with, there were some differences evident between ‘efficacious’ and ‘inefficacious’ cases in terms of *impact of the hidden curriculum*. It is particularly interesting to note the classroom atmosphere of Teacher 3 at ZPS in which the teacher was able to infuse some of the important GNH values implicitly. It was during an English language lesson on the topic ‘possessive case’ for grade 3 students. This was a topic without any apparent reference to GNH values. The teaching was based on a constructivist approach with lots of interaction and reflection taking place in a very supportive environment. Students felt free to share their opinions with no signs of stress and tension, which otherwise are a common experience in the Bhutanese classrooms (Schuelka, 2013; Sherab & Dorji, 2013). Another interesting and related observation was that students were allowed to go to the toilet and drink water while the teaching was going on.

As discussed in the ZPS within-case analysis such practices are congruent with the philosophy of GNH Education. Some signs of harmonious relationship were also observed in the teaching of Teacher 1 at ZPS when the students were able to freely approach their teacher for clarification and support in their learning. Creation of such classroom ambience indicated that GNH was practiced at ZPS, at least in these two classrooms. If students were able to learn values such as care, respect and harmonious relationships implicitly as practiced by teachers at ZPS in their relationships with their students, it is necessary that some of the teachers from inefficacious schools rethink their attitudes and practices. Notwithstanding, some of the principal and teacher participants have realised how important positive role modelling is for their students such as the principal who picked up discarded papers on the way to school and “if as a teacher we can inculcate the value of time, appreciation, care and love to others and if we leave the positive impression of a teacher on the children through our action, we need not plan for the achievement of GNH values, it is already done” (Teacher 202).

In addition another important aspect that differentiated the ‘efficacious’ and ‘inefficacious’ schools was the *classroom seating arrangements*. It is interesting to note that at both the ‘efficacious’ schools, students sat in groups with both boys and girls mixed (see Figure 6.6, p. 177) demonstrating their commitment to change and progress and moving away from traditional classroom arrangements. Contrarily, at both the ‘inefficacious’ schools students sat in rows facing the same direction. Was this an impact of GNH Education or is it rather a product of a particular

history of teaching at the schools concerned? Seating arrangements and groupings can also have a considerable impact on learning academic substance as well as values such as working in teams, supporting one another, showing respect and concern for group members including members of the opposite gender.

7.3.2.3 Summary of infusion through CPs

The presentation of similarities between ‘efficacious’ and ‘inefficacious’ schools in terms of lack of focus on GNH values in the daily teaching lessons, unpreparedness of change agents, exclusive focus on academic attainments and heavy workload indicated that the implementation of GNH Education in the four case study schools had not adequately considered the on-the-ground realities. Furthermore, inappropriate use of classroom language and feedback, and inappropriate promotion of culture and tradition through enforcement of Buddhist practices by the teacher participants indicated that these teachers were not aware of the negative impact that they were potentially making on their students. Therefore, the vision of GNH Education is unlikely to be achieved at these schools, unless there is an immediate intervention.

Although very little had been achieved in terms of infusion through daily CPs, findings showed that teachers and principals from ‘efficacious’ schools were also able to implicitly infuse values in the form of hidden curriculum while teaching and interacting with their students. A difference in classroom seating arrangements was also observed between ‘efficacious’ and ‘inefficacious’ schools demonstrating some potential differences in the way teachers conduct their teaching.

7.3.3 Common differences to both ECPs and CPs

Some differences between ‘efficacious’ and ‘inefficacious’ schools associated with infusion of GNH Education through ECPs and CPs were presented in the preceding sections. In this section a total of four general differences that are common to both ECPs and CPs are presented.

First, one key characteristic that differentiated the ‘inefficacious’ from the ‘efficacious’ cases was in the participants’ *attitude and commitment towards both CPs and ECPs*. Generally the participants from the two ‘efficacious’ schools showed positive attitudes and exhibited much more commitment to GNH Education compared to the participants from the two ‘inefficacious’ schools. For instance, mentioning the possibility of infusing GNH values in the teaching subjects and the role of teachers, both teacher participants from efficacious SLSS revealed their positive attitudes through, for example, “if we have the will, I think we could easily inculcate values in our

teaching” (Teacher 1 SLSS, 18/05/11). Similarly, the Principal of SLSS showed high self-efficacy and a positive attitude when he said, “I am confident that GNH is within the attitude of self and it is [the] self who makes [the] difference” (Interview, 17/05/11). Such attitudes from the agents of change could bring positive impact on the implementation of GNH Education. On the other hand, in the two ‘inefficacious’ schools, there were disagreements and differences in views between the principals and teachers. At GLSS the Principal was of the opinion that GNH Education can be implemented without much problem while one of the teacher participants (Teacher 2) was of the view that there should be independent teachers who are “well versed with all the GNH values” to handle the teaching of GNH values and principles.

Next, interview data showed that there were some differences between ‘efficacious’ and ‘inefficacious’ schools in terms of *participants’ attitudes towards resources* required for the implementation of GNH Education in their schools. For instance, discussing the role of resources in implementing GNH Education, both the teacher participants from much higher collective efficacy school (SLSS) asserted that infusion of GNH values and principles could be carried out with minimum resources and also that they made use of the resources that were abundantly available in the environment.

According to Teacher 2 from a moderately higher collective efficacy school (ZPS), although lack of resources was a challenge, her school had learned to make use of recycled materials to prepare teaching-learning aids. These teachers, who appeared to view things positively despite the difficulties they faced, were likely to promote such values to their students, supporting GNH Education in order to realise its vision of producing GNH minded graduates. However, on the other hand, participants from the two ‘inefficacious’ schools appeared to cite lack of resources in their schools as an obstacle. For instance, the Principal and Teacher 1 from much lower collective efficacy school (GLSS) commented that their schools’ lack of resources such as inadequate classrooms and other infrastructure facilities had prevented progress in implementing GNH Education. Such negative attitudes on the part of change agents are likely to undermine their confidence level, which can affect the implementation of GNH Education. Findings from the current study corroborated that – inefficacious people easily get discouraged by small institutional impediments (Bandura, 1977).

Then there were *school leadership* differences between the ‘efficacious’ and ‘inefficacious’ schools. It is well known that school leadership plays an important role in the success of any educational programme. The principals of ‘efficacious’ schools were able to generate more required team spirit and positive energy among staff and students in implementing GNH Education compared to the principals of ‘inefficacious’ schools. There was also evidence of

enthusiasm and energy by the two principals of the ‘efficacious’ schools whereas the two principals of ‘inefficacious’ schools lacked such enthusiasm. For instance, the willingness of ‘efficacious’ schools (especially at ZPS) to go beyond school boundaries in promoting GNH values and make an impact not only in the school environment but also in the larger society would play a significant role in successful implementation of GNH Education. Alternatively, such a high level of enthusiasm, energy, team spirit and leadership support were lacking in the ‘inefficacious’ schools. For instance, the Principal of GLSS chose to remain complacent when he mentioned “I feel that this [GNH Education] programme is not likely to affect the academic activities of the school because there is nothing extra to be done” (Interview, 19/05/11). Such complacency on the part of a school leader indicated, among other things, that he had little awareness of the actual nature of GNH Education and what implementation of any educational reform entails.

There is no doubt that the implementation of such a substantial educational innovation in the entire education system is likely to make great demands on the existing school culture. When a school culture is disturbed, teachers are the first ones to be affected. Perhaps, the inevitability of the intended impact on the prevailing school and teaching culture is one of the reasons why a number of teachers who participated in this study were not able to make a meaningful infusion of GNH values and principles in their academic teaching lessons. The findings from this study imply that the school principals can not take things for granted. Such attitudes by principals have the potential to directly affect the attitude of the teachers in the school.

Lastly the *autonomy of the school*, although it was a unique theme associated with only one case study school (ZPS) being a private school, appeared to play an important role in boosting the efficacy of the principal and teacher participants. The Principal of the school considered autonomy the key to their success in implementing GNH Education related programmes. This school had been able to exercise some flexibility in initiating and implementing various educational programmes (see p. 184) to help realise its vision of ‘educating for universal happiness’ long before the implementation of GNH Education. ZPS, being a private school had provided more opportunities to be flexible and go beyond the prescribed standards of the Ministry of Education to make a difference in the lives of their students (ZPS Principal, 26/05/11). Besides, private schools also have financial freedom that allowed them to use their budget as they desire. Contrarily, the other three case study schools were public schools that did not enjoy much autonomy in its daily functioning. This lack of autonomy is likely to restrict creativity and motivation hence weakening their efficacy for GNH Education.

Although it is based on only one case study, autonomy of the school seemed to have positive relationship with school outcomes. Therefore, autonomy may well play a crucial role in

boosting the self- and collective efficacy beliefs of change agents. Recently, Jones (2012) has shown that provision of autonomy to individuals or to an organisation broadens up the opportunity to take risks and question one's own 'habits of mind'. Such opportunities often lead to transformation of beliefs, assumptions, values, actions and practices through critical reflection (Mezirow, 1991) that were also evident at ZPS, especially in the leadership role played by the Principal in implementing various ECPs. School autonomy also allowed ZPS to organise on-going professional development that made a huge impact on their teachers. Therefore, autonomy related to both structural and professional life of a school could be potentially identified as one of the important sources of efficacy information besides Bandura's four sources – enactive mastery experience, vicarious experience, verbal persuasion and physiological arousal.

Furthermore, there was also evidence of student autonomy that played crucial role in boosting the level of school collective efficacy beliefs at both the higher efficacy schools – ZPS and SLSS. Principals and teachers at these schools appreciated their students for getting engaged in ECPs without much supervision and guidance from the school authorities. Although SLSS the other 'efficacious' school was a public school like the other two 'inefficacious' schools with limited autonomy, there was evidence of some flexibility being exercised by the school in implementing numerous ECPs. Conversely, the two 'inefficacious' public schools remained inflexible in implementing GNH Education and there was no evidence of student-led programmes at these schools although they had much more matured students. Thus they were satisfied with a few existing ECPs.

7.4 Comparison of GNH Education impact

According to the first parliamentary form of government and the Ministry of Education, the vision of GNH Education was to convert every school into a 'GNH school' with GNH-minded teachers, principals and students to ultimately produce a 'GNH graduate'. Some participants considered (e.g., the Principal of GLSS and Teacher 2 WHSS) that the impact of GNH Education, which is based on teaching and learning of values, cannot be seen immediately because of its long-term orientation. Nonetheless, the findings from this study showed that there is adequate evidence of some impact within a period of just over one year since its implementation, although the more successful schools appeared to have had a longer history of involvement in GNH-type activities such as at ZPS. As shown in Figure 7.2 (see p. 207) GNH Education impact is presented in two sub-sections below – the target of impact and the nature or thrust of impact.

7.4.1 The target of impact

Cross-case analysis showed that all the four cases have been able to make impacts on students, teachers and principals themselves, on the schools and on their communities in general but that this varies across schools. These impacts presented in the following sub-sections are particularly attributed to the implementation of ECPs, although there could be some hidden impact associated to CPs. As presented in the following sub-sections, impacts vary depending on the type and number of ECPs implemented in each of the schools.

7.4.1.1 Impact on students

The impact of GNH Education on the students varied between ‘efficacious’ and ‘inefficacious’ schools. At the ‘efficacious’ schools, there was adequate evidence to show that students were given opportunities among other things to: think critically; practice democratic procedures; show empathy; discover their potential; learn through experience; practice healthy habits; interact with peers from within and abroad; interact with communities; take up responsibility; promote culture and tradition; practice leadership skills; and practice mindfulness. It is interesting to observe that such opportunities have led students of the two ‘efficacious’ schools (particularly at ZPS) to brainstorm and identify concerns that bothered them with minimum teacher guidance, discussed solutions, implemented and shared with others through their Design for Change programme. There was also evidence to show that at a very young age students of these two schools (SLSS and ZPS) were mindful of their actions, took up responsibilities with dedication, and practiced healthy habits by minimising the use of packaged foods and plastics. Some of the principals have also observed development of caring attitudes among students towards the environment (e.g., Principal 165). Discussing the impact of GNH Education on students, the Principal of SLSS proudly claimed that he had observed a reduction of disciplinary problems such as gang fights and quarrelling among students in his school (Interview, 17/05/11). Teacher 1 at ZPS was also of the opinion that his students’ behaviour and attitude towards their life and what they did at school had improved. Reduction of disciplinary problems and changes in student behaviour were also observed in many other schools that took part in the survey (e.g., Principal 85). GNH Education had been also successful in “making children responsible” and “instilling the concept of dignity of labour” (Teacher 1, SLSS 18/05/11).

At the ‘inefficacious’ schools, some participants (WHSS Teacher 2 and GLSS Principal) argued that it is too early to see the impact of GNH Education on students. For instance, the Principal of GLSS, which had grades from pre-primary to eight, mentioned that the real impact

would be seen only after eight to nine years, that is when this first cohort of GNH Education students graduate from his school. Perhaps, GLSS Principal felt that this was a realistic assessment and that incrementally, there is little he could do individually. However, such a view on the part of these participants may signal low efficacy beliefs and lack of commitment. Perhaps if such beliefs continue in these schools, nothing much will happen in terms of implementing GNH Education. Existence of such beliefs also can be a source of lack of motivation and encouragement of teachers to implement GNH Education successfully in their schools. However, in spite of such beliefs that the impact of GNH Education can only be realised in the long term, these participants clearly pointed out some of the immediate impact they had seen in their students. For instance, the Principal of GLSS commented that his students had minimised the use of junk food, improved use of dust bins, significantly reduced bullying problems in the school and there had been an improvement in caring attitudes of the senior students for the juniors. Teacher 2 from the same school felt that with the practice of meditation sessions, her students had become more attentive in the class and are aware of life skills such as dealing with winning and losing in life, collaboration and team spirit through implementation of other ECPs in the school. Such changes observed are indicators of initial success of GNH Education even in two ‘inefficacious’ schools.

From the above discussion it appears that GNH Education had been able to make some impact on students whether they were in an ‘efficacious’ or in an ‘inefficacious’ school. However, the ‘efficacious’ schools were able to make a much deeper impact on students compared to the two ‘inefficacious’ schools. It was impressive to witness how well the students at the two ‘efficacious’ schools initiated and led innovative programmes that provided life-changing experiences for themselves, other students and school communities. There was much positive energy and enthusiasm evident among students at the ‘efficacious’ schools compared to the students at the two ‘inefficacious’ schools, although one of the ‘inefficacious’ schools was a higher secondary school with relatively matured students.

7.4.1.2 Impact on principals and teachers

Evidence from the four case studies showed that the implementation of GNH Education had impacted both the teachers and principals in many ways. One of the principals (#82), discussing the impact of GNH Education on teachers, mentioned that the working atmosphere has completely changed in his school. This Principal further shared that many teachers came forward for school improvement activities. Similarly another teacher maintained that he had become more sincere and honest in his work and kind to others (Teacher 1621). He further made it clear that, “I

spent some of my salary to show this outcome by giving 10 students (who were economically disadvantaged) a set of [school] uniforms during 2010.” These are small but significant things that can contribute to the achievement of nation’s vision of GNH.

The self-efficacy of the principal and the teacher participants who attended the week-long Paro GNH Education workshop were comparatively higher than the self-efficacy of the principal and teacher participants who did not have the same opportunity. Although the three principals (GLSS, SLSS and ZPS) and the teacher (WHSS) who attended the national level workshop had provided a one-day school based in-service workshop to familiarise all the teachers of their respective schools, case study data as well as the open-ended comments in the survey showed that these workshops were not able to make a telling impact on the teachers, especially at the two ‘inefficacious’ schools. This no doubt had an impact on collective self-efficacy.

The most positive impact on the principals and teachers was noticed at SLSS, which scored much higher school collective efficacy belief for GNH Education compared to the other three case study schools. SLSS had implemented many ECPs to promote GNH values and principles (see p. 172). In sharing the experiences of implementing GNH Education, the Principal of SLSS realised that the usual practice of authoritative and top down school administration would not work and that as a GNH administrator, he had to follow a democratic process. He had also realised that the infusion of GNH values and principles in all aspects of school life has helped his school to enhance child-centred learning with much love, care and promotion of equity among students. He further stressed that GNH-minded teachers and principals:

Never assess a child with one activity or with a day’s lesson. [A] GNH teacher will have notes of individual child’s portfolio. GNH teachers are also aware of [sophisticated] criteria for assessment and other necessary rubrics for fair assessment. (Interview, 17/05/11)

The Principal also maintained that he was necessarily a role model and had become approachable to both teachers and students. Both the teacher participants from SLSS agreed with their Principal that they had to be mindful of what they do. For instance, Teacher 1, believed that GNH Education had helped her set transparent assessment criteria, improved time management, and boosted self-esteem, while Teacher 2 thought that he had learned to value others’ lives and to show love, care and respect for others. The Principal further maintained that everyone in the school had become time conscious in attending to various duties and activities as this is one of the domains of GNH (Principal, SLSS 17/05/11).

ZPS, the moderately higher school collective efficacy, private school, had its own opportunities and challenges. With a lack of trained teachers, limited school space and having to follow the prescribed government syllabus, the school seemed to be under pressure with all these

challenges but had made good use of its autonomy in working towards fulfilling its vision of promoting universal happiness. The Principal appeared to be passionate and enthusiastic in spear heading the design and initiation of many innovative programmes that were well supported by the teachers and students. She strongly believed that all educational practices at the school have to be made relevant to the children. As a result of this, she made absolutely sure that she understood everything about a given programme in detail. For instance, before the school implemented meditation sessions she conducted thorough research to study the benefits of meditation (ZPS Principal, 26/05/11). As a result of her desire to learn, experience and evolve, there was evidence to show that she had immense motivation to study best practices of other schools and institutes from both within the country and abroad. The Principal contended that she then shared many of her experiences with the teachers through regular in-service programmes. Such a passion and effort for self-learning and then disseminating the knowledge to teachers was not evident at the other three case study schools. Both of the teacher participants from this school supported the above views of the Principal when they confirmed that their Principal was resourceful and anything that they did not know were discussed during the in-service programmes.

At WHSS with moderately lower school collective efficacy, there was never-the-less evidence of GNH Education impact reported by both the Principal and two teacher participants. For instance, the Principal reported that the implementation of GNH Education had helped her to refine her “thoughts, action and speech” (WHSS Principal, 13/07/11). She further claimed that as a role model, she had to be fair, punctual, transparent, responsible, accountable, caring, receptive to feedbacks and democratic (WHSS Principal, 13/07/11). For Teacher 1, implementation of GNH Education had been a good learning experience. According to her, “honestly speaking, earlier I did not really know much about GNH values... but now I think I am more aware” (Teacher 1, 31/05/11). Teacher 1 had also learned that being mindful of her own actions and speech helped to maintain good relationships with others in the immediate surroundings which further helped to generate true happiness.

At GLSS with a much lower school collective efficacy beliefs, little impact was evident on the Principal and the two teacher participants. The Principal was of the opinion that there is nothing extra to be done in implementing GNH Education. Teacher 1 strongly believed that there should be a separate GNH values classes with full-fledged GNH teachers instead of infusion with academic subjects. According to Teacher 2, values teaching had existed in the Bhutanese education system for a considerable time and with the introduction of GNH Education the only difference is the use of term ‘GNH’. While the latter comment may well be true, such opinions suggest that they are not aware of the deep concepts and profound implications of GNH

Education. These participants also appeared to be pulling in different directions. These features clearly explain why this school scored much lower in school collective efficacy beliefs and that there was a lack of positive impact on them.

The foregoing discussion on the impact of GNH Education on principals and teachers suggest that there were some differences between ‘efficacious’ and ‘inefficacious’ schools. There was also evidence of greater effort, persistence, resilience and motivation at the two ‘efficacious’ schools compared with the two ‘inefficacious’ schools. It was also clear that the participants at the higher collective efficacy schools viewed GNH Education positively and critically while participants at the lower collective efficacy schools lacked enthusiasm, understanding and commitment. It can be tentatively concluded that the more efficacious the case study schools were, the greater the impact of GNH Education.

7.4.1.3 Impact on schools

All four schools have been impacted by their implementation of GNH Education. One important impact of the GNH Education at all of the four case study schools was the creation or continuation of litter free campuses. Although there was no empirical evidence, there was anecdotal evidence to show that littering and garbage disposal has become a huge problem in Bhutan. If schools and institutions in the country are able to follow the four case study schools, it is reasonable to expect that Bhutan will be one day free of litter and will develop environmentally friendly systems of garbage management.

It is interesting to note some examples of the most recent impact of GNH Education in the schools. First, as a part of the Design for Change programme at one of the schools, children have started refusing to use government pool vehicles (allocated to their parents) to take them to school and back home since it was connected to corruption (Teacher 2, ZPS 25/05/11). Second, as reported in the *e-Kuensel* (18th September), the web version of one of the national newspapers of Bhutan, some of the schools have decided to stop rearing pigs mainly because it is against GNH values to rear a pig and slaughter it later for consumption (Pelden, 2012). Such practice is mainly influenced by Buddhist values.

Participants across all the four case study schools also agreed that they have achieved some success in promoting the concept of ‘green schools for green Bhutan’ through promotion of both physical and psycho-social ambience, consequently there were signs of campus greening activities at all of the four case study schools. A substantial reduction of bullying problems, improvement of student behaviour, and promotion of greater care and love were all reported. These are some of the significant milestones towards fulfilling the vision of GNH Education in addressing the

concept of ‘green school for green Bhutan.’ While the creation of a litter free campus and promotion of the concept of a child-friendly school were some of the impacts of GNH Education that cut across all the four cases, the findings also showed that there were a few other impacts related to a particular case study school.

For instance, at SLSS, one of the ‘efficacious’ cases, an observation was made that the school had successfully created a GNH room for display of – reading materials relating to GNH including newspapers and magazines, the portraits of the kings of Bhutan and other relevant information about GNH. This room was also used to conduct meetings with parents and students. The GNH room was created to make visitors and everyone at the school feel something different from the other rooms (Principal SLSS, 13/09/12).

7.4.1.4 Impact on communities

The implementation of GNH Education had not only made a meaningful impact on students, teachers, principals and schools but also had begun to make some impact on the wider communities. Findings from the case studies point out that in the process of implementing GNH Education, the two ‘efficacious’ schools have put in much more effort to go beyond school boundaries to make an impact on the community compared to the two ‘inefficacious’ schools. According to the Principal of SLSS, “we also try to impart GNH values to parents during parent-teacher meetings. We have been successful with one of the GNH components – time use” (Interview, 17/05/11). In order to keep working towards its vision of promoting universal happiness, it was also observed that ZPS had put in effort towards making an impact on the community than any other case study schools. To achieve their vision, ZPS has adopted ‘empathy’ as their guiding philosophy and exerted efforts to design and implement ECPs that provided opportunities to work with other schools and render helping hands to the disadvantaged people in the community (Principal, 25/05/11). The Principal further argued that, “children can be great leaders, mathematicians and scientists but if they do not know how to show empathy and be good to others, it will be difficult to achieve true happiness” (Principal, 25/05/11).

