THE INDONESIAN COMPETENCY STANDARDS IN TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING: AN EVALUATION OF POLICY IMPLEMENTATION IN YOGYAKARTA PROVINCE INDONESIA

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ABSTRACT

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To develop the Technical and Vocational Education (TVET) system in Indonesia, competency standards have been borrowed globally and implemented, as part of the national agenda for skills recognition and skills qualifications. Little research exists regarding the effectiveness of the implementation of the Indonesian version of competency standards, named Indonesian Competency Standards (SKKNI) in Indonesian TVET institutions.

This study consisted of empirical surveys based on comprehensive questionnaires, followed by individual and group semi-structured interviews, as well as the analyses of relevant documents. The study involved participants from two types of institutions in Indonesian TVET which were managed by two different ministries and implementers from relevant institutions. The first type was Vocational Centres (BLK) of the Ministry of Manpower (MoM) which assumed the leadership of the development of the policy of SKKNI. The second type was Vocational Schools (SMK) of the Ministry of Education (MoEC) which was the main regulator and the provider of education and training in education institutions nationally.

Findings revealed that the policy of SKKNI was poorly established, the resources for implementation was limited (financial, curricular and training workshops), there was a tension and rivalry between two ministries and lack of coordination and cooperation for implementation, he commitment of implementers was generally insufficient, however participants from a small number of TVET institutions implementing the policy showed a high commitment for implementation, the support

from external stakeholders (industry and the public) was insufficient, teachers' disposition significantly contributed as a predictor for teachers' performance in implementing two aspects of the policy (certification aspects and curriculum aspects) and certified teachers showed better disposition and performance in implementing SKKNI.

The analysis concludes that the implementation of a policy borrowed from international agencies is ineffective, in a situation where the development of a policy is not underpinned by a comprehensive study, and an implementation strategy developed in accordance with six factors pre-determined for the implementation process. In the Indonesian context, these factors are vital because of the problems of education provision caused by significant diversity in infrastructure and culture across the Indonesian archipelago. The implications of this study are significant because the effectiveness of the implementation of SKKNI will underpin the successful implementation of the broader and strategic agenda of the Indonesian Qualification Framework (IQF) which was promulgated in 2012. The main finding is the need to rebuild the policy in accordance with the key factors of effective implementation, which then needs a strategy of investment for TVET teacher certification under SKKNI as a national priority.

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AQF   Australian Qualification Framework

ASEAN   the Association of Southeast Asia Nations

BKSP   (*Badan Koordinasi Sertifikasi Profesi*) Coordinating Agency for Certification of Profession, hereinafter referred to as Coordinating Agency for Certification

BLK   (*Balai Latihan Kerja*) Vocational Training Centres under the Ministry of Manpower (MoM), hereinafter referred to as Vocational Centre

BNSP   (*Badan Nasional Sertifikasi Profesi*) Indonesian Professional Certification Authority, hereinafter referred to as Certification Authority

BPS   (*Badan Pusat Statistik*) BPS-Statistics Indonesia

CBET/CBT Competency Based Education and Training also known as Competency Based Training

Directorate PSMK (*Direktorat PSMK* or DIT-PSMK) Directorate of Vocational School Development Ministry of Education and Culture

GDP   Gross Domestic Product

ICT/TIK   (*Teknik Informatika dan* Komunikasi) Information and Communication Technology

ILO   International Labour Organisation

IQF/KKNI (*Kerangka Kualifikasi Nasional Indonesia*) Indonesian Qualification Framework

KTSP   (*Kurikulum Tingkat Satuan Pelajaran*) School-Based Curriculum

LSK   (*Lembaga Sertifikasi Kompetensi)* Competency Certification Body

LSP   (*Lembaga Sertifikasi Profesi*) Professional Certification Body, hereinafter referred to as Certification Body

MGMP   (*Musyawarah Guru Mata Pelajaran*) Subject Panel (a forum for teachers teaching the same subject)