It has been also observed that even at an ‘inefficacious’ school (GLSS), although not much had been achieved, an attempt had been made to promote GNH values to parents during parent-teacher meetings. Other than this, both GLSS and WHSS, the two ‘inefficacious’ schools have not apparently done anything to include the wider community in their attempts to provide GNH Education.

When undertaking the journey towards GNH Education in a school, it is important that communities be involved, especially the parents of the students; otherwise there is a risk of

promoting values in school that conflict with those values students are acquiring in their home environment. Parents also have the right to know what is occurring in the children's education. Open-ended comments in the survey also showed that there were many other principals who considered students' home environment significant in realising the vision of GNH Education (e.g., Principal 2, 4, 71, 95, 221). Although it is acceptable for different individuals to have different values, the government's view is that every Bhutanese citizen learn GNH values and principles right from a young age that can help generate true and sustainable happiness.

7.4.2 Nature or thrust of impact

From the preceding section based upon the target of impact, it is clear that the initial stage of the implementation of GNH Education obviously had made some impact on the students, principals, teachers, schools and communities. However, these impacts are mainly focused on creating conducive psychosocial and physical ambience of the school. Furthermore, there was also evidence of the important role played by the hidden curriculum in promoting GNH values at these four schools. The thrust of the impact has been summarised in the following points:

1. It became apparent from the four case studies that improving the psychosocial ambience of the school such as student discipline, love and care, mindfulness training, critical thinking, student leadership and school-parent relationship were focused upon;
2. It also became obvious that case study schools provided much greater emphasis on the improvement of school physical ambience through programmes such as waste management, school greening programme and promotion of healthy habits; and
3. The impact of hidden curriculum, especially in the way teachers interacted with their students in the classrooms (although teachers may not have been aware) was identified as one of the potential areas to infuse GNH values implicitly.

The thrust areas identified in this study clearly indicated that the case study schools were efficacious in promoting values through programmes that are extra-curricular in nature and much easier to initiate and manage compared to the infusion in the academic teaching lessons. Initiating and implementing such programmes did not really challenge the principals and teachers to think critically and question their 'frames of reference' – 'habits of mind' and 'points of view'. Without critical thinking, principals and teachers were not able to challenge their assumptions, beliefs, values and practices, thus leading to adaptive approach to learning which is 'single loop learning' as shown in the conceptual framework (see Figure 2.2, p. 47). On the other hand, infusion of GNH values and principles in the teaching lessons would demand significant changes in beliefs,

assumptions, values and practices through critical reflection and discourse. Such learning experiences would often lead to transformation, which is ‘double loop learning’ (see Figure 2.2, p. 47). Unfortunately, such practices were not evident in the teaching lessons of all the eight teacher participants.

7.5 Chapter summary

Findings from this cross-case analysis, described in this chapter, indicated that the case study schools, particularly the two ‘efficacious’ ones, have made a considerable contribution in addressing the vision of GNH Education. There is adequate evidence to show that the two ‘efficacious’ schools have implemented innovative ECPs making an impact on the whole school environment, which other schools in Bhutan could emulate to reconfirm their commitment for GNH Education. However, findings also indicated that very few GNH principles have been achieved through CPs (mainly implicit infusion through the hidden curriculum) at any of the four case study schools. The lack of GNH Education in the classroom teachings was also confirmed through findings of a review of seminar proceedings that was organised mainly to share classroom stories and experiences of GNH Education implementation process (CERD, 2011). Some cultural and contextual issues that appeared to impact on the implementation of GNH Education were also revealed that called for immediate intervention.

The reason why GNH Education lacked focus on infusion through CPs indicated apparent lack of teaching strategies as well as inadequate time that contributed to teacher resistance and low teacher self-efficacy. Evidence in the within-case analysis also indicated that the prevalence of a full syllabus and a strongly examination-oriented education system discouraged teachers from diverting any time away from academic discussion. There was also evidence that the style of school leadership and the attitude and commitment of both teachers and principals influenced the GNH Education take up. These were some of the major themes that emerged through this cross-case analysis.

In the absence or due to very limited infusion of GNH values in the academic lessons, it can be logically assumed that impacts discussed are mostly consequences of ECPs. Keeping this in view and as elaborated in the within-case chapter (Six), the potential of ECPs is limited, especially from the point of view of student participation. So schools cannot entirely depend on their ECPs to promote GNH values, principles and practices. In fact if teachers provide more focus on infusion in the teaching lessons, values inherent in ECPs could be further reinforced in the classroom situation making it relevant to each student in the class.

The next and final Chapter (Eight) presents broad conclusions based on the integration of the key findings from both phases of the study. This chapter also includes various implications related to theory, methods, policy and practice, limitations and delimitations of the study, and possible directions for future research.

CHAPTER EIGHT: CONCLUSIONS AND IMPLICATIONS

8.1 Chapter introduction

The previous chapter highlighted commonalities and differences in a cross-case analysis and the overall impact of GNH Education grounded in interpretive perspectives. The first section in this chapter presents answers to the two over arching research questions based on the overall findings drawn from between-paradigm triangulation in relation to the conceptual framework presented in Chapter Two (see Figure 2.2, p. 47). The second section presents various implications of the study related to theory, methods, practice and policy. The chapter ends with a presentation of limitations and delimitations of the current study and possible directions for future research.

According to Bhutan's first elected Prime Minister, Jigme Y. Thinley (2010) who "spearheaded" the introduction of GNH Education in the Bhutanese education system, Bhutan is one of the first nations in the world to initiate a nation-wide implementation of educational innovation related to teaching of values, principles and practices. This notion was conceived in order to promote the philosophy of 'Gross National Happiness.' The then Prime Minister considered that it was important for the Ministry of Education and in particular the school principals to implement this historical education reform successfully (Thinley, 2010).

In any educational reform effort, school principals and teachers play a crucial role as change agents. This is clearly the case in Bhutan because, as discussed in Chapter Two, earlier research conducted in the Bhutanese context has shown that implementation of educational reforms have encountered undesirable outcomes mainly because key stakeholders have not been able to consider on-the-ground realities such as preparedness of change agents in terms of knowledge, skills, attitude, support and resources. Such concerns motivated this study. Therefore, this exploratory, sequential, mixed methods study investigated perceptions and experiences of school principals and teachers measured by their efficacy beliefs for GNH Education, perceptions of importance, support systems, actions and impacts.

The presentation of first phase quantitative data analysis in Chapter Five and second phase qualitative data analysis in Chapter Six (within-case) and Chapter Seven (cross-case) revealed unique findings in terms of overall implementation of GNH Education. On the whole, findings suggest that while there was some progress made in infusing GNH values, principles and practices within just over one year (in 2011) of its implementation, there were some inconsistencies among schools.

8.2 Conclusions

This section brings together key findings derived from both positivist and interpretive perspectives in relation to the conceptual framework proposed in Chapter Two (see Figure 2.2, 47). The design of the conceptual framework has been grounded on the three interrelated theories of perceived sense of efficacy beliefs (Bandura, 1997), transformative adult learning (Mezirow, 1991) and dynamics of educational reform (Fullan, 1996) to explore and understand the process of implementing GNH Education in the Bhutanese schools. The intent was to measure efficacy beliefs of principals and teachers and their perceptions of importance, support systems, actions and impacts of GNH Education and to further predict principal and teacher actions and impact and student impact of GNH Education.

Additionally, it was also intended to check whether there was evidence of transformation of principals' and teachers' assumptions, beliefs, actions and practices about GNH values and principles. Research in educational contexts as discussed in Chapter Two has shown that principals and teachers with robust sense of perceived self- and collective efficacy beliefs exhibit greater effort, are persistent, resilient and motivated, leading to better outcomes (e.g., Hoy, Sweetland, & Smith, 2002). However, as discussed in Chapter Two, low efficacy can sometimes bring positive changes in educational reform effort (Wheatley, 2002). For instance, a recent PhD study revealed that low self-efficacy teacher interns with good support were more resilient, motivated and exerted greater effort compared to their counterparts with high self-efficacy beliefs (Jones, 2012). Such findings question the theory of efficacy beliefs. At the same time, it is important to understand that efficacy beliefs are largely dependent on specific domains and contexts. The present study was carried out in the context of implementing GNH Education values and principles in the Bhutanese education system.

In any educational reform movement, school principals and teachers are the key change agents. It is therefore important that these change agents are adequately prepared in terms of visioning, knowledge and skills, attitudes, incentives, resources, and support to implement the reform successfully (Fullan, 1996; Kilcher, 1994; Sherab, 2001). Lack of attention to any of these attributes could result to failure of an educational reform irrespective of its intentions. Findings presented in the following sections are intended to provide insights into the process of the early implementation of GNH Education through triangulation of data to address the two main research questions.

What are the principals' and teachers' efficacy beliefs, perceptions of importance, support systems and actions and impacts of GNH Education in Bhutanese schools? and;

What are the principals' and teachers' lived experiences for GNH Education in Bhutanese schools?

A flow map (see Figure 8.1), displaying an overview of the study, elucidates how different sources of data/methodologies helped to shape different phases of the study that contributed to learning about specific aspects of the research questions. It further demonstrates how this study benefited by employing both within-paradigm and between-paradigm triangulation. Results from the first phase helped to select case study schools and in turn case studies in the second phase helped to contextualise the findings from the first phase. The mixed methods were complementary and helped to understand any indications of congruence or incongruence in the findings. For instance, survey and the interview data revealed that principal and teacher participants perceived themselves to be infusing GNH values and principles in their teaching lessons but observations of teaching lessons seldom found explicit infusion of values.

While findings from the within-paradigm triangulation were presented in the previous chapters, this particular section presents findings based on the between-paradigm triangulation. It is particularly focused on the following study specific themes: i) the role and impact of self-efficacy beliefs; ii) the role and impact of collective efficacy beliefs; iii) role-based (principal and teacher) influences and patterns; and iv) prediction of actions and impacts of principals, teachers and students.

8.2.1 The role and impact of self-efficacy beliefs

Understanding the self-efficacy beliefs of educational change agents such as teachers and principals play an important role in making the educational reform efforts successful (Tschannen-Moran & Gareis, 2004; Wheatley, 2002). In the context of this study, the noble vision of GNH Education is unlikely to be successfully realised without a robust sense of principal self-efficacy beliefs (PSEB) and teacher self-efficacy beliefs (TSEB) for GNH Education. Findings from both phases of the current study confirmed that principals who participated in this study were generally found to exhibit higher self-efficacy beliefs in implementing GNH Education compared to the vice/assistant principals and teacher participants.

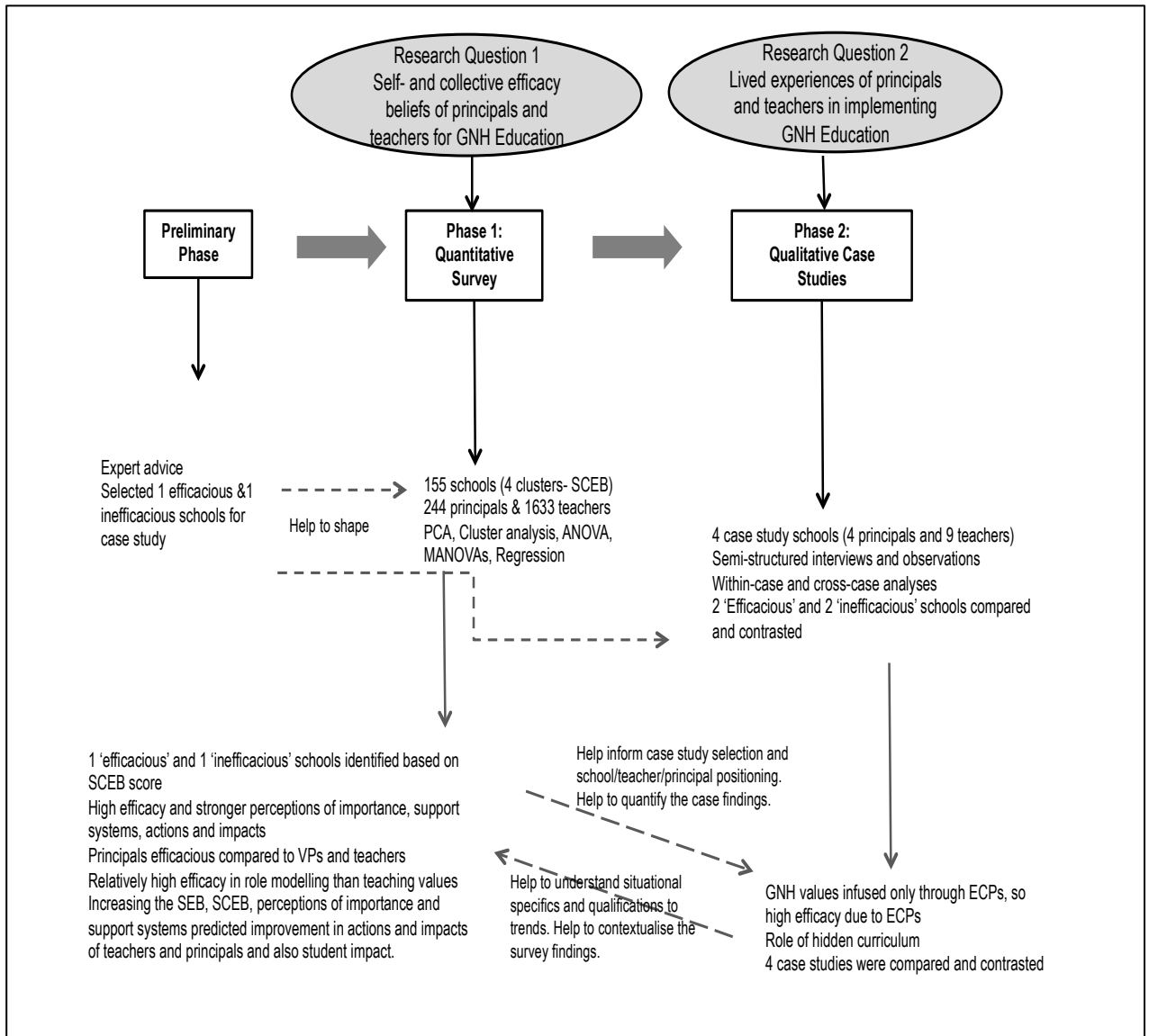


Figure 8.1 A flow map of the study

Findings showed that principals were more efficacious in their ability to *influence values development in students* and *design and teach GNH values lessons* while they were relatively ‘inefficacious’ in their self-efficacy to *lead GNH Education* and *GNH Education training*. Further it was found that there were statistically significant differences between principals and vice/assistant principals in terms of their self-efficacy to lead GNH Education and GNH Education training. More specifically principals showed a higher sense of self-efficacy in terms of: i) designing student-centred activities; ii) creating GNH values lessons that hold students’ interest; iii) adjusting GNH values lessons to the needs of their students; and iv) integrating teaching of values into their academic lessons. This difference is an indication of a positive impact of the national level Paro GNH Education workshop in preparing the principals to

specifically infuse GNH values into their daily academic lessons. Furthermore, findings generally indicated that principals were efficacious (especially at the ‘efficacious’ schools) in promoting GNH values through ECPs. On the contrary, triangulation of data suggest that both principals and vice-principals lacked skills and knowledge related to: i) generating interest amongst teachers to promote GNH values; ii) leadership to lead teachers; iii) development of a clear vision for implementation of GNH Education; and iv) the GNH Education concept. As none of the principals from the four case studies were observed teaching, efficaciousness of the principals in designing and teaching GNH values lessons cannot be further validated by the qualitative data and further research is needed. However, empirical evidence indicated that principal participants needed further professional development to prepare them to teach as well as to lead GNH Education in their schools. The urgent need for GNH Education training for both principals and teachers was also expressed by more than half of the principal participants (56%) who responded to the open-ended survey comments ($n = 48$). Thus the view of one of the vice-principals in the open ended survey comments saying that the GNH Education situation in the schools as being like “an army without arms and ammunitions” (Principal 41) sums the situation up well.

Teachers exhibited much lower self-efficacy beliefs compared to the principals. In particular teachers showed lower self-efficacy to *design and teach GNH values lessons* compared to their self-efficacy to *influence values development in students*. This difference indicated that teachers had lower self-efficacy to infuse or integrate GNH values into their daily teaching lessons. Evidence from an analysis of the interviews and teaching observations also maintain that very little values teaching were happening in the classrooms. This observation is mainly attributable, among other things, to lack of readiness in change agents and also to the culture of reliance on examinations to judge the quality of a school or for that matter the quality of a teacher. Nevertheless, teachers were observed to be relatively more ‘efficacious’ in terms of influencing values development in their students through implementation of extra-curricular programmes (ECPs). Case study findings confirmed that the four case study schools concentrated more on infusion of GNH values through ECPs and very minimal attention provided to infusion through curricular programmes (CPs) including implicit promotion of values through hidden curriculum.

Findings from the nation-wide survey suggested that teachers were not able to: i) design lessons that would enable all students to master GNH values; ii) adapt GNH values lessons to the needs of students; iii) design student-centred activities to infuse GNH values; iv) teach values lessons as effectively as other academic subjects; v) find better ways to encourage development of GNH values in students; vi) teach GNH values lessons without training; and vii) have a good understanding of the GNH concept. Analysis of case study data affirms that workshops (SBIPs)

prior to the implementation of GNH Education did not provide adequate attention to raise teacher efficacy through all four sources of efficacy information particularly related to infusion of GNH values into daily classroom teachings (Bandura, 1997). Teacher participants lacked enactive mastery experience, verbal persuasion, models to emulate in terms of infusion of GNH values and principles into daily classroom teachings, thus leading to lack of emotional excitement. Teachers' only source of verbal persuasion and role model in the school could have been principals. However, evidence showed that principals of all the four case study schools, especially at the two 'inefficacious' schools were not able to address important sources of efficacy enhancement because they were more focused on syllabus coverage and academic performance rather than infusion of GNH values in the academic subjects.

On the other hand, teachers perceived themselves to be better off with their ability to influence values such as honesty, respect, kindness, responsibility and be a good role model through ECPs based on cultural, sporting, literary, campus greening, meditation and other innovative programmes such as design for change, democracy in action, car free day, GNH room, waste management, community involvement and student-led campus cleaning. With the introduction of 'wholesome education' in the Bhutanese education system in the mid 1980s (for details see Chapter One, p. 3), schools were required to implement various ECPs to promote values in students. It can be speculated that the experience of implementing 'wholesome education' in the past have provided teachers, enactive mastery experience, one of the important sources of efficacy information (Bandura, 1997). Further, initiation and implementation of various innovative programmes especially at the 'efficacious' case study schools suggest, inter alia, that these principals were able to model and verbally persuade teachers to infuse GNH values into ECPs.

This finding further supports the contention that effective professional development programmes play an important role in lifting the level of efficacy beliefs of teachers (Ross & Bruce, 2010). Moreover, statistically significant differences in principal and teacher self-efficacy also confirmed that the 'train-the-trainer' model of professional development appeared to have not affected the implementation of GNH Education reform successfully in this case (see Kennedy, 2005 for different models of in-service professional development). For instance, action research is one of the effective models of professional development for teachers that promote transformative learning (Kennedy, 2005; Timothy & Cooper, 2013). Findings from both the phases of this study maintain that 'one-off' SBIPs were not very useful for infusion of GNH values into academic subjects. It is important that teacher professional developments are ongoing and conducted in a collaborative nature (Hunzicker, 2011; Kennedy, 2005; Maxwell, 2001). As noted in Chapter

Two, there has been a considerable amount of research that has shown that one-off in-service courses are not effective. For example, earlier research by Ross (1994), which examined the impact of an in-service to promote cooperative learning on the stability of teacher efficacy in Canada identified short in-service duration as one of the factors that negatively affected teacher efficacy. Close to half of the teachers (48%) who responded to the open-ended survey comments ($n = 122$) expressed the need for more professional development programmes to prepare them to adequately implement GNH Education. Much lower teacher self-efficacy to design and teach GNH values partly reflect the quality of support for change. Further, as indicated earlier, teachers were also deprived of adequate social persuasion and learning vicariously as did the principals from various leaders and experts who provided the Paro GNH Education workshop.

Discussing the importance of early development of efficacy beliefs of teachers involved in implementing educational innovation, Tschannen-Moran, Hoy and Hoy (1998) comment that, “once efficacy beliefs are established, they appear to be somewhat resistant to change.” Given such findings, it is important that: i) stakeholders of GNH Education provide continuous intervention to address factors that undermine teacher efficacy for GNH Education particularly related to teacher efficacy in designing and teaching GNH values; and ii) efforts (both pressure and support) toward the desired change need to continue and take place over a long period of time (Fullan, 1992). However, it is encouraging that, ‘A teacher action research project on transformative education for GNH’ has been implemented at some of the selected schools in the two Western districts (Timothy & Cooper, 2013). Such initiatives would play a significant role in successfully infusing GNH Education values and principles in the Bhutanese education system.

The finding from the current study suggests that there is a gap between the expectation of the government and the quality of teacher preparation to implement GNH Education. There is also evidence of much confusion among teachers due to lack of knowledge, skills and methods to infuse GNH values and principles into their teaching lessons. For instance, many teacher participants were of the opinion that they had to infuse GNH values in every lesson that they teach and in every school subject while others thought it was not necessary at all. Without immediate attention to such discrepancies in the system, the future of GNH Education is likely to be at risk. Earlier research related to implementation of educational innovation in the context of Bhutan has also shown similar results (Sherab, 2001; Sherab et al., 2008). Based on such findings, it is argued that educational reforms in Bhutan need to pay closer attention to factors that impede successful implementation of reforms at the classroom and school levels. Furthermore, educational reforms need to address Bandura’s four sources of efficacy information – enactive mastery experience,

vicarious experience, verbal persuasion and physiological excitement as well as Fullan's idea of continuous support and pressure.

Analysis of data from both phases of the study corroborated to show that Dzongkha teachers possessed high self-efficacy compared to teachers teaching other subjects. As discussed in the case study chapters, Dzongkha texts are redolent with values-related topics that provide opportunities for Dzongkha teachers to discuss GNH values and principles. Traditionally Dzongkha teachers in the Bhutanese schools were also responsible for maintaining discipline in the schools, which is still continued to the present. Further, as detailed in Chapter Two (beginning p. 20), GNH values are basically grounded in Buddhist philosophy. Therefore, it is assumed that Dzongkha teachers with their sound knowledge on Buddhist philosophy through their education and training find it relevant, motivational and useful to discuss GNH values, thus enhancing their self-efficacy beliefs. This finding is consistent with the findings of Milson and Mehlig (2002) in the United States (although the context is different) that teachers who undertook their undergraduate from religiously affiliated colleges and universities performed better in teaching character education. Almost all Dzongkha teachers are a product of colleges and institutes related to Buddhist studies while teachers of other subjects are graduates of secular institutions.

It is evident from the preceding discussions that self-efficacy of change agents play important role in successfully implementing educational reform efforts such as GNH Education. However, without adequate attention to the sources of efficacy information, very little is likely to change (Bandura, 1997). Additionally, autonomy of an individual or an organisation has been identified in this study as important source of efficacy information that requires some attention in the Bhutanese education system. As discussed earlier, public schools in Bhutan do not have the same amount of liberty that private schools enjoy in terms of overall school management – structural, professional and financial authority. Such a system restricts creativity and innovation and has the potential to negatively impact the vision of GNH Education as almost 95 percent of the schools in Bhutan are public schools (MoE, 2011a). This difference is an indication that school systems in Bhutan should be provided with some flexibility in the overall management.

8.2.2 The role and impact of collective efficacy beliefs

Collective efficacy is one of the important school characteristics that demonstrate the level of commitment, motivation, effort, resilience and persistence for any given task amongst a group of people (Schechter & Tschannen-Moran, 2006). An analysis of the combined data from both principal and teacher surveys that measured school collective efficacy to *model and promote*

values showed that all sample schools ($n = 155$) had average to high levels of commitment, motivation, effort, resilience and persistence. Interestingly, cluster analysis showed that more than 60 percent of the sample schools revealed relatively lower or much lower collective efficacy for GNH Education indicating that the majority of the sample schools felt collectively ‘inefficacious’ in modelling and promoting values such as kindness, respect, responsibility, caring, honesty and carefulness.

An analysis of the results found that collective efficacy, like self-efficacy beliefs, is a multi-dimensional construct and it is important to address all the dimensions to further enhance the overall collective efficacy of the school. Findings also confirmed that collective efficacy is positively related to self-efficacy beliefs (Skaalvik & Skaalvik, 2007) of principals and teachers, their perceptions of importance, support systems, actions and impacts of GNH Education. The higher the collective efficacy beliefs schools exhibited the higher the principal and teacher self-efficacy beliefs were, especially related to ECPs. Teachers and principals in the higher collective efficacy clusters also tended to show stronger perceptions of importance, support systems, and actions and impacts of GNH Education. Therefore, findings from this study contend that there is a positive relationship between the construct of self- and collective efficacy with GNH Education. Case studies further support that the view that principals and teachers from ‘efficacious’ schools also exhibited higher efficacy beliefs for GNH Education, stronger perceptions of importance, support systems and actions and impacts. Furthermore, this finding is consistent with earlier findings of Milson (2003) and Narvaez, et al. (2008) that there is a positive relationship between teacher efficacy and character education development.

Given such findings, it is important that the key stakeholders of GNH Education provide timely intervention and continuous support to enhance self- and collective efficacy beliefs of teachers and principals, especially related to their efficacy for designing and teaching GNH values lessons. Explicit infusion of values in the teaching lessons would provide opportunities for critical reflection on their assumptions, beliefs and actions about infusing GNH values and principles. This would potentially lead to transformational learning and successful implementation of GNH Education through renewed or altered sources of efficacy information (see Figure 2.2, p. 47).

The findings of both the principal and teacher samples also revealed one unique collective efficacy component each, which is specific to their role in the school. Principals exhibited much higher collective efficacy to *influence values development in students*. More specifically principals believed in: i) encouraging responsibility at school to influence students’ level of responsibility outside of school; ii) providing extra attention to problematic students; iii) teaching students what it means to be honest; iv) schools promoting respectfulness to make students more

respectful; and v) spending time encouraging students to be respectful of others to improve students' social interaction. Case study findings suggested that such principal perceptions of school collective efficacy to influence values development in students were manifested more at the 'efficacious' schools compared to the 'inefficacious' schools. The teacher unique component related to collective efficacy in *creating an appropriate context for GNH Education* also exhibited moderately higher collective efficacy. Overall, teachers reported that their school: i) had a clear vision for implementation of GNH Education; ii) had the responsibility to model appropriate behaviour to students; and iii) provided time to make the school a safe place for all the students. However, case study findings suggested that a much higher teacher perception of collective efficacy in creating an appropriate context for GNH Education could be attributed to teachers' ability in infusing values development in students through ECPs and not necessarily through CPs and the hidden curriculum.

Overall findings from the current study confirmed that perceived sense of self- and collective efficacy are multidimensional constructs and also that they are context and domain specific (Bandura, 1997). Evidence from this study showed that teachers and principals generally found it easy to infuse GNH values through ECPs rather than through CPs, hence enhancing their self-efficacy beliefs to *influence values development in students* even without much training or professional development. Among other things, this finding could be mainly attributed to the Bhutanese culture of respect for one's teachers and elders and discipline oriented school system. It is also speculated that high efficacy to influence values development in students through ECPs could be also due to their enactive mastery experiences gained from implementing the concept of 'wholesome education' and also values education during the pre-GNH Education schooling system. These relationships could be the focus of future research.

Overall findings based on efficacy beliefs suggest that vice-principals, principals and teachers who did not get an opportunity to attend a full-scale in-service professional development, such as the Paro GNH Education workshop, were apparently disadvantaged from comprehensive understanding of the GNH concept and skills to infuse GNH values and principles into academic subjects. Further, they were also deprived of verbal persuasion, one of the important sources of efficacy information provided by several high level advocates including the then Prime Minister, the Education Minister, and other national and international experts who resourced the Paro GNH Education workshop. At the school level, teachers and vice-principals depended on the ability of their principals for verbal persuasion.

Findings showed that principals of efficacious case study schools were able to persuade their teachers and vice-principals to infuse values into ECPs particularly through their passion for

GNH Education but this was not so with those of ‘inefficacious’ schools. However, in terms of infusion through CPs very little progress has been made irrespective of whether the school was ‘efficacious’ or ‘inefficacious.’ This observation further supported the findings from the first phase that teachers generally thought themselves ‘inefficacious’ to design and teach GNH values lessons. Under such circumstances, it is difficult to undergo transformation of one’s assumptions, beliefs and actions about GNH Education through critical reflection (Mezirow, 1991). Without substantial transformation of principals’ and teachers’ mindsets with regard to GNH Education (Figure 2.2, p. 47), very little learning is likely to take place and as a result not much change especially in terms of infusion into various academic subjects.

8.2.3 The role and impact of principal/teacher perceptions of importance, support systems and actions and impacts of GNH Education

Findings from phase one showed that principals and teachers equally perceived GNH Education as important and believed that GNH Education has the potential to support: i) the development of four pillars of GNH (sustainable and equitable socio economic development, preservation and promotion of cultural heritage, preservation and sustainable use of the environment and good governance); ii) student learning in other key learning areas; iii) students in their academic education which has the potential to impact the larger society; and iv) teachability of human values and happiness skills. These findings are similar to the finding of Dykes (2007) that the overwhelming majority of the Alabama educators in the United States deemed character education as important for students. Further, findings showed that both principal and teacher participants did not statistically significantly vary in their perceptions of importance of GNH Education on any of the twelve demographic variables. However, based on the case study findings, it has been concluded that some principals exhibited relatively much stronger perceptions of importance of GNH Education compared to the teacher participants. This is an indication that principals in general have not been able to convince, motivate and provide the skills for the teachers as much as they have been convinced and motivated by the national level Paro GNH Education workshop.

In terms of the principal sample-specific component, principals generally did not consider implementation of GNH Education to be of extra burden for them in terms of both teaching as well as administrative responsibilities. This is an encouraging indicator. This finding was partly supported by the case study data. Nonetheless, it is important to understand that implementation of any educational reform often upsets the existing culture of a school, sometimes negatively

impacting the work culture of principals and teachers (Fullan & Hargreaves, 1992; Fullan & Stiegelbauer, 1991). Despite the perception that GNH Education not being an extra burden to them, findings from the current study showed that many principals have not been able to put into practice what they believed, especially in terms of infusion of GNH values into classroom teachings. There are at least three possible explanations for showing inconsistencies in what principals believed and practiced. First, not being able to focus on infusion of GNH values into daily academic teaching lessons indicated that principals did not have a comprehensive understanding of GNH Education and its constituent pedagogical knowledge. Second, schools in Bhutan continue to provide more focus on syllabus coverage and examination performance, which do not allow diversion of time and energy for other activities in the classroom such as GNH Education. Third, both principals and teachers also worked under heavy workload that possibly undermined their efficacy beliefs. Therefore, the perception that GNH Education generates no teaching or administrative burden has to be treated cautiously and indicates that further work needs to be done.

In terms of the teacher sample-specific component, teachers from private schools and teachers who were less than 30 years of age showed stronger perceptions of importance *to introduce GNH Education as a separate subject* while teachers from government schools and senior teachers were found to be against the idea of introducing GNH Education as a separate subject. The difference in perceptions between private and government school teachers could be partly attributed to the difference in sample size as only 11 percent of the teacher participants were from private schools. With regard to teachers' age, much younger teachers considered infusion of GNH values difficult compared to the senior teachers. While case study findings do not either support or refute such findings, one plausible reason for such finding is that senior teachers consider that values have always been a part of school education and they can be infused rather than creating a completely different area of study. This finding also suggests that younger teachers need to gain more experience in dealing with values in the schools.

Second, findings showed that principal and teacher perceptions of external support received in the process of implementing GNH Education from external agents such as: i) Department of Curriculum and Research Development; ii) Education Monitoring and Support Services Division; iii) District Education Office; iv) Teacher Training Colleges; and iv) parents and internal support and collaboration within the school did not vary in terms of any of the demographic variables. However, principal and teacher perceptions of external support was comparatively weaker compared to their perceptions of internal support and collaboration.

When principal and teacher perceptions of support systems were considered separately, it was found that principal perceptions were comparatively stronger than the teacher perceptions. This is partly attributed to the type of professional development programmes principals and teachers participated in order to implement GNH Education. These findings partly suggested that the national level Paro GNH Education workshop for the principals made a greater impact compared to the SBIPs for the teachers that was based on ‘train-the-trainer’ model.

However, principal perceptions of support provided by the Paro GNH Education workshop varied statistically significantly by gender, current post, experience and qualification of the principals. Findings revealed stronger perceptions among males, principals, long-term experienced and certificate qualified principals. Almost 50 percent of the principal participants consisted of vice-principals who did not get the opportunity to attend the Paro GNH Education workshop and also that most of the vice-principal participants were females. While there is no pertinent explanation in terms of experience and qualification, it can be speculated that experienced principals were in a more comfortable situation to implement GNH Education compared to their inexperienced counter parts. As Bhutan discontinued providing certificate qualification to pre-service teachers more than a decade back, it can be reasonably assumed that most principals with certificate qualification would be also senior and experienced principals.

The teacher perception of support provided by school based in-service programmes on GNH Education was also not encouraging. Such findings question the usefulness of *single* professional development programme in terms of preparing teachers to teach GNH values lessons as well as to organise ECPs to promote values. Teachers in the urban areas, long term experienced, senior, day school, expatriate and non-Bhutanese nationals showed relatively stronger perceptions of support provided by SBIP. It is not clear why this appears to be the case and more research is needed into this issue. In terms of expatriate and non-Bhutanese national teachers, it can be speculated that their enactive mastery experiences of character or moral education in their own countries (either as a student or a teacher) would have played a role in making them understand the nature of GNH Education.

Third, principal and teacher perceptions of *GNH Education impact on student* were not very encouraging. More specifically principals and teachers in the sample did not show strong perceptions that in the process of implementing GNH Education their students have been able to: i) change some of their own beliefs and assumptions about values; ii) question some of their own beliefs and assumptions about values; iii) change some of their own actions and practices; and iv) reduce disciplinary problems. There were also no differences in principal and teacher perceptions of student impact based on any of the twelve demographic variables. Some findings from the case

studies support these findings while some did not. For instance, the Principal at GLSS mentioned that GNH Education impact in students could be seen only after a long period has elapsed. This is long-term thinking and may well be correct. However, case study findings revealed some contradictions to the survey data as principals and teachers reported interesting student impacts such as reduction of disciplinary and bullying problems, development of caring attitude, attitude towards cleanliness and waste management, and development of healthy eating habits. Furthermore, one important improvement observed during the research field visits was that schools were generally found to be litter free, which may well be an impact of GNH Education in most schools.

In terms of principal sample-specific components, findings indicated that principals perceived themselves to have taken successful actions in relation to school practices and their own practice. It was also found that principal actions and impacts components did not significantly vary on any of the fifteen demographic variables. In contrast, case study findings at the two 'inefficacious' schools showed that: i) SBIPs for teachers were not effective; ii) promotion of GNH values, especially through infusion into daily classroom teachings were not evident; and iii) there was no evidence of principals changing their own beliefs and assumptions about values.

The two teacher sample-specific components related to teacher perceptions of actions and teacher perceptions of impact were relatively weak. Teacher perceptions of *teacher actions* to implement GNH Education varied in terms of teacher experience and nationality. Teacher actions also showed marginal significance in terms of school type. Therefore, teachers with medium and long term experience, non-Bhutanese nationals and day school teachers perceived themselves to have taken appropriate actions to implement GNH Education. More specifically these teachers: i) agreed that SBIP on GNH Education was conducted for teachers in their school; ii) have established a high priority for promoting GNH values in their school; iii) often liked to include the teaching of values in their academic classes; iv) have experienced some success in teaching GNH values; and v) were able to reflect critically on their values lessons. However, case study findings indicated that while some success have been achieved in terms of infusion of GNH values through ECPs, not much has been achieved in terms of infusion through CPs, except promotion of values through the hidden curriculum in some cases. Therefore, findings from phase one that teachers often like to include teaching of values in their academic classes and that they have experienced some success in teaching GNH values were all contradictory to what has been found through in-depth case studies. Case study evidence (although limited to only 14 lesson observations) showed that teachers lacked, among other things, the knowledge and pedagogical skills necessary to infuse GNH values and principles explicitly in their teaching subjects. There were also some

cultural and contextual issues such as academic focus, heavy workload, principal leadership, attitude and commitment and focus on Buddhist practices that require immediate attention if the government desires to witness more principal and teacher actions and impact, ultimately leading to successful implementation of GNH Education.

In terms of teacher perceptions of impact made as a result of teaching GNH values lessons, teachers in the sample generally perceived themselves to have: i) changed some of their own beliefs and assumptions about values; ii) questioned some of their own beliefs and assumptions about values; and also iii) changed some of their own actions and practices. Case study evidence showed that such impact in the teachers were attributable more to the infusion of GNH values and principles through ECPs rather than through CPs. Therefore, intervention programmes have to be designed to provide more focus on infusion through academic teaching lessons.

8.2.4 Prediction of actions and impacts of principals, teachers and students

Findings from the current study predicted that principals and teachers with a robust sense of self- and collective efficacy beliefs, stronger perceptions of importance and support systems for GNH Education could lead to improved principal-teacher actions, principal-teacher impacts and student impacts. Besides, the current study showed that teacher participants were less likely to put in consistent efforts and hence less impact compared to the principal participants. These findings are consistent with the other findings derived from the survey results discussed in the preceding sections.

Findings from the second phase case studies also corroborated that teachers, especially at the two lower collective efficacy schools, were relatively ‘inefficacious’ in terms of implementing GNH Education and also possessed relatively weaker perceptions of importance and support systems for GNH Education. Furthermore, principals and teachers at the ‘efficacious’ case study schools were ascertained to be more proactive and motivated to infuse values in students especially through ECPs compared to the two ‘inefficacious’ schools. Generally teacher participants were found to be not adequately equipped in designing and teaching GNH values lessons.

There is much for GNH Education stakeholders to do. Given such findings, it is important that key stakeholders design intervention strategies to address the issue of low efficacy particularly related to self-efficacy for infusion of GNH values and principles in the academic lessons. Particular focus needs to be provided to various aspects (see section 8.2.1) of GNH values infusion in the academic lessons that undermined the self-efficacy of principals and

teachers. For instance, Bandura (1997) postulated that mastery of a difficult task helps to enhance the self-efficacy beliefs that ultimately lead to appropriate actions and meaningful outcomes. Moreover, the role of the hidden curriculum has to be stressed so that principals and teachers consciously model good practices both within and outside of the teaching. There are also some cultural and contextual issues that need to be considered in order to make an impact on the actions and impacts of principals and teachers. For instance, the existing practice of relentless focus on academic performance had a negative impact on the infusion of GNH Education. This finding corroborated earlier research that too much focus on knowledge and skills has led to neglect of values and attitudes in students (Galloway, 2007; Quisumbing & Leo, 2005). Similarly there were other issues such as attitude, commitment and resources that required urgent attention that are further elaborated in the following section pertaining to implications of the study. However, prior to presenting these details, a summary of conclusions and a review of the conceptual framework, proposed in Chapter Two, are presented next.

8.2.5 Summary of conclusions

As GNH Education had just completed one year of its implementation in the schools, it is clear from the preceding discussions that there were signs of a ‘temporary dip in efficacy’ among principals and teachers (Tschannen-Moran et al., 1998) which Fullan (1992) calls ‘implementation dip.’ Hopefully the difficulties identified in the current study would be a source of better implementation of GNH Education in the long term. The conclusions drawn in this study are based on findings of the phase 1 nation-wide survey that were further confirmed with the support of in-depth case study findings from the second phase. Therefore, the conclusions drawn from this study can be generalised to other situations in Bhutan. Overall conclusions from the current study are summarised in the following points.

1. Principals and teachers were ‘efficacious’ in implementing GNH Education through various extra-curricular programmes;
2. Principals and teachers were ‘inefficacious’ in implementing GNH Education through infusion in academic teaching lessons;
3. Principals and teachers perceived GNH Education to be important and believed that GNH values are teachable and that it should be infused in academic lessons;
4. Self-efficacy beliefs of principals and teachers were found to be the major influential factor in successfully implementing GNH Education as it has the potential to make lasting impact on principals, teachers and students;

5. Principals were ‘inefficacious’ in leading GNH Education in their schools;
6. There was evidence of schools providing too much focus on promotion of GNH values and principles through ECPs, hence minimal attention was given to infusion through CPs;
7. The focus of ECPs at ‘efficacious’ schools were on both school and community benefit and were mainly student initiated while ‘inefficacious’ schools were mainly content with modification of the existing programmes and with the focus only on the school;
8. There is a positive relationship between the construct of self- and collective efficacy with GNH Education;
9. Schools need to update their vision and mission to align with the vision of GNH Education;
10. Some of the main reasons for not being able to efficiently infuse GNH values and principles in the teaching lessons were due to lack of awareness, knowledge, skills and methods, culture of academic and examination focus, heavy workload for both principals and teachers, teacher resistance and lack of positive attitude and commitment;
11. Principals were relatively more efficacious in implementing GNH Education compared to their vice principals and teachers;
12. The national level Paro GNH Education workshop has made some impact on the principals while the ‘train-the-trainer’ model of school based in-service workshop provided by the principals for their teachers did not make much impact;
13. There is a gap between the expectation of the government and the quality of teacher preparation to implement GNH Education;
14. Principal and teacher perceptions about GNH Education were found to be contradictory to their actual practices;
15. The hidden curriculum has the potential to play important role in achieving the vision of GNH Education;
16. School leadership differences between ‘efficacious’ and ‘inefficacious’ schools played an important role in implementing GNH Education. Principals at the ‘efficacious’ schools were more dynamic and committed;
17. Participants from ‘efficacious’ schools exhibited a positive attitude and commitment for both ECPs and CPs, although not much was done in terms of infusion in CPs;
18. Dzongkha teachers were found to be more efficacious than any other subject teachers;
19. School autonomy has the potential to play important role in successfully implementing GNH Education;

20. Student ownership of ECPs at the two efficacious schools played a significant role in promoting GNH values and principles that provided opportunities for experiential learning;
21. Buddhist practices such as saying prayers and maintaining altars in the classrooms followed at some schools could potentially bring in dissonance and confusion;
22. There was evidence of transformation of the schools, both in terms of physical (greening programme, litter free) and psychosocial ambience (reduction of bullying problems, promotion of caring attitude);
23. There was inadequate support from the stakeholders such as the Department of Curriculum and Research Department, Education Monitoring and Support Services Division, Colleges of Education and District Education Office; and
24. GNH Education had made some preliminary impact on students, principals, teachers, schools, and even in the community (see section 7.4, p. 221).

8.3 Review of the conceptual framework

A conceptual framework that was mainly inspired by the efficacy belief of Bandura, transformative learning of Mezirow and dynamics of educational reform of Fullan was designed to study the implementation process of GNH Education in the Bhutanese schools. In implementing GNH Education successfully, it was assumed that principals and teachers, who were the key change agents, demonstrate a robust sense of efficacy beliefs that would lead to transformation of their assumptions, beliefs and actions through an interactive process of critical reflection and discourse. Without a robust sense of efficacy beliefs principals and teachers are less likely to make significant learning in implementing GNH Education. Findings from the current study facilitated a review of the conceptual framework to further refine and make it more comprehensive. While the general structure of the conceptual framework seemed to have been confirmed, the current study provided an insight into two particular aspects of the framework that provides some insights into the literature (see Figure 8.2, additions are indicated in blue and in upper case letters).