MoEC	Ministry of Education and Culture (also known as Kemendikbud), hereinafter referred to as Ministry of Education
MoM	Ministry of Manpower (also known as Kemenaker)
NCS	National Competency Standards
NOS	National Occupational Standards
NQF	National Qualification Framework
OBE	Outcome Based Education
RMCS	Regional Model of Competency Standards
RSBI	(*Rintisan Sekolah Berstandar Internasional*) Piloting of International Standards School
RSBN	(*Rintisan Sekolah Berstandar Nasional*) Piloting of National Standards School
SISDIKNAS	(*Sistem Pendidikan Nasional*) National Education System
SKKD	(*Standar Kompetensi dan Kompetensi Dasar*) Competency Standards and Basic Competency (Competency standards developed by the Directorate of Vocational Schools Ministry of Education and Culture)
SKKNI	(*Standar Kompetensi Kerja Nasional Indonesia*) Indonesian National Competency Standards, hereinafter referred to as Indonesian Competency Standards
SMA	(*Sekolah Menengah Atas*) General Senior Secondary School, hereinafter referred to as General School
SMK	(*Sekolah Menengah Kejuruan*) Senior Vocational Secondary School, hereinafter referred to as Vocational School
TUK	(*Tempat Uji Kompetensi*) Assessment Centre
TVET	Technical and Vocational Education and Training (also known as Vocational Education and Training-VET)
n	Number of sub-sample
N	Total number of cases
X2	Chi-square test
df	Degrees of freedom

p	The Probability of obtaining a test statistic
r	Pearson's correlation coefficient
ES	Effect Size
M	Mean
SD	Standard Deviation
SS	Sum of Square
MS	Mean squares
F	A value resulting from a standard statistical test used in ANOVA
Sig.	Significance level
B	Un-standardised regression coefficient
Beta	Standardised regression coefficient
R	Correlation Coefficient
R2	Coefficient of determination
PCA	Principle Components Analysis

CHAPTER ONE: INTRODUCTION TO THE STUDY

1.1   Introduction

This chapter identifies the challenges faced by Indonesia in the area of Technical and Vocational Education and Training (TVET) in strengthening its link to the job market and the context of the implementation of the policy of the Indonesian Competency Standards (SKKNI). This chapter also outlines the research problem, purpose, significance and the organisation of the thesis.

1.2   Indonesia: Education and workforce context

Indonesia is located between the continent of Asia and Australia and is bordered by Papua New Guinea in the east, Timor Leste and Australia in the south and the Philippines, Malaysia and Brunei Darussalam in the north. The population of Indonesia in 2015, according to the projection of the BPS-Statistics Indonesia (2013c) was 255,461,700, and this placed Indonesia as the fourth-largest populated country in the world after China, India and the USA. Compared to Australia, Indonesia's gross domestic product (GDP) per capita (2013) was about one eighteenth of Australia's GDP. Indonesia's GDP per capita was ranked 139th by the World Bank and valued at US$3,580 and Australia was ranked 9th (US$ 65,520) (The World Bank, 4 November 2014). Administratively, Indonesia is divided into 33 provinces, 399 districts and 98 municipalities under the centralised republic system. The country is comprised of 17,504 islands, 746 local

languages and has an enormous cultural diversity (Bangay, 2005; BPS, 2010b; Jalal, Sardjunani, & Purwadi, 2003).

The education system in Indonesia is structured as six years primary school, three years junior secondary (nine years basic education), three years senior secondary and four years undergradute tertiary education (Gray & Paryono, 2004). In senior secondary, there are two streams which students can choose to join either General School (SMA) or Vocational School (SMK). In 2014, 4,085,160 students were enrolled in 11,679 SMAs and 4,244,241 students in 10,375 Vocational Schools nationally (Kemendikbud, 2015). Statistics provided by BPS Statistics Indonesia in 2013 indicate that the enrolment ratio in primary schools was 107.63% (the excess of 7.63% from the normal enrolment ratio because of academic and non-academic reasons). For junior secondary school, the gross enrolment ratios are 85.69%, followed by 66.27 % for senior secondary and 23.06 % for tertiary education (BPS, 2015). Vocational Centres (BLK) falls under the remit of Ministry of Manpower (MoM) and provides vocational training for around 234,490 participants spread over 329 centres with a total of 2,772 instructors (for practicality this thesis uses the term "teachers") (Kemenakertrans, 2013b).