First, the current study identified various contextual issues such as principal leadership, autonomy, student ownership of ECPs, academic focus, attitude and commitment, hidden curriculum, heavy workload, Buddhist practices and resources that deterred successful infusion of GNH values and principles especially in academic teaching lessons. It is important that these contextual barriers are included in the conceptual framework so that change agents carefully and

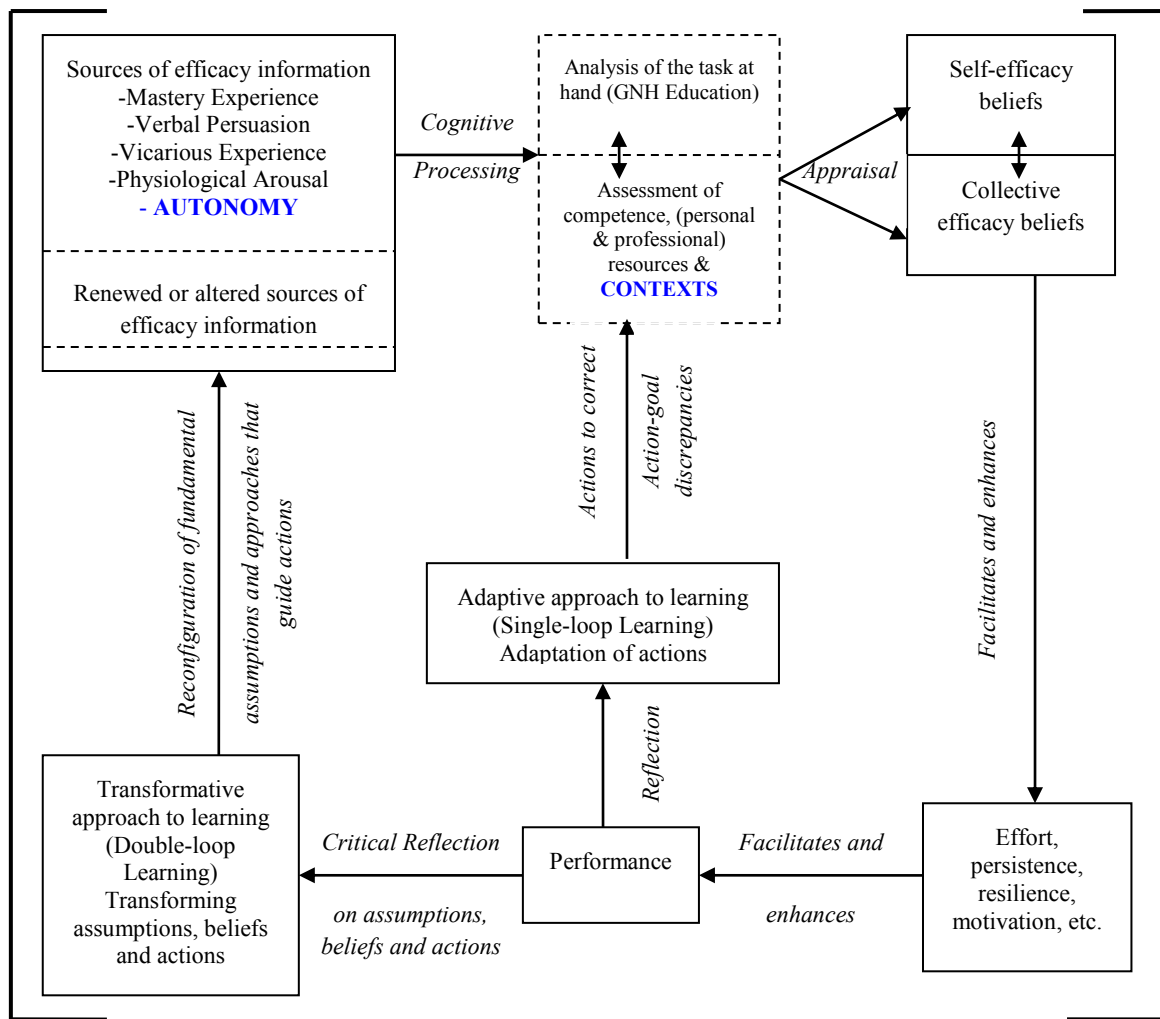


Figure 8.2 A conceptual framework for implementation of GNH Education

accurately assess such issues when they appraise their efficacy beliefs besides assessment of their own competence and resources (see the middle box in upper half of the Figure 8.2). If the contextual barriers are not included then assessment of efficacy beliefs can be misleading as in the present study. For instance, even in high collective efficacy schools, there were not much of effort, persistence, resilience and motivation to infuse GNH values in the academic lessons. The current study found that such a situation could occur when contextual factors are not properly accounted for. Jones (2012) found that under a problematic yet high-level support environment, even low efficacy interns make greater efforts, persist, and get motivated to successfully complete the task.

Second, relevant to Bandura's four sources of efficacy information (mastery experience, verbal persuasion, vicarious experience and physiological arousal), findings revealed that 'autonomy' of the school has the potential to be one of the important sources of efficacy information particularly relevant to implementation of GNH values and principles. Although

autonomy was associated to only one private case study school (see ZPS case report) in the present study, it demonstrated an important role in lifting the efficacy beliefs of the participants, especially in implementing GNH Education through ECPs. There was evidence of much confidence, motivation, persistence, positive attitude, effort and commitment among ZPS participants in initiating and implementing various ECPs to promote GNH values and principles. In exercising their autonomy, ZPS had even stretched beyond the school boundaries by taking risks and questioning their own beliefs, values and assumptions for the benefit of their students. Clearly autonomy was the source of higher efficacy beliefs at ZPS.

Related to the concept of autonomy, the current study also found that student ownership of the ECPs that they implemented played significant role in promoting GNH values and principles. This concept was particularly relevant with students at ZPS and SLSS, the two higher collective efficacy schools. At ZPS students were given opportunity to design and implement their own ECPs that made impact in contributing towards realising the vision of GNH Education. Similarly at SLSS, students willingly and enthusiastically participated in daily campus cleaning activity without having the school authority to supervise or remind them. Such practices would go a long way in producing the GNH graduates as described by the MoE.

8.4 Implications of the study

The implementation of GNH Education in the Bhutanese education system is most recent educational innovation introduced by the government of the day with the hope of promoting Gross National Happiness, a unique development philosophy of Bhutan. The findings from this study have theoretical, practical, policy and methodological implications that are presented in the following sections.

8.4.1 Theoretical implications

The analyses of the results highlight the importance of efficacy beliefs of principals and teachers in successfully implementing GNH Education. Enhanced self- and collective efficacy beliefs of principals and teachers predicted improvement in principal and teacher actions and impact and student impact of GNH Education. Furthermore, their improved perceptions of importance of GNH Education and support systems also indicated better actions and impacts. Therefore, the current study buttresses the theory of a positive relationship between efficacy beliefs and effort exerted by the change agents and its related outcomes (Caprara et al., 2006; Goddard, 2001; Haney et al., 2002 ; Milson & Mehlig, 2002; Tschannen-Moran & Hoy, 2001). To be specific,

there were more evidence of principal-teacher actions and impacts and student impacts as a result of GNH Education particularly related to ECPs at the ‘efficacious’ schools compared to the ‘inefficacious’ schools. Participants at the ‘efficacious’ schools also exhibited transformation of their assumptions, beliefs and actions about GNH values and principles. This transformation resulted in positive student outcomes. However, even at ‘efficacious’ schools very little has been achieved in terms of infusion of GNH values and principles through academic teaching lessons.

Findings from the current study confirmed that Bandura’s (1997) perceived sense of self-efficacy is a multidimensional construct and also that it is context and domain specific. No matter how efficacious principals were in other school programmes and activities, if they were not efficacious in terms of all the four components of PSEB for GNH Education, very few GNH values and principles are likely to be infused. For instance, WHSS was one of the well-known schools in Bhutan in terms of academic performance (CERD, 2008) but in terms of GNH Education, this school was identified as one of the ‘inefficacious’ schools. The Principal and teacher participants of this school apparently lacked GNH knowledge and skills even though these were presented at the workshop. Further, these participants also missed the opportunity for ‘verbal persuasion’, one of the important sources of efficacy information (Bandura, 1997). At the Paro workshop, several high level advocates including the then Prime Minister, the Education Minister, and other national and international experts provided ‘verbal persuasion’ for the principals. Perhaps this could be one of the reasons why principals and vice-principals who could not attend the Paro workshop exhibited low self-efficacy beliefs.

According to the model shown in Fig. 8.2 (see p. 249), change agents with a low sense of efficacy are likely to put in less effort, give-up more easily when faced with difficulties, and suffer from lack of motivation especially when support is not in place. Unless principals and teachers with low self-efficacy are provided with continued professional support and guidance, they are not likely to make much effort to infuse GNH values, especially in their academic lessons. Without support to address a major reconfiguration of fundamental assumptions and approaches that guide principals’ and teachers’ actions, very little learning is likely to take place (Mezirow, 1997) leading to the inappropriate implementation of GNH Education.

Furthermore, this study revealed ‘autonomy’ of the school (shown in Figure 8.2, p. 249) as one of the important sources of efficacy information in implementing GNH Education. A sense of autonomy at the school level in terms of implementing GNH Education provided opportunity to the principal and teacher participants to take risks and question their beliefs, assumptions and actions with more focus on infusion of values in ECPs. According to Mezirow (1991) such processes allow reconfiguration of assumptions, beliefs, values and practices that are fundamental

for transformational learning. This finding is supported by previous research (Jones, 2012) undertaken in the context of teacher interns' efficacy beliefs. She concluded that autonomy with support allowed even low efficacy interns to exert more efforts, persist and take risk in their learning. So 'autonomy' has the potential to also benefit efficacy research in other domains and contexts.

8.4.2 Practical implications

Several practical implications can be drawn from this study that may benefit all schools. Each of the seven practical implications identified are discussed in the following sections:

First, the current study showed that there has been a considerable *disparity between participant perceptions and their actual classroom practices*. It has been encouraging to note from the survey as well as interview data that principals and teachers exhibited a much stronger perceptions that GNH Education is important in terms of – student learning, equally important as academic education, has the potential to support promotion of four pillars of GNH, GNH values and happiness skills are teachable, and should be integrated into other academic subjects rather than teaching it as a separate subject. While such beliefs are important and encouraging, teachers have not been able to translate their beliefs into reality due to several implications related to their practice. For instance, teachers were not able to 'live up' to their perceptions due to lack of knowledge, skills and motivation. Furthermore, there is also an indication that the culture of heavy reliance on academic performance of students deterred teachers from spending time for values discussion in the class (see implications for policy section for further elaboration on this point);

Second, teachers lacked adequate *awareness, knowledge, skills and motivation* related to GNH Education. Many teachers were of the view that GNH values and principles have to be infused into almost all the lesson topics and in all the academic subjects on a daily basis. It is important to understand that GNH Education does not require forceful indoctrination of GNH values and principles in all the topics and in all the subjects. GNH Education is all about infusion of GNH values and principles in a subtle way as found fitting with the lesson topic. GNH Education is all about enriching the teaching-learning process, "making the curriculum and learning more enjoyable, more pleasurable, and much more relevant" to the lives of children (Thinley, 2010). Existence of such misperception among the change agents is an indication; inter alia, that the vision of GNH Education has not been communicated well. Given such confusion it is imperative that schools take instantaneous efforts to demystify the misperception by raising the

level of awareness, knowledge, skills and motivation. Teacher capacity building on GNH Education with special focus on infusion in academic lessons would go a long way in fulfilling the vision of GNH Education. Teachers need to learn how values can be acquired, among others, through – persistent instruction, modelling, analysis, clarification, valuing and doing. While some of the lessons observed definitely created awareness in students on certain values, it is important that teachers initiate a more in-depth analysis through critical reflection and discourse on how values that emerges in the teaching lessons impact on the daily lives of students and their relationship to GNH;

Third, another significant implication of this study is role of the *hidden curriculum*. Findings from this study indicated that a wide range of GNH values and principles such as respect, caring, honesty, kindness, compassion, gratitude, equality and empathy (to mention a few) can be communicated to students through teachers' and principals' daily interactions with students in the form of hidden curriculum. Therefore, it is very important for the principals and teachers to be aware of what they do and say to students, whether it is in the classroom or at the playing fields or perhaps even outside the school. Hidden curriculum has the potential to make a life-long impact on students and helps fulfil the vision of GNH Education, because vicarious learning is one of the important sources of efficacy information (Bandura, 1997);

Fourth, a *focus on ECPs* to infuse GNH values and principles in the schools presents a most relevant practical implication of this study. In most cases, the ECPs that were organised in the four case study schools did not cater for every single student in the school due to lack of resources and more importantly because of its competitive nature. Most ECPs were competitive where only good and capable students were selected as well as limited in terms of number of students who could participate. Such practices were contrary to the nature of GNH philosophy. Every single student in a school deserves to be provided with opportunities to participate in various ECPs and learn GNH values and principles that are likely to contribute to the achievement of the larger national goal of GNH. ECPs should therefore be broadened to include all students as was observed in the ZPS case study;

Fifth, case study schools, although there are some aspects of GNH Education mentioned, have not updated their *vision and mission statements* to align with the vision of GNH Education (see Chapter One, p. 5 for the vision of GNH Education). It is likely that many other schools in the nation have not done so. It is apparent that the introduction of GNH Education has given a new shape and meaning to the education system in Bhutan as indicated by its vision. The vision and mission statements reflect a sense of common purpose and it is a source of inspiration for its members (Hallinger & Heck, 2002). Therefore, it is important that schools review their vision and

mission to align with GNH Education so that the guiding philosophy is made relevant and evident;

Sixth, the task of promoting GNH values and principles does not just rest with teachers. It is important that *home and school values* are complementary. Therefore, bringing parents and schools closer is one of the most important issues that the Ministry of Education needs to address. It was encouraging to note the involvement of parents at GLSS and SLSS in implementing GNH Education in the form of briefing provided by the schools. Harmonising home and school values could take place in a reciprocal manner not just one way as initiated by these two case study schools. Schools could invite elders from the community to talk to students and teachers and take their students for community visits to learn from each other. Although GNH Education is targeted at the education system in the country, it is important that all Bhutanese are aware of and keep up with the spirit of the national goal of GNH. Otherwise the consequences would be detrimental; and

Seventh, *principal leadership differences* observed in this study is perhaps one of the important practical implications of the study. Principals need to understand that their leadership in the school plays a very important role in implementing educational reform efforts such as the GNH Education (Fullan, 1996). While principals at the ‘efficacious’ schools proved to be proactive in supporting and leading GNH Education with particular focus on ECPs, the two principals at the ‘inefficacious’ schools were much less so. Furthermore, principals of all the four case study schools provided less focus related to leading GNH infusion in the teaching lessons, although they were trained with various strategies at Paro workshop for the principals (except for the WHSS Principal) (MoE, 2010d). It is important that principals are proactive and act as a resource, a guide and a role model in leading such educational reforms. Without much effort from the principals, reforms such as GNH Education are likely to be a failure.

8.4.3 Policy implications

Overall, there is a gap between the expectation of the government and the quality of teacher preparation to implement GNH Education. Hence, nine policy related implications are drawn up that may be beneficial to all relevant stakeholders of GNH Education – the Department of School Education, which designs and implements educational policies; teacher education colleges, which prepare both pre-service and in-service teachers; the Curriculum Department, which is responsible for school curriculum; Education Monitoring and Support Services Division, which monitors

school activities; and the Bhutan Council for School Examinations and Assessment (BCSEA), which designs school and student assessment policies.

First, empirical evidence from this study showed that a week-long national level *professional development* on GNH Education for school principals facilitated by senior educators and international experts made positive impact on development of principal self-efficacy in relation to implementation of GNH Education in their schools even though it was a ‘one-shot’ workshop. On the other hand, a few hours or a day’s school based in-service programme for teachers facilitated by their principals have made little impact on teacher self-efficacy beliefs for GNH Education. As a result, vice-principals and teachers exhibited much weaker sense of efficacy beliefs for GNH Education compared to principals. This difference is an indication that such cascading model of professional development (train-the-trainers) is not particularly effective in implementing educational reform such as GNH Education where the follow up is a single in-service event. The Ministry of Education needs to streamline the policy on teacher professional development, so that every teacher gets opportunity to attend quality workshops in terms of both depth and breadth of the content covered (see Kennedy, 2005 for different models of teacher professional development) and also focused on changing teacher beliefs and attitudes (Guskey, 2002). Such professional development support should be ongoing with opportunity to take risks. However, it is interesting to note that the Ministry of Education (MoE, 2011b) has developed a training manual (*GNH Education: A Training Manual*) to train teachers on how GNH can be infused in teaching lessons. Probably this could be the outcome of the feedback received by MoE on teachers’ inability to infuse GNH in teaching. Ideally such actions should have been taken before starting a nation-wide implementation of GNH Education. Now that the damage has been already done, it would mean additional effort in terms of time and resources to mend it;

Second, *Lack of support* for the teachers was one of the issues that emerged in this study that has policy implications. Educational innovations are likely to fail without continuous support as well as some form of pressure from the key stakeholders. Discussing the importance of right combination of both support and pressure in implementing educational reform, Fullan (1992, p. 25) said that, “pressure without support leads to resistance and alienation; support without pressure leads to drift or waste of resources.” Therefore, continuous monitoring and support from stakeholders need to be made available to address any difficulties that arise in the process. Now that internet connectivity is improving in Bhutan, perhaps an online platform to share opportunities and difficulties in implementing GNH Education would be a worthwhile investment;

Third, relevant to the previous point, *teacher workload* became evident as an issue that potentially affected the implementation of GNH Education related to infusion in teaching lessons. Teachers shoulder multi-tasking burdens of teaching five and half days a week and also having to organise and supervise ECPs. These factors appeared to restrict them from having time to reflect and creatively infuse GNH values in the relevant topics (not all topics) of the subjects that they teach. Thus, if workload is made reasonable, with some good orientation and continuous support, teachers will find GNH Education interesting and achievable in the long term;

Fourth, findings from the current study suggested that schools were providing too much focus on the immediate *student academic performance*. There is both research (Sherab, 2001) and anecdotal evidence (e.g., values education introduced in 1999) in the Bhutanese context to show that the change agents at the school level sideline any educational reforms that are not directly related to the academic subjects because it is not a part of the both school level and external assessment programmes. Therefore, the long history of the culture of focus upon student academic results means that achieving GNH Education will be problematic unless this emphasis is changed. It is important that the key stakeholders reconsider their approach to GNH Education.

If GNH values are important, these values could be translated into examination questions, so that both teachers and students provide importance of learning and developing particular values in them. This is what has been termed “examination-led” curriculum change. Further, ongoing assessment at the school could be strengthened so that teachers have the liberty to discuss GNH values through assignments, project work and class presentations. More importantly it is time now for Bhutanese education system to reflect on its rigorous examination system that only promotes an academic focus above all aspects of education. While there is no empirical evidence, there is adequate anecdotal evidence to suggest that the students who do well academically during their school life do not necessarily do well in their adult life, and vice versa. Doing well in the examinations and obtaining higher scores is not all one’s life is about. For a child as young as five or six years of age having to experience a rigorous examination system is likely to cause more harm than good;

Fifth, this study identified various components of principal and teacher efficacy beliefs for GNH Education. GNH Education stakeholders including principals need to concentrate on the design of *efficacy-building interventions* particularly related to those components with which principals and teachers were not comfortable. For instance, both the principal and teacher participants showed relatively lower self-efficacy beliefs to design and teach GNH values lessons indicating that they were not able to effectively infuse GNH values into their academic subjects. So principals and teachers need to be exposed to various ways and means to bring in relevant

GNH values and principles into their academic lessons, thereby enriching the lesson content. Such a process should include and encourage critical reflection that could lead to transformation of assumptions, beliefs and actions about GNH values and principles. Unless principals and teachers experience reconfiguration of fundamental assumptions and approaches that guide their actions, not much of GNH Education is likely to take place in the schools. While this finding has immediate implications on the MoE to take care of the in-service principals and teachers, it has much stronger implications for the teacher education colleges in preparing their pre-service teachers. Furthermore, inclusion of efficacy building approaches in the pre-service teacher education modules would benefit other subject areas;

Sixth, another significant policy implication of this study concerns the teacher education colleges in terms of pre-service teacher preparation on the use of *classroom language and feedback*. Teacher education staff needs to model such practices and further invest time and resources on the effective use of teachers' classroom language and feedback. The hidden curriculum, especially as found in the teacher-student classroom interactions, can be a positive force for the development of GNH Education if teachers are made aware of its impact. Teacher capacity building on GNH is the single most important factor for the MoE and the university to consider if GNH Education is to be implemented successfully in the long run;

Seventh, many *positive practices related to ECPs* especially from the two 'efficacious' case study schools were revealed that are worth sharing with other schools in the country. For instance, 'quality class time' and 'quality school time' that ZPS implemented to provide opportunity for their students to brainstorm and come up with issues or concerns that bothered them were remarkable. There was evidence of these primary school students employing reflective and critical approaches to discuss real life issues and concerns such as garbage and designing strategies to address the issue at hand. At SLSS student initiated campus cleaning activities, without having teachers to supervise the students working, were implemented. Usually students would not do much if they were asked to do such physical work without teacher supervision (for other practices see Chapter 7, Within-Case Analysis, p. 142). Such practices are worth emulating by other schools as it promotes values such as responsibility, honesty, trust, creativity, eco-consciousness, unity, cooperation and integrity;

Eight, findings suggest that the MoE adopt immediate measures to *raise the collective efficacy* of schools. Slightly more than 60 percent of the schools ($n = 155$) that participated in this study showed *moderately lower and much lower collective efficacy beliefs* for GNH Education. Given the efficacy theory, it is likely that many of these 60 percent of the schools would encounter problems to promote values such as kindness, respectful, responsibility, caring, honesty

and carefulness through principal and teacher role modelling. However, if the other issues identified in this study are taken up by the stakeholders seriously, it is likely that school collective efficacy for GNH Education will elevate; and

Ninth, there are likely to be teachers and schools who tried to promote GNH values and principles through implementation of *Buddhist practices* such as saying prayers before commencing the teaching and also maintaining Buddhist altars in the school and classrooms. Such practices have the potential to marginalise and mark the absence of respect for others. Like other nations, Bhutan is increasingly becoming a multi-cultural society. Teaching of values in such multi-cultural society has always been a contested subject and the question that, ‘whose values are they?’ is often raised by critics. Such practices have the potential to create dissonance thereby defeating the whole purpose of GNH Education and also create complications in the system. Therefore, it is important for teachers and schools to ensure that everyone in the class is Buddhist for such a practice to be implemented. If there are non-Buddhists, maybe they could be allowed to say prayers in their own way and not follow the group. However, this is a policy issue that appropriate authorities must address. Perhaps if there were a significant number of students in the class with two or three religious backgrounds, it would be a good idea to at least listen or watch how other groups say their prayers and learn from each other. Opportunities for such mutual learning experiences would help to understand similarities of different religions instead of focussing on their differences – the true essence of GNH philosophy. It would be also important to examine how schools in other multicultural societies handle such issues.

8.4.4 Methodological implications

Earlier research (e.g., Mayer, 1999) on measuring instructional practice especially in the context of educational reforms has shown contradictions between findings from classroom observations and surveys. This study also revealed some considerable incongruence between survey findings, participant perceptions shared during interviews and their actual practices. Such findings have implications on the trustworthiness of the survey or even interview data. Therefore, it is important that educational survey studies are complemented by interviews and observations. This study adopted a sequential mixed method approach beginning with a nation-wide survey followed by case studies of four schools. The second phase qualitative case studies, with data obtained mainly through semi-structured interviews and teaching observations, were useful to confirm, refute or provide nuances of understanding for some of the survey findings. For instance, results from the first phase identified ‘efficacious’ and ‘inefficacious’ schools with respect to collective efficacy

beliefs and the subsequent case studies helped to contextualise why this was the case. Similarly survey data showed that teachers teaching Dzongkha, the national language of Bhutan, were ‘efficacious’ compared to teachers teaching other subjects. Case study data provided insights into the nature of such correlation between Dzongkha teachers and efficacy beliefs for GNH Education. For instance, the Dzongkha teacher at SLSS was found to be ‘efficacious’ in infusing GNH values and principles in his teaching lessons. As discussed in the theoretical background section in Chapter Two, efficacy researches have been largely dominated by quantitative survey studies. This study therefore contributes to further understanding of self- and collective efficacy beliefs and their relationships to other key facets of GNH Education by adopting a multi-paradigm approach in the context of educational reform movement.

8.5 Limitations and delimitations of the study

There are limitations inherent in all research and setting them out critically and transparently helps the readers to judge the study in terms of its scope and applicability as well as provide avenues for future research (Cooksey & McDonald, 2011). There were several limitations as well as delimitations that threatened the quality of this study. Therefore, the interpretation of findings from this study should be made cautiously with the following limitations and delimitations in mind.

First, this study had *delimited potential stakeholders* such as parents, students, personnel from teacher education, the school curriculum department, and education monitoring division due to lack of time and funds. Inclusion of these key stakeholders in the study would have provided a much wider perspective and understanding of the implementation process of GNH Education in the Bhutanese context. For instance, principals and teachers considered home environment crucial in the journey towards promotion of GNH values and principles in students and that parents should also take equal responsibilities. Eliciting parental perceptions would have provided further insights into the matter. Likewise this study suggested that GNH Education has made some positive impact on students such as reduction of disciplinary problems, promotion of caring attitude, eco-consciousness and critical thinking. It would have been useful if such claims were substantiated through student views;

Second, again due to time and funding constraints, this study also did not include *remote and difficult schools* (MoE, 2010b) especially for the thirteen districts where the researcher distributed and collected questionnaires. Most remote and difficult schools to reach in Bhutan were located anywhere between three to five days walking distance from any trafficable road, which was beyond the scope of this research. Although the present category of urban, semi-urban

and rural did not show any statistically significant differences, inclusion of remote and difficult schools would have enriched the study with that perspective;

Third, one important limitation of this study was the *depth of case studies*. On an average one week was spent in each case study site. This time frame did not allow for more teaching observations as well as a more comprehensive observation of the school environment such as school meetings and conduct of various ECPs. Ideally such case studies would largely benefit from expending an extended period of time at the site with extensive fieldwork. Furthermore, seeking views from other stakeholders would have provided additional information for in-depth understanding of each case study school;

Fourth, another limitation related to the case studies is the identification of *teacher participants for the semi-structured interviews and their teaching observations*. Ideally it would have been more appropriate if teacher participants were selected based on their self-efficacy scores, that is, selecting teacher participants with high self-efficacy from the two ‘efficacious’ case study schools and low self-efficacy teacher participants from the two ‘inefficacious’ case study schools to fully understand the intricacies of ‘efficacious’ and ‘inefficacious’ schools. However, for ethical reasons it was decided not to adopt any strategy that would identify survey respondents. Moreover employing strategies that would potentially identify respondents would have affected both the quality of response and the response rate, as teachers would have become less likely to participate. Since the teacher participants were selected on the basis of their willingness and availability, it would be possible that the self-efficacy of teacher participants at the two ‘efficacious’ sample schools would have had low self-efficacy and the teacher participants at the two ‘inefficacious’ sample schools would have had high self-efficacy for GNH Education, hence findings from the case studies may not have truly reflected the level of school collective efficacy beliefs;

The fifth limitation is related to the *implementation timeframe*. As it was only the second year of GNH Education implementation, it would have been difficult for the principals and teachers to see some visible signs of learning or changing behaviour in students or themselves. A minimum of two to three years after the implementation would have provided more valid findings. Nevertheless, participants in this study, especially the principals, were aware of the issues since they were involved in the initiation stage (Fullan & Stiegelbauer, 1991); and

Finally, principals in the Bhutanese schools were often required to teach a couple of hours in a week that would have provided opportunities for *teaching observation*. However, principals from the four case study schools were not observed teaching lessons. It would have been much better if the principal participants were also observed. For instance, survey data showed that

principals were efficacious in terms of their self-efficacy to design and teach GNH values lessons. Due to lack of qualitative data on principals' teaching, this survey finding could not be confirmed.

8.6 Possible directions for future research

The implications and limitations of the current study presented in the preceding sections signpost several directions for further research. Every piece of research work finishes off with more ideas for future research.

First, for such sequential mixed methods research in the future, it would be useful to first analyse the entire data from phase one and use the findings to inform and direct the second phase study. For instance, findings from the phase one revealed that Bhutanese principals and teachers generally believed that human values and happiness skills are teachable but on the other hand, their self-efficacy to design and teach GNH values and principles were much lower. Similarly findings from phase one showed that expatriate teachers were much more efficacious than the regular Bhutanese teachers. Awareness of such findings before the commencement of the second phase study would have provided opportunity for more focused research during the subsequent phase. For instance, inclusion of principals in the teaching observations and a few expatriate teachers as case study participants would have provided more focus during the case studies;

Second, the finding from this study indicated that the *impact of GNH Education* can be long-term and that it is future oriented, although there was some evidence of immediate impact made within one year of its implementation. However, to ascertain the long-term impact of GNH Education, this study should be replicated after three to four years incorporating a full-scale sequential mixed methods approach;

Third, understanding the implementation process of any educational reform would remain unfulfilled without *inclusion of all relevant stakeholders* in the research process. Therefore, to gain wider perspective, future research should include potential stakeholders of GNH Education such as students, parents (who also share the responsibility of teaching children values), Ministry of Education (responsible for formulation of policies) and teacher education colleges (responsible for preparing both pre-service and in-service teachers). These key stakeholders play their own role in implementing GNH Education and without a clear understanding of their perspectives, gaining an understanding of the implementation process of GNH Education would remain unfulfilled. In the future, any study on the implementation process of educational reform efforts must include all stakeholders to make the study comprehensive. There is also potential for some researchers to take different aspects of the GNH Education for future research;

Fourth, this study was able to determine the level of PSEB, TSEB and SCEB, perceptions of importance, support systems and actions and impacts of GNH Education. Teachers were found to have low self-efficacy compared to the principals and there were maximum number of schools from relatively lower collective efficacy clusters. Future research should be conducted to determine if there is any change in principal and teacher self-efficacy and school collective efficacy for GNH Education at these schools. Further there is also a possibility of carrying out action research through implementation of intervention strategies at some of the selected lower collective efficacy schools to achieve improvement in their self- and collective efficacy;

Fifth, this study revealed that GNH values and principles in the Bhutanese schools were mainly infused through ECPs. While the perception is that ECPs play an important role in promoting values in students, there is no empirical evidence in the Bhutanese context to show the actual impact and whether it benefits all students or not. Research in other countries such as the United States has shown that after school extra-curricular activities do benefit students (Valentine, Nye, & Lindsay, 1999). Therefore, future research into the impact of ECPs would provide insights as to the values that are actually promoted in ECPs. More importantly, future research could also concentrate on whether participation in ECPs has any association with academic performance of students. Findings from such studies could be used to streamline organisation and also student participation in ECPs;

Sixth, for future, a large-scale evaluative study is needed to ascertain the actual impact of GNH Education. Such study could be followed by small-scale qualitative case studies in schools with longitudinal designs where exemplary GNH Education practices have produced desired outcomes to determine the salient features of such programmes;

Seventh, as proposed in the revised conceptual framework (see Figure 8.2, p. 249) the link between efficacy beliefs, transformative learning and educational reform could not be clearly explained in this study although there is some evidence that supported the existence of linkages between these three interrelated educational theories. Therefore, future research with longitudinal designs or extensive case studies would provide more insights into the nature of this theoretical linkage developed for the purposes of this study; and

Eighth, teachers/principals teaching Humanities subjects were found to have lower self-efficacy related to their ability to influence values development in students compared to their counterparts teaching Science subjects. Although promotion of values in students would be more relevant to Humanities subjects, it cannot be certain why teachers/principals teaching Science subjects showed higher self-efficacy in this study. This finding provides avenue for more research in the future to explore the cause-effect relationship.

Ninth, evidence from this study showed that teachers and principals generally found it easy to infuse GNH values through ECPs rather than through CPs, hence enhancing their self-efficacy beliefs to *influence values development in students*. Among others things, this finding could be mainly attributed to the Bhutanese culture of respect for one's teachers and elders and to the discipline-oriented school system. It is also speculated that high efficacy to influence values development in students through ECPs could be also due to their enactive mastery experiences gained from implementing the concept of 'wholesome education' and also values education during the pre-GNH Education schooling system. Exploring these relationships more thoroughly could be the focus of future research.

Tenth, teachers categorised as teaching in urban areas, long term experienced, senior, day school, expatriate and non-Bhutanese nationals showed relatively stronger perceptions of support provided by SBIP on GNH Education. It is not clear why this appears to be the case and more research is needed into this issue.

Finally, this was the first research in the Bhutanese school system on efficacy beliefs of principals and teachers. As efficacy beliefs of teachers and school leaders play an important role and have a direct link to student performance and achievement, Bhutanese educators and researchers do need to perform such research in their own fields of interest. Teacher education colleges could also conduct action research to increase the efficacy levels of both pre-service and in-service teachers using Bandura's four sources of efficacy information (mastery experience, verbal persuasion, vicarious experience and physiological arousal) in various subject areas. Perhaps, 'autonomy' as the fifth source of efficacy information could also be investigated.

8.7 Chapter summary

This Chapter (Eight) presented overall conclusions based on the integration of the key findings from both phases of the study. The entire results of this study were encapsulated in a total of twenty-four major findings. Based on these key findings a review of the conceptual framework (provided in Chapter Two) was carried out (see Fig. 8.2). This chapter also discussed theoretical, methodological, policy and practical implications, which relevant stakeholders could use to inform strategies for enhancing the chances of successfully implementing GNH Education. The final sections of this chapter also presented detailed discussions of limitations and delimitations of the study and possible directions for future research.

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APPENDICES

Appendix 1.1 Characteristics of a Gross National Happiness School: Indicators

I. Leadership and Management Practices

SI Indicators

1. The school has a written management policy which is understood and shared by all Principal, teachers, learners and the community
2. The policy covers all aspects of the school management system in line with education policies.
3. The school consciously observes teachers and students code of conduct.
4. The school conducts morning assemblies meaningfully and purposefully.
5. The school has a functioning SMB as per the management guidelines.
6. The activities are held in accordance with the School and Dzongkhag Calendar.
7. The school resources (human, financial & material) are mobilized, used and monitored effectively.
8. The student leaders are clear about their roles and responsibilities in school management.
9. The school management involves parents in school activities.
10. The principal involves teachers, students and the community in collaborative planning and decision making.
11. The school ensures realistic and timely requisition and follows up on the arrival of school resources.
12. The school management is proactive in seeking support from relevant agencies and has evidences of such support for school improvement.
13. The school has professional development plan and program in place.
14. The school has a regular schedule for in-school teacher meeting, including class, subject, management and committee meetings.

II. Green Schools

A. Physical Ambience

1. The classroom is clean, safe and conducive for interactive teaching/ learning activities.
2. The school has adequate and clean toilets separately for girls and boys.
3. The school has safe and sufficient drinking water with functioning taps.
4. The school is litter free with proper waste management practices.
5. The school adopts and advocates No Plastic policy in school and community.
6. The school has well maintained flower gardens, hedges and plants in all relevant places.
7. The school promotes organic farming and local products through school agriculture programmes.
8. The school encourages healthy food habits e.g. nutrition guide displayed on the walls, avoid food waste, junk food.
9. The school practices a strong conservation ethics (e.g. saving electricity, water, paper use).
10. The school promotes and demonstrates knowledge on eco-literacy like climate change, resource conservation, impact of pollution and consumerism.
11. The school uses outdoors for enriching teaching and learning (field trips, local wisdom).
12. The school adopts water sources, streams, sections of rivers and forest and provides sustained care, cleanliness and preservation.
13. The school harvests rain water
14. The school practices reduce, reuse, recycle and refuse.
15. The school environment is free of graffiti.
16. The school ensures timely maintenance of school buildings and other infrastructure to provide safe environment.
17. The school has recreational places.
18. The students are clean, tidy and healthy

B. Psycho-social Ambience

1. The school has safe, caring and supportive environment (e.g. absence of abuses, bullies, corporal punishment, humiliation, and harassment).
2. The Principal and staff talk with learners outside the class and school.
3. The school promotes mind training and mindfulness practices as a normal part of school life.
4. The school has remedial programmes and services to help all students succeed.
5. The school practices a variety of positive disciplining techniques.
6. The school conducts counseling programs and services with protocols for referrals.
7. The school has life skills educations provided to students.
8. The school practices inclusiveness in all aspects.
9. Each student has a proper health record maintained by the class teacher/warden/ matron/PE teacher.
10. All children feel cared for and supported.
11. Teachers and students feel they are succeeding.

III. Curriculum: Strengthening Teaching and Classroom Management Practices

1. Teacher has a complete set of curriculum materials for his/her teaching subjects (workbook, teachers' manual, syllabus)
2. Teacher has the full understanding of the syllabus of his/ her teaching subjects.
3. Every teacher has daily lesson plans for all teaching subjects.
4. Teachers inculcate in students the value of time through punctuality and effective use of the available instructional time in class.
5. Relevant teaching/ learning materials (aids) prepared by both teachers and learners are neatly displayed in the classrooms.
6. The text books, syllabi, stationery items and other required learning materials are available with the students.
7. Teachers inspire positive learning attitudes and behaviours in the learners by modeling good examples.
8. Teachers translate the knowledge of their subjects into effective classroom teaching by relating to GNH values and principles without compromising on the quality of the content.
9. Teachers relate the lessons to the prior knowledge and experiences of learners for desired results.
10. Teachers pace their teaching to the different abilities and challenge their learners with relevant additional work.
11. Various study skills are integrated in the daily teaching-learning processes.
12. Teachers use a variety of learner-centered teaching strategies (role play, dramatization, group works, classroom debates, question-answer techniques, field trips, project works, etc) appropriate to each subject.
13. Teachers use inclusive practices to address the special needs of all learners.
14. The learners demonstrate the ownership of learning through active participation and expression of enjoyment of the lessons.
15. Appropriate class-works are assigned, monitored and checked using appropriate criteria and constructive feedback.
16. Teachers use a variety of relevant questioning techniques to test the understanding of the learners.
17. Home works are assigned in line with the school homework policy and with clear and appropriate instructions.
18. Teachers keep themselves up to date with the current developments in their own field and use them in their teaching.
19. Reading programmes are actively carried out.

IV. Continuous and Holistic Students' Assessment (Formative and Summative)

1. Teachers provide regular and prompt feedback on achievements and responses.
2. Teachers use assessments to review teaching plans.
3. Teachers maintain assessment records of learners.
4. Question papers, marking schemes and related criteria are developed together among teachers.
5. Questions are set as per the test specifications.

6. Question banks are maintained.
7. Test/examination results are used to enhance teaching and learning.
8. Teachers and students know why they are assessing or being assessed.
9. Promotion is fair and based on reliable and valid assessment.
10. Tests and examinations objectively assess students learning.
11. The integrity of tests and examinations are maintained in all respects.
12. Fair and reliable on-going assessment of students is evident.
13. Teachers set high expectations of themselves and their students.

V. Co-curricular Dimension: Co-curricular activities for wholesome development

1. The school policy document contains well defined policies on co-curricular activities.
2. The school ensures that every child participates in co-curricular activities while building excellence.
3. The school has a variety of clubs that meaningfully engage all students to promote their wholesome development.
4. Scouting program effectively delivers life skills and citizenship building education (*Self disciplining, character building, integrity, spirit of service.....*).
5. The advancement scheme in scouting for both the scouts and scout masters is followed as per the scouting guidelines.
6. The students have broader knowledge and skills on health and physical education.
7. The school takes initiatives to promote local and traditional games and sports.
8. Students are aware of their skills and aptitude and various career options.
9. Students are equipped with information on higher studies and training.
10. The school has designated place for career education and counseling.
11. The school promotes aesthetic sensibilities of children through various artistic and cultural expressions.
12. All the school activities promote civic sense, trust, tolerance, harmony, friendship.

VI. School-Community Relationship

1. The school surveys and ensures full enrollment of children in the catchment area.
2. The school promotes local festivals through projects work, research and interview).
3. The school builds awareness on health and environment issues in the community.
4. The school carries out viable and relevant projects in partnership with community.
5. The school has a functioning parents' support group to take a lead role in the parenting education programmes.
6. The school promotes alcohol free and drug free life style in partnership with the community.
7. The school supports life skills related activities for out of school youth in their community.
8. The community feels that their children are getting properly educated to face their future.
9. The community and their children have confidence in the school leadership and teachers to guide them.
10. Parents' contributions are acknowledged in school newsletters, magazines and during Parents Teachers Meeting.

VII. Qualities of a Gross National Happiness School Graduate (Indicators)

Every level of school (community primary, lower secondary, middle secondary and higher secondary) and, every class can set up targets to acquire the qualities, deliberately and consciously for their students. When they graduate from their schools, the students shall have the following qualities:

1. Individually

- Positive thinking, mindful, calm
- Has high self-esteem and civic sense
- Manages time efficiently,
- Productive/skillful
- Offers help to others
- Loyal and faithful, patient and tolerant, honest and dedicated
- Self-aware of strengths, challenges, opportunities
- Sociable, confident, creative, grateful, humble, knowledgeable
- Self contended, takes initiatives
- Be a source of happiness
- Practices and promotes *Tha Daam Tshe and Ley Jum Dre*
- Non-materialistic – can differentiate between necessity and luxury
- Observant and open to ideas
- Analytical, creative, reflective, resourceful
- Has good communication skills
- Demonstrates dignity of labour
- Adapts to changes
- Takes responsibility towards self, family, community and the country
- Self introspective – spiritual
- Preserves and promotes culture and tradition
- Conscious about our nature of interdependence and impermanence
- Practices sustainable-based actions.

2. As a Family

- Love and care for friends, family and environment
- Understands and helps others (empathy, compassionate, kind)
- Can work in a team
- Collaborative and supportive

3. At Workplace

- Values and promotes integrity and commitment
- Accountable/ responsible
- Professional/ ethical
- Dedicated and hard-working/ industrious
- Shows a high sense of team spirit and cooperation
- Willingness to lead and initiate
- Ready to learn throughout life
- Maintains interpersonal relationship
- Learned and Intelligent and
- Skilful and dexterous
- Is punctual and time conscious
- Demonstrates patience and tolerance, adjusts to pressure and solves problems
- Accommodating and open to others views

4. In a Community

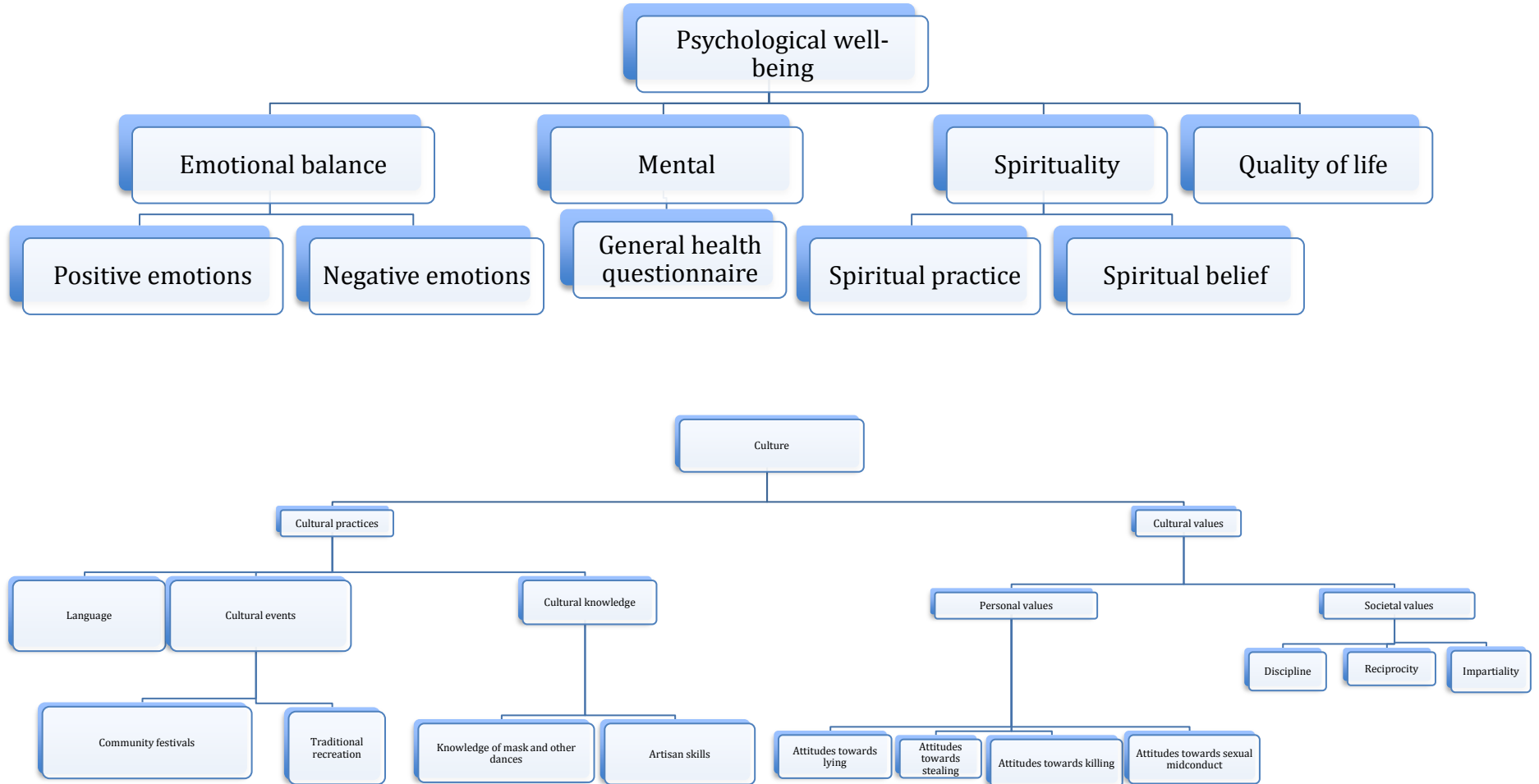
- Sociable, cooperative and caring
- Concerned about the environment
- Participates in activities and volunteers for good causes
- Has civic sense and belongingness
- Culturally sensitive, farsighted and responsive
- Demonstrates leadership skills
- Spiritual
- Loyal to the *Tsa-wa-sum*