The following data, which shows the high rate of unemployment, contextualised the potential role that TVET in Indonesia could play in improving employability and reducing unemployment, the basic purpose of the development of TVET (Chen, Skjaerlund, Setiawan, Cerdan-Infantes, & Santoso, 2011; Tilak, 2002). With a population of

237 million people (BPS, 2009, 2010a), Indonesia has a large workforce characterised by a high rate of unemployment, a significant number of highly-educated unemployed, domination of the informal sector and significant growth of urbanisation (Newhouse & Alatas, 2010). The Indonesian Bureau of Statistics (BPS) categorises the informal sector as family workers, self-employed and self-employed with temporary workers in agricultural area and family workers and self-employed in non-agricultural industries (Newhouse & Alatas, 2010). In February 2010, Indonesia's workforce (age 15-65 year old) was 116 million. This number equates to ten times that of both Australia's workforce (11.24 million) and Malaysia's workforce (11.62 million) (Australian Bureau of Statistics, 2010; BPS, 2010b; Department of Statistics Malaysia, 2010). The labour force in the USA, as the third largest population in the world (UNFPA, 2010), was 155.27 million (Statistics, 2010). At the same time, the open unemployment (people who are not working and are actively looking for employment) rate in Indonesia was 7.41 %, or the equivalent of 8.59 million people (BPS, 2010b; Suryadarma, Suryahadi, & Sumarto, 2007). Compared to the USA, Australia and Malaysia during a similar period, in July 2010 unemployment in the USA was 9.7 % (Statistics, 2010), Australia was 5.3 % (Australian Bureau of Statistics, 2010) and Malaysia was the lowest amongst the countries compared (3.7 %) in June 2010 (Department of Statistics Malaysia, 2010).

The workforce in Indonesia is dominated by the informal sector (Supriadi, 2002) with a growing industry and service sector. According to Veal (2009), the domination of the informal sector either in an

agricultural setting or in informal micro-enterprises is a common feature of workforces in developing countries. In a more detailed picture of the sectors where senior secondary school leavers work, the data from 2002 shows that urban area service sectors employ 72.10 %, industry 24.39%, and the agriculture sector 3.50 %. Conversely, in Indonesia's rural areas, service sectors drop to 50.38 %, industry 11.95 % and the agricultural sector rises 37.67 % (Suryadarma et al., 2007). It seems that in the future the workplace will shift predominantly to industry and service (Suryadarma et al., 2007).

Indonesia's workforce profile is also characterised by a highly educated, unemployed population. In a decade of longitudinal research, it was reported that unemployment of senior secondary school leavers was the highest compared to primary, junior secondary and tertiary education (Suryadarma et al., 2007). The final defining characteristic of Indonesia's workforce is the growth of urbanisation. In 1980, 22.4 % of the population inhabited urban areas. It is projected that by 2025 the proportion of the population living in urban areas will reach 58.11 % (BPS, Bappenas, & UNFPA, 2005). This trend will obviously exacerbate inequity of the workforce in terms of competition for jobs and qualifications (Firman, Kombaitan, & Pradono, 2007).

1.3 Background to the study

According to the 2003 Act of National Education System, the basic mission of vocational education is preparing students for a specific job (Undang-Undang, 2003b). However, relevant studies have

identified that the unemployment rate of Vocational School graduates is higher than the graduates from General School (BPS, 2010b, 2013b; Chen, 2009; Suryadarma et al., 2007). As a result the relevance of Vocational Schools have attracted public concern, and the government has been dealing with this challenge for decades (Kemendikbud, 2007c, 2011, 2012; Kurnia, Dittrich, & Murniati, 2014; Supriadi, 2002). Efforts have been put in place to improve the relevance of Vocational Schools for the jobs market. These efforts have been focussed on improving teacher quality, building workshop facilities and developing curriculum relevant to industry demands (Kemendikbud, 2007c, 2011, 2012; Kurnia et al., 2014). However, the relevance of Vocational Schools to the job market is still problematic. One of the emerging models in improving the relevance of TVET globally is the introduction of competency standards in its systems (ILO, 2006, 2009; Stanwick, 2009).

In Indonesia, the idea of competency standards was linked to the earlier proposal of *Paspor Keterampilan* (Skills Passport) that was proposed in 1997 in the document of *Keterampilan Menjelang 2020 untuk Era Global* (Skills toward 2020 for a Global Era) by the Ministry of Education and Culture (MoEC) (Supriadi, 2002). The proposal for the Skills Passport covered four levels of competencies that included "international standards, regional standards, national standards and general skills as a passport to work in home and small industries with the emphasis of improving livelihoods in rural and remote areas" (Supriadi, 2002, p. 453). Nevertheless, this proposal was never

established or implemented due to the economic and political crisis at the end of the 1990s.