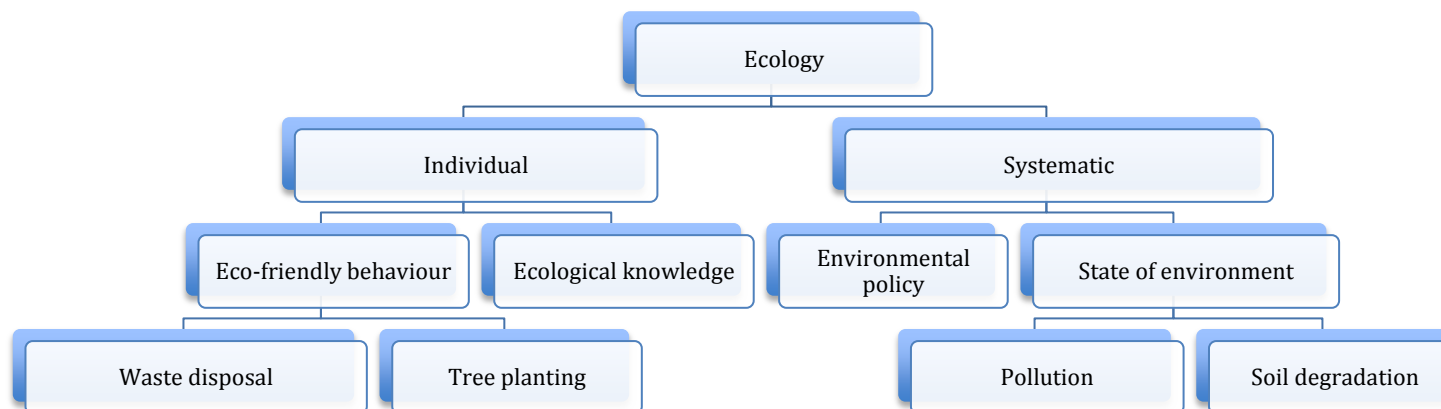
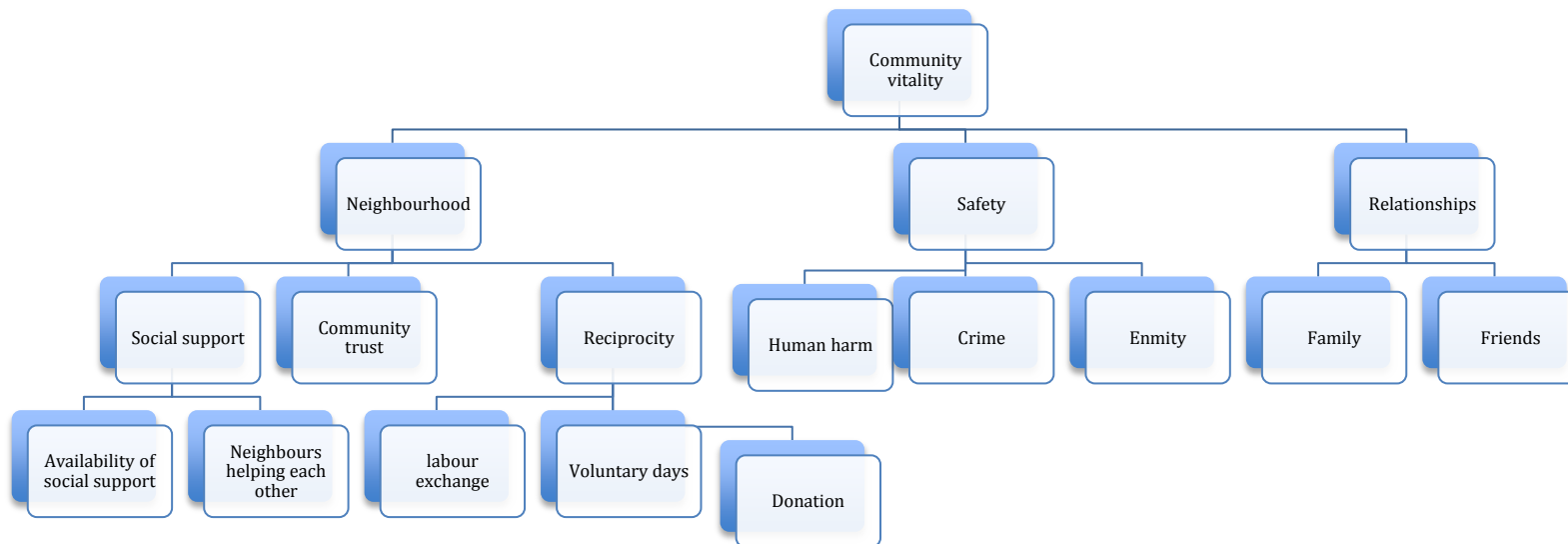
- Shows gratitude
- Dedicated and completes any given job well
- Patriotic
- Promotes equity & justice
- Creates awareness for GNH Values

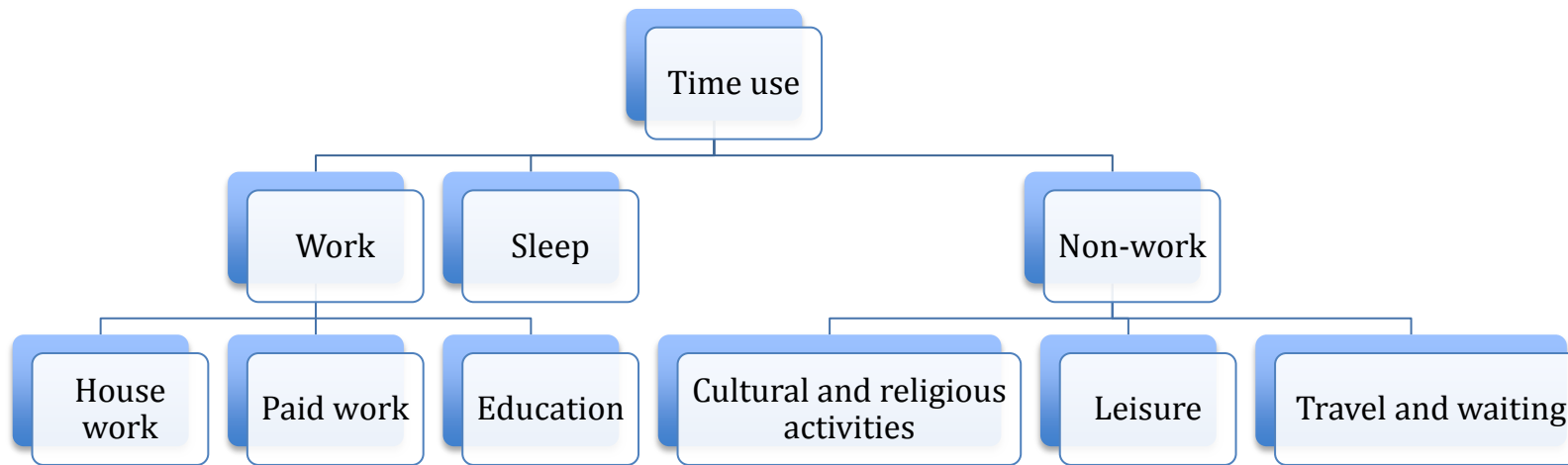
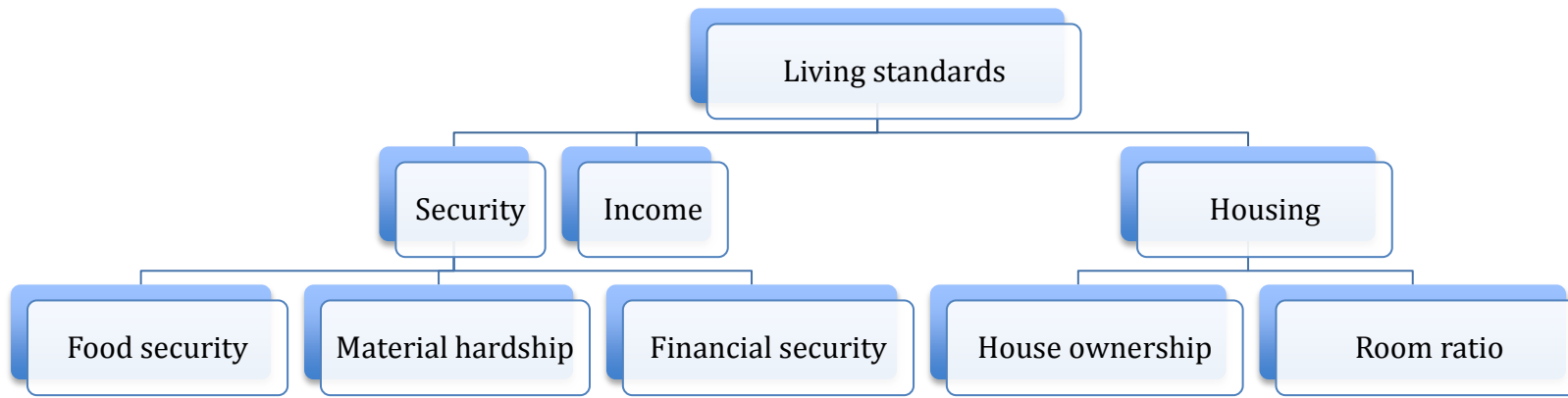
5. As a Global Citizen

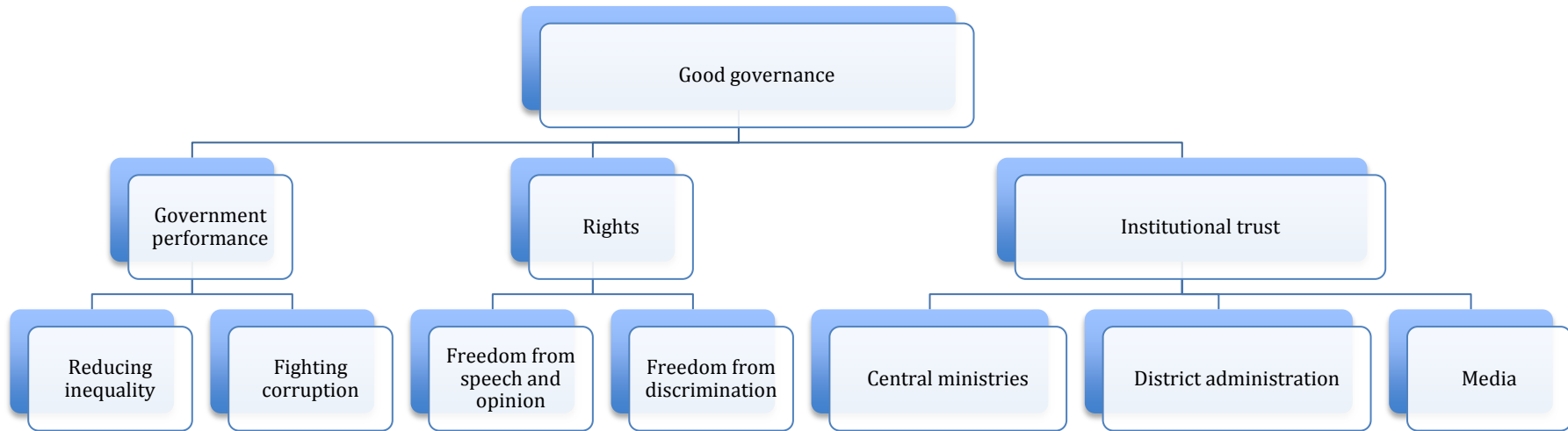
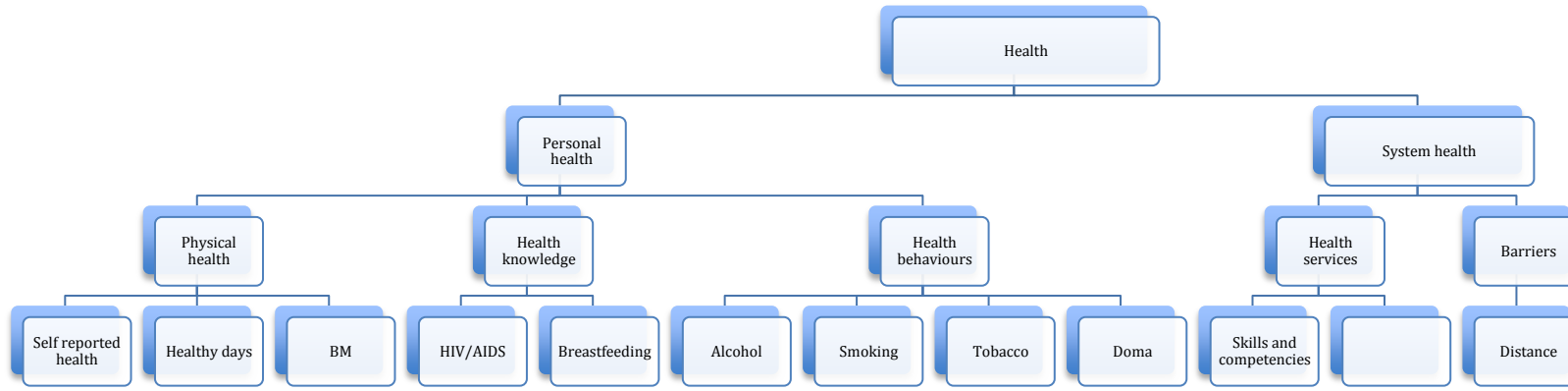
- Sensitive to cultural diversity
- Appreciates interconnectedness
- Concerned about the world as a global village
- Upholds one's rights and respects others rights

Appendix 2.1 GNH domains and indicators

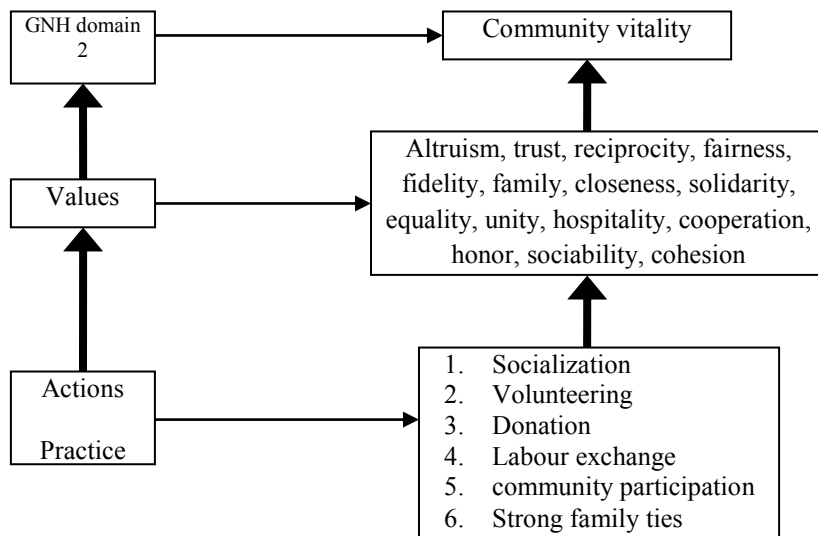
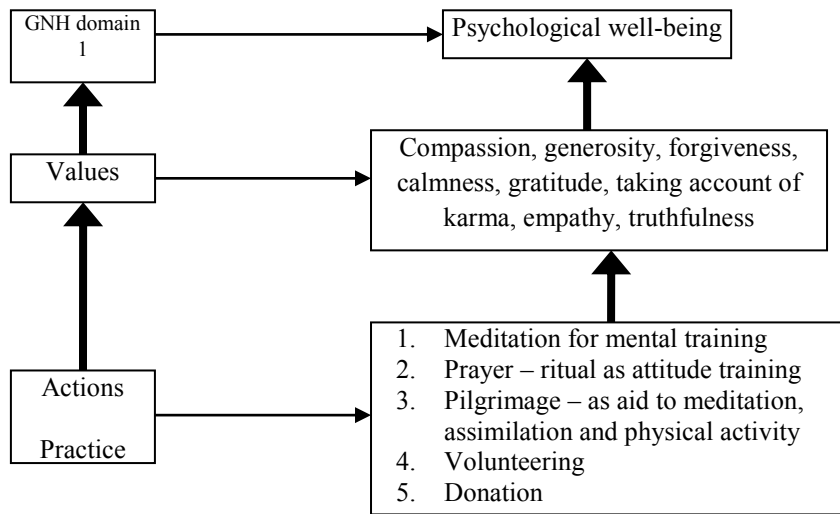


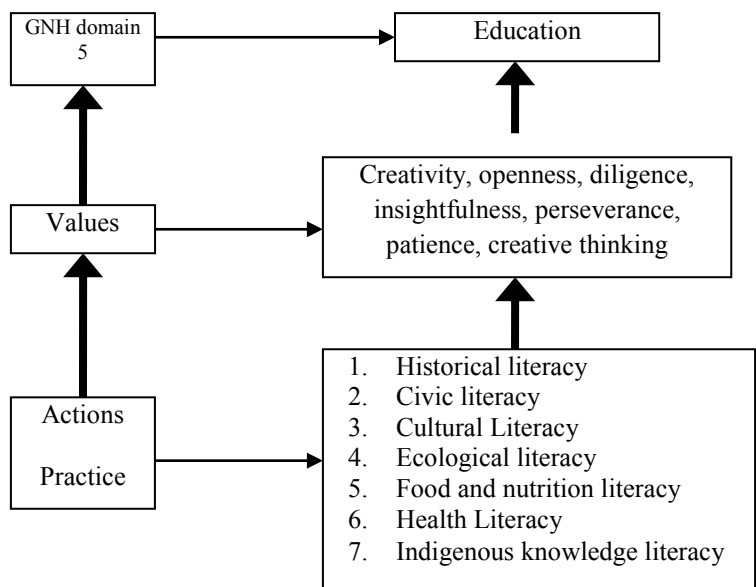
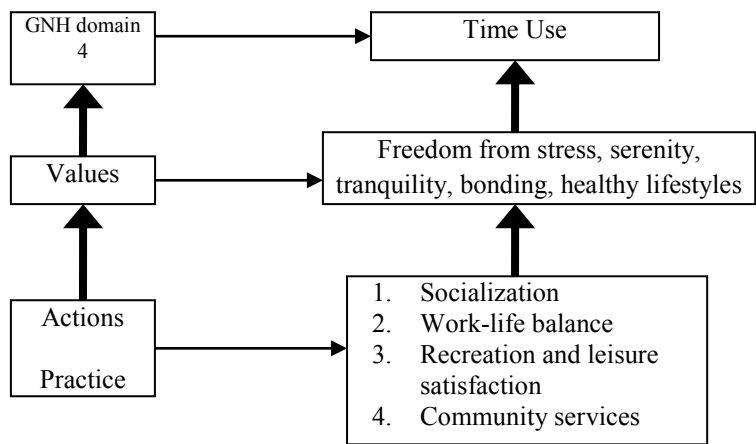
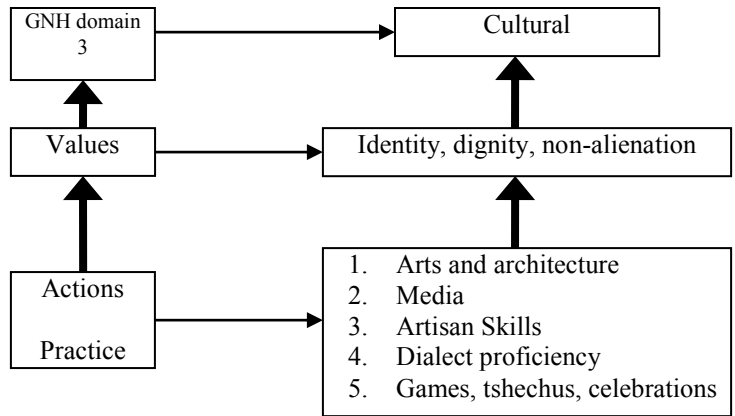


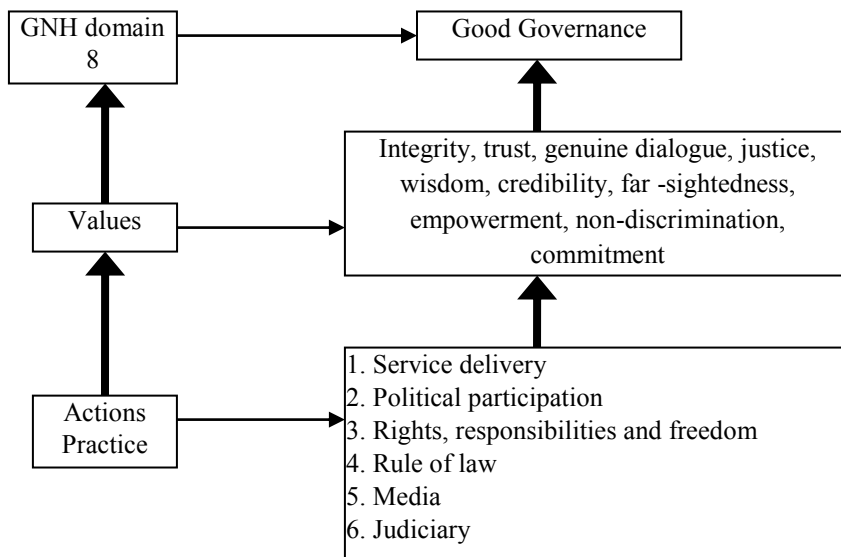
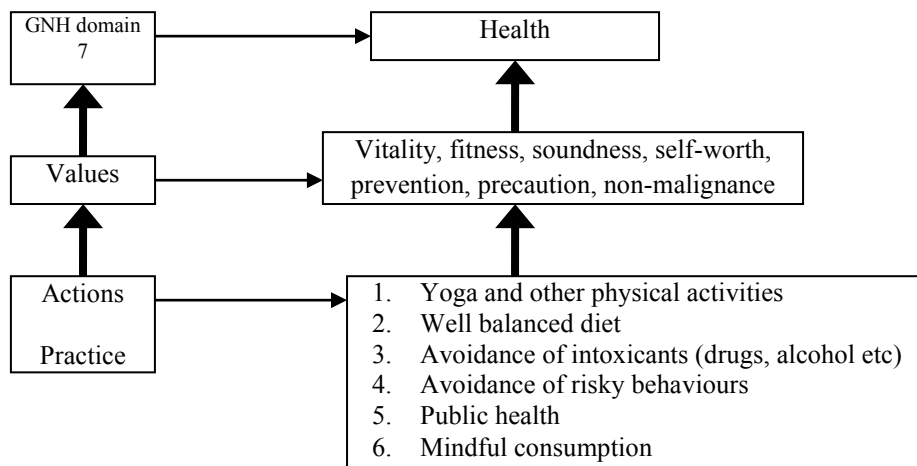
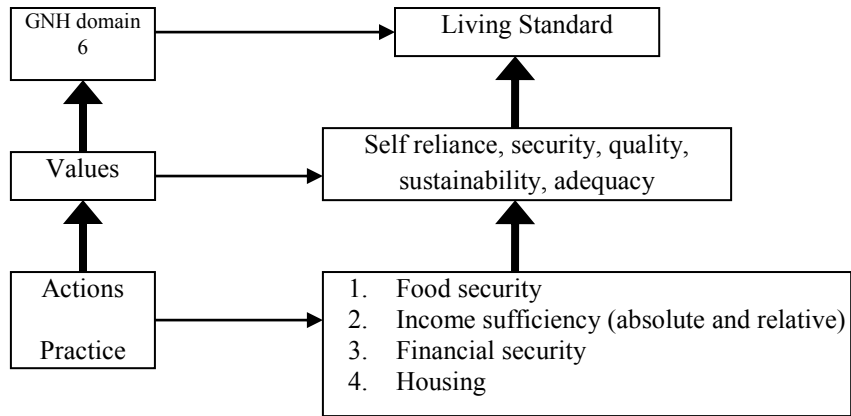


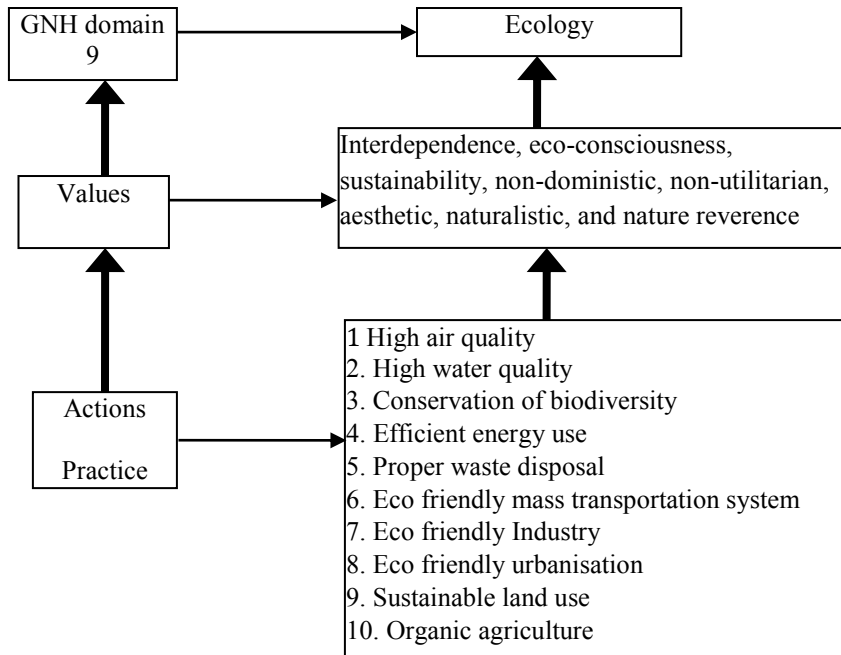


Appendix 2.2 GNH domains and values









Appendix 3.1 Principal questionnaire
Principal Efficacy Beliefs for GNH Education Survey Questionnaire

Dear Sir/Madam,

As a part of my PhD studies at the University of New England in Australia, I am undertaking research to understand the process of **GNH Education** that has been implemented in the Bhutanese schools recently. Your cooperation in this matter by completing the survey items will be highly appreciated. Your responses will remain **CONFIDENTIAL**.

I. Demographic Information [Please TICK the most appropriate choice].

- a. Gender: Male Female
- b. Currently you are a: Principal Vice/Assistant Principal
- c. Principal-ship experience: Less than 5 Years
 6 -10 Years
 11 -15 Years
 16 – 20 Years
 21 and above
- d. Highest qualification: PTC/ZTC/Diploma
 Bachelor
 Master
 PhD
 Any others (please specify).....
- e. Age: Less than 25 Years
 26 – 30 Years
 31 – 35 Years
 36 – 40 Years
 41 and above
- f. Type of school Day school
 Boarding school
- g. Number of teachers in 1-5
 your school 6-10
 11-15
 16 and above
- h. Number of students in 1-50
 your school 51-100
 101-200
 201-300

- 301 and above
- i. Presently you are teaching class/es: (tick all that apply) PP – 6
 7 – 12
- j. Length of time in your current school: 1 – 2 Years
 3 – 5 Years
 6 – 10 Years
 11 – 15 Years
 16 Years and above
- k. Religion: Buddhist
 Hindu
 Others (Please specify)
- l. Teaching subject/s (tick all that apply):
- | | |
|---|---|
| <input type="checkbox"/> English | <input type="checkbox"/> Mathematics |
| <input type="checkbox"/> Dzongkha | <input type="checkbox"/> EVS |
| <input type="checkbox"/> Social Studies | <input type="checkbox"/> Health & Physical Education |
| <input type="checkbox"/> Science | <input type="checkbox"/> History |
| <input type="checkbox"/> Geography | <input type="checkbox"/> Economics |
| <input type="checkbox"/> IT | <input type="checkbox"/> Biology |
| <input type="checkbox"/> Physics | <input type="checkbox"/> Chemistry |
| <input type="checkbox"/> Commerce | <input type="checkbox"/> Any others (please specify)..... |

II. Principal Efficacy Beliefs for GNH Education Survey Items

Instructions: A number of items about **GNH Education** in the schools are presented below. Please respond to each item by considering the combination of your beliefs in your **current ability, importance, support system, actions and impacts of GNH Education** in your school as a principal or vice/assistant principal. The purpose is to gather information regarding the actual **beliefs and attitudes of principals** concerning GNH education in terms of (1) self-efficacy beliefs, (2) school collective-efficacy beliefs, (3) GNH Education importance, (4) support for GNH Education and (5) actions and impacts of GNH Education.

There are no correct or incorrect answers. Your responses will remain **CONFIDENTIAL**. Please, feel free to share your frank opinions by indicating the degree to which you agree or disagree with each statement by **CIRCLING** the appropriate number or **NA** for **Not Applicable**.

SI #	ITEMS	Levels of your agreement or disagreement					
		Strongly Disagree (SD)	Disagree (D)	Neither Disagree nor Agree (NDA)	Agree (A)	Strongly Agree (SA)	Not Applicable (NA)
	Part A Items on Principal Self-Efficacy Beliefs						
1	I have been able to lead in coming up with a clear vision for implementation of GNH education in this school	1	2	3	4	5	NA
2	I can generate much interest amongst teachers for successful implementation of GNH education	1	2	3	4	5	NA
3	I have the knowledge needed to lead teachers in promoting GNH values	1	2	3	4	5	NA
4	I have a good understanding of the GNH concept	1	2	3	4	5	NA
5	I can motivate difficult teachers to support the school in successful implementation of GNH education	1	2	3	4	5	NA
6	I can effectively manage the resources (for example, materials, time and support) required for successful implementation of GNH education	1	2	3	4	5	NA
7	I am able to positively influence the values development of a child who has had little direction from parents (Milson & Mehlig, 2002)	1	2	3	4	5	NA
8	When I have a student who lies regularly. I can usually convince him/her to stop lying to me (Milson & Mehlig, 2002)	1	2	3	4	5	NA
9	I usually find it easy to encourage a student to understand that respect for others is important (Milson & Mehlig, 2002)	1	2	3	4	5	NA
10	I am able to influence the values of students because I am a good role model (Milson & Mehlig, 2002)	1	2	3	4	5	NA

11	I know what to do to help students become more kind to others (Milson & Mehlig, 2002)	1	2	3	4	5	NA
12	I know how to create GNH values lessons that hold my students' interest (Narvaez et al., 2008)	1	2	3	4	5	NA
13	I know how to adjust a GNH values lesson to the needs of my students (Narvaez et al., 2008)	1	2	3	4	5	NA
14	I can design student centred activities for GNH values classes	1	2	3	4	5	NA
15	I can easily integrate teaching of values into my academic lessons	1	2	3	4	5	NA
16	I am usually comfortable discussing issues of right and wrong with my students (Milson & Mehlig, 2002)	1	2	3	4	5	NA
17	I know how to help a student be more responsible	1	2	3	4	5	NA
18	I know how to use different strategies that might lead to positive changes in students' values (Milson & Mehlig, 2002)	1	2	3	4	5	NA
19	I am confident that I can teach my students to be honest (Milson & Mehlig, 2002)	1	2	3	4	5	NA
20	I can teach values lessons as effectively as I do other academic subjects	1	2	3	4	5	NA
21	When students have a disagreement, I know how to help them work it out (Narvaez et al., 2008)	1	2	3	4	5	NA
22	I can usually control disruptive behaviour in the school	1	2	3	4	5	NA
23	I do not require a separate training to teach values	1	2	3	4	5	NA
24	I do not require a separate training to lead GNH education in the school	1	2	3	4	5	NA

Please add any other comments you would like to make on part A

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	Part B Items on School Collective Efficacy Beliefs	S D	D	N D A	A	S A	NA
25	When a student shows greater respect for others, it is usually because this school has effectively modelled that value (Milson & Mehlig, 2002)	1	2	3	4	5	NA
26	When students show carefulness it is often because this school has encouraged the students to keep it up with tasks (Milson & Mehlig, 2002)	1	2	3	4	5	NA
27	If parents notice that their children are more responsible, it is likely that the school has promoted this value at school (Milson & Mehlig, 2002)	1	2	3	4	5	NA
28	If students are kind, it is often because schools have sufficiently modelled this value (Milson & Mehlig, 2002)	1	2	3	4	5	NA
29	When a student becomes kind-hearted, it is usually because schools have created caring school environments (Milson & Mehlig, 2002)	1	2	3	4	5	NA
30	Schools who encourage responsibility can influence students' level of responsibility outside of school (Milson & Mehlig, 2002)	1	2	3	4	5	NA
31	When a problematic student is improving, it is usually due to extra attention provided by the school	1	2	3	4	5	NA
32	Teachers in this school are role models when it comes to GNH values	1	2	3	4	5	NA
33	This school can usually make students follow their school rules effectively	1	2	3	4	5	NA
34	If responsibility is not encouraged in a child's home, school will be able to successfully promote this value at school (Milson & Mehlig, 2002)	1	2	3	4	5	NA
35	Schools which spend time encouraging students to be respectful of others will see changes in students' social interaction (Milson & Mehlig, 2002)	1	2	3	4	5	NA
36	Students will become more respectful if our school promoted respectfulness more (Milson & Mehlig, 2002)	1	2	3	4	5	NA
37	Teaching students what it means to be honest is likely to result in students who are more honest (Milson, 2003)	1	2	3	4	5	NA

38	Schools should not be blamed for students who are dishonest (Milson, 2003)	1	2	3	4	5	NA
39	Teachers in this school do not require a separate training to teach values	1	2	3	4	5	NA
Please add any other comments you would like to make on part B							

	Part C Items on Importance of GNH	S D	D	N D A	A	S A	NA
40	I think GNH education has been introduced at the right time	1	2	3	4	5	NA
41	The introduction of GNH education will encourage development of moral values in my students	1	2	3	4	5	NA
42	Schools should assume a central role in shaping the values of youth (Ampel, 2009)	1	2	3	4	5	NA
43	I do not consider GNH education to be an extra administrative burden for me	1	2	3	4	5	NA
44	I do not consider GNH education to be an extra teaching burden for me	1	2	3	4	5	NA
45	The GNH education has the potential to improve students' academic achievement (Ampel, 2009)	1	2	3	4	5	NA
46	The GNH education has the potential to solve many youth problems such as school dropout, drug abuse, teenage pregnancy, alcohol, depression, etc. (Ampel, 2009)	1	2	3	4	5	NA
47	The GNH education is as important as academic education (Ampel, 2009)	1	2	3	4	5	NA
48	Moral lessons learned in the social interactions of daily school life (such as sports, social work, cultural activities, etc.) should have more influence on students than the content taught through a formal curriculum (Ampel, 2009)	1	2	3	4	5	NA

49	The GNH education has the potential to support preservation of unique Bhutanese culture and tradition in the long run	1	2	3	4	5	NA
50	The GNH education has the potential to support preservation and sustainable use of environment in the long run	1	2	3	4	5	NA
51	The GNH education has the potential to support sustainable and equitable socio economic development in the long run	1	2	3	4	5	NA
52	The GNH education has the potential to support good governance in the long run	1	2	3	4	5	NA
53	The future happiness status of Bhutan will largely depend on the success of GNH education	1	2	3	4	5	NA
54	In the process of learning GNH values students will be able to become more caring for others including other species	1	2	3	4	5	NA
55	In the process of learning GNH values students will be able to become ecologically literate	1	2	3	4	5	NA
56	In the process of learning GNH values students will become critical thinkers	1	2	3	4	5	NA
57	In the process of learning GNH values students will be able to help and support others	1	2	3	4	5	NA
58	In the process of learning GNH values students will become more aware of democratic principles	1	2	3	4	5	NA
59	In the process of learning GNH values students will be able to avoid greed and too much selfish desires	1	2	3	4	5	NA
60	Human values can be taught to the children	1	2	3	4	5	NA
61	Happiness skills can be taught to children and youth	1	2	3	4	5	NA

Please add any other comments you would like to make on part C

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	Part D Items on Support System for GNH Education	S D	D	N D A	A	S A	NA
62	Leading with respect to GNH Education is easy in this school because of good collaboration with teachers	1	2	3	4	5	NA
63	Leading with respect to GNH Education is easy in this school because of good cooperation from students	1	2	3	4	5	NA
64	My teacher training experiences at the college of education has given me the necessary knowledge to teach GNH values effectively	1	2	3	4	5	NA
65	The Paro GNH education workshop for principals helped me teach values lessons confidently	1	2	3	4	5	NA
66	The Paro GNH education workshop for principals helped me to organise curricular activities to promote GNH values in the school	1	2	3	4	5	NA
67	The Paro GNH education workshop for principals helped me to organise extracurricular activities to promote GNH values in the school	1	2	3	4	5	NA
68	The support from Curriculum Department (CASPD) facilitates my leadership in implementing GNH Education	1	2	3	4	5	NA
69	The support from Education Monitoring, Support and Services Division facilitates my leadership in implementing GNH Education	1	2	3	4	5	NA
70	The support from the District Education Office facilitates my leadership in implementing GNH Education	1	2	3	4	5	NA
71	The support from the teachers in this school facilitates my leadership in implementing GNH Education	1	2	3	4	5	NA
72	The support from principals in other schools facilitates my leadership in implementing GNH Education	1	2	3	4	5	NA
73	The support from parents (local community) facilitates my leadership in implementing GNH Education	1	2	3	4	5	NA
74	The support from teacher education colleges facilitates my leadership in implementing GNH Education	1	2	3	4	5	NA
75	Parents should take more responsibility in promoting GNH values	1	2	3	4	5	NA
76	Teachers and administrators collaborate well in this school with respect to GNH Education	1	2	3	4	5	NA

77	Teachers in this school are motivated to implement the GNH Education programme	1	2	3	4	5	NA
78	I promote shared decision making in this school with regard to GNH Education	1	2	3	4	5	NA
Please add any other comments you would like to make on part D							
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	Part E	S	D	N	A	S	NA
	Items on Actions and Impacts of GNH Education	D		D		A	
				A			
79	I am excited to teach GNH values to my students	1	2	3	4	5	NA
80	In this school SBIP on GNH Education was effective	1	2	3	4	5	NA
81	I have established a high priority for promoting GNH values in my school	1	2	3	4	5	NA
82	I provide opportunities for teachers to take risks when it comes to the implementation of GNH Education	1	2	3	4	5	NA
83	I am continually finding better ways to introduce GNH values to my students	1	2	3	4	5	NA
84	I often like to include the teaching of values in my academic classes	1	2	3	4	5	NA
85	I have experienced some success in teaching GNH values	1	2	3	4	5	NA
86	I think that implementation of GNH Education has reduced student disciplinary problems	1	2	3	4	5	NA
87	I am able to critically reflect on my values lessons	1	2	3	4	5	NA

88	In the process of teaching GNH values I have been able to question some of my own beliefs and assumptions about values	1	2	3	4	5	NA
89	In the process of teaching GNH values I have been able to change some of my own beliefs and assumptions about values	1	2	3	4	5	NA
90	In the process of teaching GNH values I have been able to change some of my own actions and practices	1	2	3	4	5	NA
91	In the process of teaching GNH values my students have been able to question some of their own beliefs and assumptions about values	1	2	3	4	5	NA
92	In the process of teaching GNH values I have been able to change some of their own beliefs and assumptions about values	1	2	3	4	5	NA
93	In the process of teaching GNH values my students have been able to change some of their own actions and practices	1	2	3	4	5	NA
Please add any other comments you would like to make on part E							
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This is the end of questionnaire
 THANK YOU FOR YOUR TIME

Appendix 3.2 Teacher questionnaire

Teacher's GNH Education Survey Questionnaire

Dear Sir/Madam,

As a part of my PhD studies at the University of New England in Australia, I am undertaking research to understand the process of **GNH Education** that has been implemented in the Bhutanese education system recently. Your cooperation in this matter by completing the survey items will be highly appreciated. Your responses will remain **CONFIDENTIAL**.

II. Demographic Information [Please **TICK** the most appropriate choice].

- a. Gender: Male
 Female
- b. Type of school : Day School
 Boarding School
- c. Highest qualification: PTC/ZTC/Diploma
 Bachelors
 Master
 PhD
 Any others (please specify).....
- d. Age: Less than 25 Years
 26 – 30 Years
 31 – 35 Years
 36 – 40 Years
 41 Years and above
- e. Teaching experience: Less than 5 Years
 6 – 10 Years
 11 – 15 Years
 16 – 20 Years
 21 Years and above
- f. Length of time in your current school: 1 – 2 Years
 3 – 5 Years
 6 – 10 Years
 11 – 15 Years
 16 Years and above
- g. Presently you are teaching class/es: (tick all that apply) PP – 6
 7 – 12
- h. Service status: Regular
 Light Druk-Yul (Contract)
 Contract (Expatriate)
- i. Nationality: Bhutanese National
 Non-National

- b. Religion: Buddhist
 Hindu
 Others (Please specify)

- c. Teaching subject/s (tick all that apply):
- | | |
|---|---|
| <input type="checkbox"/> English | <input type="checkbox"/> Mathematics |
| <input type="checkbox"/> Dzongkha | <input type="checkbox"/> EVS |
| <input type="checkbox"/> Health & Physical Education | <input type="checkbox"/> Social Studies |
| <input type="checkbox"/> History | <input type="checkbox"/> Science |
| <input type="checkbox"/> IT | <input type="checkbox"/> Geography |
| <input type="checkbox"/> Chemistry | <input type="checkbox"/> Biology |
| <input type="checkbox"/> Any others (please specify)..... | <input type="checkbox"/> Commerce |
| | <input type="checkbox"/> Physics |

II. Teacher’s GNH Education Survey Items

Instructions: A number of items about **GNH Education** in the schools are presented below. The purpose is to gather information regarding the actual beliefs and attitudes of teachers concerning GNH Education. Please respond to each item by considering the combination of your beliefs in your **current ability, importance, support system, actions and impacts of GNH Education** in your school as a teacher.

There are no correct or incorrect answers. Your responses will remain **CONFIDENTIAL**. Please feel free to share your frank opinions by indicating the degree to which you agree or disagree with each statement by **CIRCLING** the appropriate number or **NA** for **Not Applicable**.