Six years later, a similar agenda of developing the Skills Passport emerged again but with a different name 'national competency standards' when the 2003 Manpower Act was promulgated. In contrast, the resurfacing of the initiative to develop competency standards was led by the Ministry of Manpower, not by the Ministry of Education (the first ministry that proposed the agenda of the Skills Passport). The 2003 Manpower Act states that: Provisions concerning procedures for establishing job competency standards as mentioned under subsection (2) shall be regulated by a Ministerial Regulation (Undang-Undang, 2003a). Seven months later, the Ministry of Manpower promulgated the first Ministerial Regulation regarding the Procedure of the Development of the Indonesian Competency Standards (SKKNI). This Ministerial Regulation has been amended three times: in 2004, 2007 and 2012 (Peraturan, 2007, 2012b). Currently there are more than 295 areas of competency standards which have been developed (Kemenakertrans, 2013a). Applying the procedures and the legal standing of the regulation, every single area of competency standards was regulated by a Ministerial Decree (Setiawan, 2010). The Ministerial Regulation about the Procedure of the Development of the Indonesian Competency Standards addresses two main aspects: the first is Indonesian Competency Standards as a framework for certification of profession (also known as certification of competency) and the second is SKKNI as

a framework for competency based education and training - CBET (ILO, 2006; Peraturan, 2012b).

The 2003 Manpower Act also stipulated the establishment of an implementation agency in the area of Indonesian Competency Standards as a framework for certification of profession (Peraturan, 2007). In August 2004 the Indonesian Government put into effect Presidential Regulation number 23 about the Indonesian Certification Authority (BNSP) (Peraturan, 2004). The regulation about BNSP entailed the establishment of agencies under the BNSP responsible for implementation of certification of competency which included the Certification Body (LSP), the Coordinating Agency for Certification (BKSP) at provincial level and Assessment Centres (Peraturan, 2004).

In contrast to the certification aspect of the Indonesian Competency Standards, there was specification of which institution should be dedicated to the implementation of CBET as it is addressed in the regulation. This is to state that no new special institution had been established to manage the education and training aspect of the Indonesian Competency Standards, on the expectation that the existing agencies would implement the Indonesian Competency Standards in their TVET institutions. The Ministerial Regulation No 23 (2007) outlining the Procedure of the Development of Indonesian Competency Standards stated that: the monitoring of the implementation of the education and training aspects of the Competency Standards would be conducted by the agencies responsible for education and training. In Indonesia, however, at least 13 ministries manage TVET. They are:

Ministry of Education, the biggest regulator and provider, Ministry of Manpower, Ministry of Agriculture, Ministry of Communication and Informatics, Ministry of Energy and Mineral Resources, Ministry of Forestry, Ministry of Health, Ministry of Industry, Ministry of Marine Affairs and Fishery, Ministry of Religious Affairs, Ministry of Social Affairs, Ministry of Tourism and Creative Economy and Ministry of Transportation. In the context of implementation of the Indonesian Competency Standards, those ministries were officially in charge of the implementation of the policy in their internal TVET institutions. The implementation of the education and training aspects of the Indonesian Competency Standards appeared weaker compared to the certification aspect, as the establishment of the Certification Authority, for example, was under the Presidential Regulation responsible directly to the Indonesian President. In contrast, there was no specific regulation addressing the implementation of the curriculum aspect of the Indonesian Competency Standards.

Despite the strong legal standing of the Certification Authority, which was directly responsible to the Indonesian President, a report by BNSP noted that the performance of the certification aspect of Indonesian Competency Standards was far from satisfactory. The report noted that after ten years since the promulgation, the certification activities had 19,052 certified assessors across the country, 115 certified master assessors (qualified as a trainer of assessor), and 41 certified lead assessors (qualified as a trainer of assessor and as a chief of certification process) with the total number of certificates of the

Indonesian Competency Standards awarded to 2,086,688 (Tatang, 2014). This number is low, if the 41.8 million workers have a secondary school qualification or higher is taken into account. It means that only 5% of workers have Indonesian National Competency Standards certified skills after ten years since the implementation of the policy.