SI #	ITEMS	Levels of your agreement or disagreement				
		Strongly Disagree (SD)	Disagree (D)	Neither Disagree nor Agree (NDA)	Agree (A)	Strongly Agree (SA) Not Applicable (NA)
	Part A Items on Teacher Self-Efficacy Beliefs					
1	I have a good understanding of the GNH concept	1	2	3	4	5 NA
2	I know how to help a student be more responsible (Milson & Mehlig, 2002)	1	2	3	4	5 NA
3	I know how to use different ways that might lead to positive changes in students’ values (Milson & Mehlig, 2002)	1	2	3	4	5 NA

4	I am confident that I can teach my students to be honest (Milson & Mehlig, 2002)	1	2	3	4	5	NA
5	I am able to positively influence the values development of a child who has had little direction from parents (Milson & Mehlig, 2002)	1	2	3	4	5	NA
6	When I have a student who lies regularly I can usually convince him/her to stop lying to me (Milson & Mehlig, 2002)	1	2	3	4	5	NA
7	I usually find it easy to convince a student that respect for others is important (Milson & Mehlig, 2002)	1	2	3	4	5	NA
8	I am able to influence the values of students because I am a good role model (Milson & Mehlig, 2002)	1	2	3	4	5	NA
9	I know what to do to help students become more kind to others (Milson & Mehlig, 2002)	1	2	3	4	5	NA
10	I know how to design lessons that enable all my students to master GNH values (Narvaez et al., 2008)	1	2	3	4	5	NA
11	I know how to create GNH values lessons that hold my students' interest (Narvaez et al., 2008)	1	2	3	4	5	NA
12	I know how to adapt GNH values lessons to the needs of my students (Narvaez et al., 2008)	1	2	3	4	5	NA
13	I can design student centred activities for GNH values classes	1	2	3	4	5	NA
14	I can easily integrate the teaching of values into my academic lessons	1	2	3	4	5	NA
15	I am usually comfortable discussing issues of right and wrong with my students (Milson & Mehlig, 2002)	1	2	3	4	5	NA
16	I provide students with opportunities during the school day to practice values	1	2	3	4	5	NA
17	When a student has been exposed to negative influences at home, I believe that I can do much to impact that child's values (Milson & Mehlig, 2002)	1	2	3	4	5	NA
18	I am continually finding better ways to encourage development of GNH values in my students (Milson & Mehlig, 2002)	1	2	3	4	5	NA
19	I can teach values lessons as effectively as I do other academic subjects	1	2	3	4	5	NA
20	I can influence the decisions made in the school with regard to GNH values education	1	2	3	4	5	NA
21	I can freely express my opinion on importance GNH Education related matters in the school	1	2	3	4	5	NA
22	I can reduce negative student behaviours through GNH Education in my classroom (Ampel, 2009)	1	2	3	4	5	NA
23	I do not require a separate training to teach values	1	2	3	4	5	NA

Please add any other comments you would like to make on part A

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	Part B Items on School Collective Efficacy Beliefs	S D	D	N D A	A	S A	NA
24	We have a clear vision for implementation GNH education programme in this school	1	2	3	4	5	NA
25	Teachers in this school have the responsibility to model appropriate behaviour to students (Ampel, 2009)	1	2	3	4	5	NA
26	Teachers in this school are usually responsible when a child becomes more polite (Milson & Mehlig, 2002)	1	2	3	4	5	NA
27	When a student shows greater respect for others, it is usually because teachers here have effectively modelled that value (Milson & Mehlig, 2002)	1	2	3	4	5	NA
28	When students show carefulness it is often because teachers here have encouraged the students to keep it up with tasks (Milson & Mehlig, 2002)	1	2	3	4	5	NA
29	In this school teachers who spend time encouraging students to be respectful of others will see changes in students' social interaction (Milson & Mehlig, 2002)	1	2	3	4	5	NA
30	If parents notice that their children are more responsible, it is likely that teachers have promoted this value at school (Milson & Mehlig, 2002)	1	2	3	4	5	NA
31	Some students will become more respectful if they have teachers who promote respect as they do at this school (Milson & Mehlig, 2002)	1	2	3	4	5	NA
32	If students are kind, it is often because teachers here have sufficiently modelled the value (Milson & Mehlig, 2002)	1	2	3	4	5	NA
33	If responsibility is not encouraged in a child's home, teachers will be able to successfully teach this value at school (Milson & Mehlig, 2002)	1	2	3	4	5	NA
34	At this school teaching students what it means to be honest is likely to result in students who are more honest	1	2	3	4	5	NA
35	Teachers in this school should not be blamed for students who are dishonest (Milson, 2004)	1	2	3	4	5	NA
36	Teachers who encourage responsibility at school can influence students' level of responsibility outside of school (Milson & Mehlig, 2002)	1	2	3	4	5	NA
37	Teachers here make the school a safe place for all the students	1	2	3	4	5	NA
38	When a student becomes kindhearted, it is usually because teachers here have created caring classroom environments (Milson & Mehlig, 2002)	1	2	3	4	5	NA
39	When a problematic student is improving, it is usually due to extra attention provided by the teachers in this school	1	2	3	4	5	NA

40	Teachers in this school do not require a separate training to teach values	1	2	3	4	5	NA
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Please add any other comments you would like to make on part B

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	Part C Items on the Importance of GNH Education	S D	D	N D A	A	S A	N A
41	GNH education has been introduced at the right time	1	2	3	4	5	N A
42	The introduction of GNH education in the schools will encourage development of moral values in students	1	2	3	4	5	N A
43	The GNH education has the potential to improve students' academic achievement (Ampel, 2009)	1	2	3	4	5	N A
44	The GNH education has the potential to solve many youth problems such as school dropout, drug abuse, teenage pregnancy, alcohol, depression, etc. (Ampel, 2009)	1	2	3	4	5	N A
45	Schools should assume a central role in shaping the values of youth/children	1	2	3	4	5	N A
46	GNH Education should be taught as a separate subject	1	2	3	4	5	N A
47	The GNH education has the potential to prepare students to become responsible citizens (Ampel, 2009)	1	2	3	4	5	N A
48	Negative student behaviours can be reduced through GNH Education (Ampel, 2009)	1	2	3	4	5	N A
49	The GNH education is as important as academic education (Ampel, 2009)	1	2	3	4	5	N A
50	Moral lessons learned in the social interactions of daily school life (such as sports, social work, cultural activities, etc.) should have more influence on students than the content taught through a formal curriculum (Ampel, 2009)	1	2	3	4	5	N A
51	I would prefer teaching values as a separate subject	1	2	3	4	5	N A
52	In the long run GNH Education has the potential to support preservation of unique Bhutanese culture and tradition	1	2	3	4	5	N A
53	In the long run GNH Education has the potential to support preservation and sustainable use of environment	1	2	3	4	5	N A
54	In the long run GNH Education has the potential to support sustainable and equitable socio economic development	1	2	3	4	5	N A
55	In the long run GNH Education has the potential to support good governance	1	2	3	4	5	N A
56	The future happiness status of Bhutan will largely depend on the success of GNH Education	1	2	3	4	5	N A

57	In the process of learning GNH values students will become more caring for other including other species	1	2	3	4	5	N A
58	In the process of learning GNH values students will become ecologically literate	1	2	3	4	5	N A
59	In the process of learning GNH values students will become critical thinkers	1	2	3	4	5	N A
60	In the process of learning GNH values students will be able to help and support others	1	2	3	4	5	N A
61	In the process of learning GNH values students will be able to become aware of democratic principles	1	2	3	4	5	N A
62	In the process of learning GNH values students will be able to avoid greed and too much selfish desires	1	2	3	4	5	N A
63	Human values can be taught to the children and youth	1	2	3	4	5	N A
64	Happiness skills can be taught to the children and youth	1	2	3	4	5	N A
Please add any other comments you would like to make on part C							
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	Part D Items on Support System for GNH Education	S D	D	N D A	A	S A	N A
65	We have a supportive leadership in our school for GNH Education	1	2	3	4	5	N A
66	The principal in this school is a good role model when it comes to GNH Education	1	2	3	4	5	N A
67	The vice principal/s in this school is good role model when it comes to GNH Education	1	2	3	4	5	N A
68	My teacher training experience at the college of education/university has given me the necessary knowledge to teach GNH values effectively	1	2	3	4	5	N A
69	The GNH Education workshop for teachers that I attended helped me teach values lessons	1	2	3	4	5	N A
70	The GNH Education workshop for teachers that I attended helped me to organise extracurricular activities in the school to promote GNH values to my students	1	2	3	4	5	N A
71	Resources required for GNH Education are easily available in the school	1	2	3	4	5	N A

72	This school gets good support from EMSSD to implement GNH Education	1	2	3	4	5	N A
73	This school gets good support from the Curriculum Department (CAPSD) to implement GNH Education	1	2	3	4	5	N A
74	This school gets good support from District Education Office to implement GNH Education	1	2	3	4	5	N A
75	This school gets good support from Teacher Education Colleges to implement GNH Education	1	2	3	4	5	N A
76	This school gets good support from parents to implement GNH Education	1	2	3	4	5	N A
77	Schools have more responsibility in promoting GNH values than parents	1	2	3	4	5	N A
78	Teachers in this school are motivated to implement GNH Education programme	1	2	3	4	5	N A
Please add any other comments you would like to make on part D							
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	Part E Items on Actions and Impacts of GNH Education	S D	D	N D A	A	S A	N A
79	SBIP on GNH Education was conducted for teachers in this school	1	2	3	4	5	N A
80	I have established a high priority for promoting GNH values in my school	1	2	3	4	5	N A
81	I often like to include the teaching of values in my academic classes	1	2	3	4	5	N A
82	I have experienced some success in teaching GNH values	1	2	3	4	5	N A
83	The Bhutanese school children have a good sense of moral values (for example, compassion, generosity, truthfulness, dignity, respect, creativity, patience)	1	2	3	4	5	N A
84	I am able to reflect critically on my values lessons	1	2	3	4	5	N A
85	In the process of teaching GNH values I have been able to question some of my own beliefs and assumptions about values	1	2	3	4	5	N A
86	In the process of teaching GNH values I have been able to change some of my own beliefs and assumptions about values	1	2	3	4	5	N A
87	In the process of teaching GNH values I have been able to change some of my own actions and practices						

88	In the process of learning GNH values my students have been able to question some of their own beliefs and assumptions about values	1	2	3	4	5	N A
89	In the process of learning GNH values my students have been able to change some of their own beliefs and assumptions about values	1	2	3	4	5	N A
90	In the process of learning GNH values my students have been able to change some of their own actions and practices	1	2	3	4	5	N A
Please add any other comments you would like to make on part E							
.....							
.....							
.....							
.....							
.....							
.....							

This is the end of questionnaire

THANK YOU FOR YOUR TIME

Appendix 3.3 Interview guide

Grand Tour Question

As a part of my PhD programme, I am carrying out research to see how GNH education is being implemented. You are now into the second year of implementing GNH education in your school. Could you please share your experiences of implementing this programme in your school?

Sub: Questions

1. As a principal/teacher, what are your priorities for this school?
2. As a principal/teacher, what do you think is the purpose of GNH education in the Bhutanese education schools?
3. As a principal/teacher, what do you see as your role in implementing GNH education in your school?
4. As a principal/teacher, how well prepared do you feel to lead or teach GNH values?
Areas for probing- In terms of knowledge
In terms of resources
In terms of
professional development
In terms of confidence
5. Focus on advantages and disadvantages of GNH education.
 - a. I would be interested to know what you see as some of the advantages.
 - b. What are some of the disadvantages?
6. In what ways has your pedagogy changed since implementing GNH?
7. How did it impact or change your- Programme, pedagogy, assessment practices, reporting,
8. In what ways could you improve GNH education? Or Do you have any suggestions for improvement?

Appendix 3.4 Lesson observation form

Date: _____ CS School No: _____ Time: _____ Class: _____

Subject: _____ Topic Taught: _____

Gender: _____ No. of years in teaching: _____

Values Taught	Describe the strategies used to present the value	Describe the learning activity/ies	Student reactions and commitments	Researcher comment

Appendix 3.5 UNE ethics approval letter



Ethics Office
Research Development & Integrity Research Division
Armidale NSW 2351
Australia
Phone 02 6773 3449 Fax 02 6773 3543 jo-ann.sozou@une.edu.au www.une.edu.au/research-services

HUMAN RESEARCH ETHICS COMMITTEE

MEMORANDUM TO: Prof R Cooksey, Adj/Prof T Maxwell & Mr K Sherab School of Business, Economics & Public Policy

This is to advise you that the Human Research Ethics Committee has approved the following:

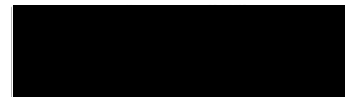
PROJECT TITLE: Gross National Happiness Education in Bhutanese Schools: Understanding the experiences and efficacy beliefs of principals and teachers

APPROVAL No.: HE11/061
COMMENCEMENT DATE: 22/03/2011
APPROVAL VALID TO: 2/03/2012
COMMENTS: Nil. Conditions met in full.

The Human Research Ethics Committee may grant approval for up to a maximum of three years. For approval periods greater than 12 months, researchers are required to submit an application for renewal at each twelve-month period. All researchers are required to submit a Final Report at the completion of their project. The Progress/Final Report Form is available at the following web address:
<http://www.une.edu.au/research-services/researchdevelopmentintegrity/ethics/human-ethics/hrecforms.php>

The NHMRC National Statement on Ethical Conduct in Research Involving Humans requires that researchers must report immediately to the Human Research Ethics Committee anything that might affect ethical acceptance of the protocol. This includes adverse reactions of participants, proposed changes in the protocol, and any other unforeseen events that might affect the continued ethical acceptability of the project.

In issuing this approval number, it is required that all data and consent forms are stored in a secure location for a minimum period of five years. These documents may be required for compliance audit processes during that time. If the location at which data and documentation are retained is changed within that five year period, the Research Ethics Officer should be advised of the new location.



Jo-Ann Sozou
Secretary/Research Ethics Officer

18/03/2011

Ethics Office Research Development & Integrity Research Division Armidale NSW 2351 Australia Phone 02 6773 3449 Fax 02 6773 3543 jo-ann.sozou@une.edu.au www.une.edu.au/research-services

Appendix 3.6 Research permission letter



University of New England
Armidale NSW 2351, Australia
Phone: 61 2 6773 4221
Fax: 61 2 6773 2445
Email: education@une.edu.au
www.une.edu.au/education

The Director General

12 March, 2011

Ministry of Education
Thimphu, Bhutan

Sub: Research Permission

Hon'ble Dasho,

I am undertaking research to understand the process of GNH Education that has been implemented in the Bhutanese schools. It is a part of PhD studies that I am pursuing at the University of New England in Australia. GNH Education was recently mandated by our first Government under the visionary leadership of Honourable Lyonchhen, Jigme Y. Thinley. This will go a long way to fulfilling the great vision of our fourth King, Jigme Singye Wangchuk who coined the term 'Gross National Happiness.' The GNH Education has the potential to impact every citizen of our country as MoE is aiming to achieve 100 percent school enrolment by 2015. As a teacher educator and researcher, I have a genuine interest in supporting MoE's implementation of this visionary initiative successfully.

My research topic is: *Gross National Happiness Education in Bhutanese schools: Understanding the experiences and efficacy beliefs of principals and teachers.* Therefore, I would like to seek Dasho's kind approval to conduct research in some of the selected schools in the country with effect from 22 March till 8 June, 2011. First phase of my research will begin with survey questionnaires for principals and teachers. Survey will cover approximately 170 schools that will be selected based on representation from different regions, locations and levels of schools. The second phase will involve four schools for in-depth case studies based on the survey findings. During phase two, I will spend about a week in each of the four selected schools observing school activities including classroom observations. Semi-structured interviews will be also conducted with principals of these schools and some selected teachers. The class observations and interviews will be conducted with minimum disturbance to their daily schedule.

After receiving prior approval from Dasho, I will inform all the schools concerned and get written consent from each individual participant. This research has been approved by the Human Research Ethics Committee of the University of New England, Australia. My supervisors are Prof. Ray W. Cooksey and Adjunct Prof. Tom Maxwell.

Thanking you.
Yours faithfully,



(Kezang Sherab)
PhD Student
3/17 Queen Elizabeth Drive
Armidale, NSW, 2350, Australia
Mobile: 0457362057, Phone: 02-6773-2495 (o), 02-6772-2229 (r)
Email: ksherab2@une.edu.au or kezangsherab@yahoo.com

Appendix 3.7 Approval letter from MoE, Bhutan



ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF EDUCATION
DEPARTMENT OF SCHOOL EDUCATION



THIMPHU: BHUTAN

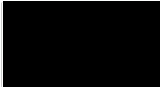
Ref: MoE/DSE/2011/4183

14th March, 2011

To Whom It May Concern

Mr. Kezang Sherab, Lecturer, Paro College of Education, RUB is undertaking a research on the topic "**Gross National Happiness Education in Bhutanese schools: Understanding the Experiences and Efficacy Beliefs of Principals and Teachers**". This research is conducted as a partial fulfilment for his PhD studies program at University of New England in Australia and it requires the involvement of Principals, teachers and students from some of the selected schools in Bhutan.

Therefore, all the concerned school heads and teachers are requested to facilitate Mr. Kezang Sherab's work as deemed appropriate.


(Tshewang Tandin)
DIRECTOR GENERAL

TEL: 975-2-325325

TELEFAX: 975-2-321794

Appendix 3.8 Participant information sheet

Research Project: *Gross National Happiness Education in Bhutanese schools: Understanding the experiences and efficacy beliefs of principals and teachers.*

I wish to invite you to participate in my research on above topic. The details of the study follow and I hope you will consider being involved. I am conducting this research project for my PhD at the University of New England, Australia. My supervisors are Professor Ray Cooksey and Adjunct Professor Tom Maxwell of University of New England. Ray can be contacted by email at rcooksey@une.edu.au or by phone on 02 6773 2563. Tom can be contacted by email at tmaxwell47@gmail.com or by phone on 02 6652 7939 and I can be contacted by email at ksherab2@une.edu.au or phone on 02 6773 2495

Aim of the Study:

- Measure the level of principals' and teachers' self-efficacy and schools' collective efficacy for GNH education;
- Explore relationship between efficacy, nature of learning, and GNH educational reform as suggested in conceptual framework;
- Gain insight into the experiences of efficacious and inefficacious schools with regard to the GNH education;
- Identify impact efficacy play on GNH teaching behaviours of teachers and principals;
- Identify impact efficacy play on GNH leadership behaviours of principals; and
- Recommend policy related implications for school education and teacher preparation.

Time Requirements:

In the first phase, survey questionnaires will take approximately 30 minutes to complete. In the second phase, a time period of one week will be spent in your school during which a face to face interview lasting approximately 60 minutes (at my expense) will be audiotaped and a few lesson observations will be carried out.

Interviews:

There will be a series of open-ended questions that allow you to explore your views and practices related to your work on GNH Education. These interviews will be voice recorded. Following the interview, a transcript will be provided to you if you wish to see one. Any information or personal details gathered in the course of the study will remain confidential. No individual will be identified by name in any publication of the results. All names will be replaced by pseudonyms; this will ensure that you are not identifiable. Some quoting of your responses may appear in my PhD thesis as a consequence of the data analysis process, but readers will not be able to identify you as the source.

Lesson Observations:

A total of two lesson observations will be also carried out at your convenience during the week that I spend in your school.

Participation is completely voluntary in all the components of this research, eg Interviews, Observations and the questionnaires. If you decide to participate, you are free to withdraw your consent from the research and discontinue at any time without having to give a reason and without consequence if you decide not to participate or withdraw at any time.

It is unlikely that this research will raise any personal or upsetting issues but if it does you may wish to contact the Director General of School Education at 02-325325 or fax at 02-321794.

The voice recordings will be kept in a locked filing cabinet at the researcher's office. The transcriptions and other data will be kept in the same manner for five (5) years following thesis submission and then destroyed. Only the investigators will have access to the data.

Research Process:

It is anticipated that this research will be completed by the end of 2013. The results may also be presented at conferences or written up in journals without any identifying information. This project has been approved by the Human Research Ethics Committee of the University of New England (Approval No. HE11/061, Valid to 22/03/2012)

Should you have any complaints concerning the manner in which this research is conducted, please contact the Research Ethics Officer at the following address:

Research Services
University of New England
Armidale, NSW 2351.
Telephone: (02) 6773 3449 Facsimile (02) 6773 3543
Email: ethics@une.edu.au

Thank you for considering this request and I look forward to further contact with you.

Regards



Kezang Sherab

Appendix 3.9 Participant consent form

Research Project: *Gross National Happiness Education in Bhutanese schools: Understanding the experiences and efficacy beliefs of principals and teachers*

I,, have read the information contained in the Information Sheet for Participants and any questions I have asked have been answered to my satisfaction.
Yes/No

I agree to participate in this activity, realising that I may withdraw at any time. Yes/No

I agree that research data gathered for the study may be published using a pseudonym
Yes/No

I agree to the interview having my voice recorded and transcribed. Yes/No

.....

Participant

Date

.....

Researcher

Date

Appendix 5.1 School-wise collective efficacy mean

Sl. No.	School ID	Mean	Sl.no	School ID	Mean
1	123.00	3.6611	41	121.00	4.0039
2	137.00	3.6800	42	70.00	4.0093
3	148.00	3.7037	43	44.00	4.0111
4	118.00	3.7111	44	124.00	4.0178
5	140.00	3.7429	45	5.00	4.0190
6	18.00	3.7607	46	143.00	4.0254
7	142.00	3.7651	47	125.00	4.0256
8	45.00	3.7753	48	36.00	4.0267
9	90.00	3.7778	49	89.00	4.0286
10	151.00	3.8000	50	105.00	4.0326
11	94.00	CS 2 (145 th) 3.8185	51	14.00	4.0337
12	62.00	3.8222	52	2.00	4.0376
13	129.00	3.8296	53	11.00	4.0392
14	42.00	3.8400	54	55.00	CS 1 (102 nd) 4.0398
15	73.00	3.8500	55	80.00	4.0431
16	135.00	3.8646	56	95.00	4.0476
17	152.00	3.8667	57	87.00	4.0556
18	27.00	3.8861	58	145.00	4.0556
19	111.00	3.8889	59	21.00	4.0578
20	17.00	3.8970	60	81.00	4.0599
21	144.00	3.9000	61	84.00	4.0635
22	68.00	3.9024	62	104.00	4.0641
23	122.00	3.9037	63	48.00	4.0667
24	53.00	3.9156	64	6.00	4.0708
25	92.00	3.9156	65	150.00	4.0741
26	20.00	3.9200	66	7.00	4.0747
27	103.00	3.9222	67	93.00	4.0762
28	97.00	3.9333	68	78.00	4.0771
29	82.00	3.9444	69	24.00	4.0821
30	40.00	3.9506	70	19.00	4.0864
31	79.00	3.9511	71	30.00	4.0869
32	57.00	3.9578	72	126.00	4.0899
33	128.00	3.9611	73	115.00	4.0919
34	59.00	3.9741	74	29.00	4.0926
35	51.00	3.9808	75	43.00	4.0926
36	132.00	3.9852	76	52.00	4.0938
37	102.00	3.9889	77	138.00	4.0944
38	99.00	3.9911	78	31.00	4.0968
39	46.00	3.9960	79	49.00	4.1022
40	146.00	4.0000	80	67.00	4.1044

Sl. no	School ID	Mean	Sl. no	School ID	Mean
81	22.00	4.1048	123	13.00	4.2729
82	38.00	4.1095	124	4.00	4.2902
83	15.00	4.1152	125	88.00	4.2926
84	120.00	4.1200	126	131.00	4.3022
85	1.00	4.1241	127	71.00	4.3037
86	63.00	4.1259	128	86.00	4.3037
87	10.00	4.1276	129	32.00	4.3067
88	141.00	4.1278	130	12.00	4.3074
89	101.00	4.1282	131	127.00	4.3111
90	114.00	4.1333	132	96.00	4.3148
91	130.00	4.1389	133	50.00	4.3210
92	28.00	4.1400	134	47.00	4.3280
93	85.00	4.1429	135	149.00	4.3556
94	136.00	4.1511	136	75.00	4.3593
95	83.00	4.1667	137	109.00	4.3852
96	35.00	4.1683	138	16.00	4.3968
97	26.00	4.1700	139	77.00	4.3981
98	9.00	4.1739	140	119.00	4.4000
99	34.00	4.1750	141	153.00	4.4000
100	58.00	4.1778	142	33.00	4.4044
101	23.00	4.1791	143	3.00	4.4051
102	139.00	4.1815	144	108.00	4.4081
103	74.00	4.1843	145	56.00	4.4222
104	37.00	4.1867	146	112.00	4.4556
105	41.00	4.1951	147	110.00	4.4667
106	100.00	4.2000	148	154.00	4.4667
107	39.00	4.2056	149	65.00	4.5111
108	134.00	4.2056	150	113.00	4.5111
109	25.00	4.2087	151	54.00	4.5926
110	66.00	4.2111	152	116.00	4.6222
111	98.00	4.2117	153	91.00	CS 3 (3 rd) 4.6730
112	72.00	4.2159	154	64.00	4.7333
113	76.00	4.2169	155	155.00	4.8000
114	107.00	CS 4 (42 nd) 4.2222			
115	61.00	4.2259			
116	133.00	4.2308			
117	69.00	4.2374			
118	106.00	4.2389			
119	8.00	4.2417			
120	117.00	4.2469			
121	60.00	4.2500			
122	147.00	4.2667			

Appendix 5.2 Dendrogram showing clusters