Amidst the lack of regulatory instruments of the Indonesian Competency Standards as a framework for competency-based education and training (CBET), the Indonesian Competency Standards is one of the official resources for the development of Vocational Schools' curriculum. The influence of the Indonesian Competency Standards policy on the Vocational School curriculum is evidenced in two government documents. The first is in the research paper (known as *naskah akademik* which literally means academic paper) of the 2006 Vocational Schools' curriculum, which is well known as School-Based Curriculum (KTSP). In the Indonesian legal drafting protocol, research papers report the results of empirical studies and an analysis of a particular proposed regulation (Peraturan, 2005b). The research paper of the KTSP acknowledges that, the development of the vocational subjects (the *Produktif* subjects) must refer to the Indonesian Competency Standards (Kemendikbud, 2007b, p. 6). The second document is the handbook for the development of syllabi in the KTSP curriculum for Vocational School (Kemendikbud, 2007b, p. i). This handbook provides a detailed link between the students' competencies in Vocational Schools' curriculum and the competencies as described in Indonesian Competency Standards. It is stated in the handbook that:

"The *Produktif* subjects (core vocational subjects) groups are a group of subjects aimed at catering for pupils with competencies according to the Indonesian Competency Standards" (Kemendikbud, 2007a, p. 10). In the 2006 Vocational School curriculum, subjects are classified into three groups, they are:

a.   *Normatif,* i.e. religion, Bahasa Indonesia (Indonesian language), civic education and sport

b.   *Adaptif,* i.e. maths, physics, chemistry, English, science, social sciences, computers and entrepreneurship

c.   *Produktif,* (vocational subjects) are subjects represented in the curriculum of Vocational School as the core vocational courses.

In its basic mission for preparing students for a specific job (Undang-Undang, 2003b), Vocational Schools deal with the unequal distribution of the number of teachers and time allocation for core vocational subjects (the *Produktif* subjects) compared to the two other subject groups, and the poor quality of training workshops (Kemendikbud, 2012; Wastandar, 2012). The significantly higher number of teachers for non-vocational subjects offered and also the time allocation for non-vocational subjects in Vocational School questioned its effectiveness in achieving the crucial objective vocational education. In these circumstances, the implementation of the policy of Indonesian Competency Standards as the national framework for CBET in Vocational Centres and Vocational Schools is questionable. Moreover, literature in the field of competency standards and NQF has placed

educational provision as one of the keys to successful implementation (Allais, 2010; Young, 2003, 2005).

In contrast to Vocational School, Vocational Centres which is directly under the auspices of the MoM, has stronger regulations to guide implementation of the two aspects of Indonesian Competency Standards (certification aspects and curriculum aspects). The Government Regulation No 31 (2006) mandates Vocational Centres to implement Indonesian Competency Standards as a resource for CBET and certification of competency as the framework to develop students' competency (Peraturan, 2006c). However, reports reveal that the implementation of the CBET and certification of competency in Vocational Centres has so far been unsuccessful (Chen et al., 2011; Hanrahmawan, 2010). Little is known about the factors relating to the failure of the delivery of Indonesian Competency Standards in Vocational Centres which are under the management of the ministry regulating the policy (the MoM).

The government regulation stated that the development of competency standards in Indonesian Competency Standards adopted the Regional Model of Competency Standards of the ILO Regional office in Bangkok Thailand (ILO, 2006). This adoption therefore, locating the Indonesian Competency Standards as part of the regional and global context of the policy. The following section links up the development of Indonesian Competency Standards to the international TVET environment.

1.4 International context of the Indonesian Competency Standards

The Indonesian Competency Standards exemplifies policy borrowing in skills development programs (Young, 2009b). The Ministerial Regulation about Indonesian Competency Standards is clearly influenced by the Regional Model of Competency Standards (RMCS), which is endorsed by the International Labour Organisation (ILO). In the four versions (which included three amendments to the original) of the Ministerial Regulation about the Procedure of the Development of Indonesian Competency Standards, the RMCS is adopted as the model of development (Kemenakertrans, 2003; Peraturan, 2007). In Article 5 of the 2007 amendment the position of the RMCS is "the development of the draft of the Indonesian Competency Standards applying the RMCS model which refers to the needs of industry" (Peraturan, 2007).

Little is known about the policy-making process in the adoption of the RMCS into the Indonesian Competency Standards. Relevant policy papers are difficult to obtain. The ILO endorses the RMCS as a model for developing countries with a claim that: "Skill standards are now the common basis for vocational training programs, testing and certification in many countries" (ILO, 2006, p. 1). As a global trend in skill development programs, RMCS has also been adopted in Bangladesh, Cambodia, Lao PDR, the Philippines, Thailand and Vietnam to foster mutual recognition of skills and qualifications in a number of key

sectors (ILO, 2006; Maclean, Jagannathan, & Sarvi, 2013; Stanwick, 2009).

The second piece of evidence in the policy borrowing aspects of the Indonesian Competency Standards relates to the key competencies which are identical to Australia's Mayer Key Competencies (R. Harris, Guthrie, Hobart, & Lundberg, 1995; Peraturan, 2007) which were promulgated in 1992. In every Ministerial Decree about Indonesian Competency Standards, two sets of competencies are included. The first is specific competencies for a particular profession and the second is a set of key competencies which are the same for all professions (Peraturan, 2007). In fact, the Australian Mayer Key Competencies were replaced by the Employability Skills Framework in 2004 (Bowman, 2010). Similar to the adoption of the RMCS, the policy document related to the borrowing processes of the Australian Mayer Key Competencies in the Indonesian Competency Standards is not available.

Moreover, the ILO argues that the adoption and implementation of the RMCS in the Asia Pacific countries will increase the relevance of education and training to the needs of both industry and individuals. The RMCS is also believed to lead to more efficient and effective skill development: a flexible benchmark of skills needed in an industry and more support for the related TVET process of skills recognition. This will lead to a description of the work carried out in industry and then guide the development of training programmes that will match the needs of industry (ILO, 2006, 2009).

TVET institutions are one of the four groups (the others being government agencies, industry employers, workers' organisations and individuals) that are expected to benefit from the RMCS model. The benefits for TVET institutions may include improving the processes of curriculum development, targeted development of training and assessment resources and the ability to specify equipment and building requirements (ILO, 2009).

From the above discussion, it can be argued that an evaluation of the effectiveness of the borrowed policy of Indonesian Competency Standards in tackling the domestic challenge of improving the employability of graduates of Vocational Centres and Vocational Schools would be appropriate. The following section identifies the research problems of the study.

1.5 Identification of the research problems

The policy of the Indonesian Competency Standards has been in place for more than a decade. Regulations for implementation have been developed, implementing agencies have been established and programs related to the curriculum and the certification aspects of the policy have been carried out. Despite these efforts, little is known about its effectiveness because it is difficult to find reports of how the policy has performed and subsequently what the outcomes of the policy were. Moreover, little is known about the underlying factors, under the lens of policy implementation framework that might lead to the effective or ineffective implementation of the Indonesian Competency Standards.

1.6   Purpose of the study

The specific objectives of this study were to:

a.   Evaluate the effectiveness of the implementation of the Indonesian Competency Standards in Yogyakarta Province Indonesia.

b.   Investigate the implementation process of the Indonesian Competency Standards in the two types of TVET institutions of Vocational Centres and Vocational School.

c.   Examine the relationship between teachers' disposition towards the policy of Indonesian Competency Standards and their performance in implementing the curriculum and certification aspects of Indonesian Competency Standards at the classroom level.

1.7   Research questions

In attempting to achieve the objectives of the study, the questions for research were:

1.   How effective was the implementation of the policy of the Indonesian Competency Standards in the two types of TVET institutions operated by MoM and MoEC in Yogyakarta Province?

2.   How effective was the implementation of Indonesian Competency Standards as measured by policy standards and objectives of Indonesian Competency Standards, resources, inter-organisational communication, characteristics of implementers, external factors perceived by stakeholders as influencing the

Indonesian Competency Standards and teachers' disposition and performance in implementing the certification and the curriculum aspects of Indonesian Competency Standards?

1.8 The significance of the study

The findings from this study have the potential to improve the outcomes of the existing policy of the Indonesian Competency Standards in the Indonesian TVET sector. The results of this study may assist in improving service provision and identify appropriate support for Vocational Centres and Vocational Schools. Moreover, this will deepen understanding of the support needs of teachers and the services required. Instead of improving the existing policy of the Indonesian Competency Standards in Vocational Centres and Vocational Schools, this study also has the potential to improve the implementation of the strategic policy of the Indonesian Qualification Framework (IQF). The implementation of the Indonesian Competency Standards is one of the important pillars in the effectiveness of the IQF. The Governmental Regulation regarding the IQF states that the certification of Indonesian Competency Standards is one of the main models of TVET qualification recognition in Indonesia (Peraturan, 2012c).

In the global arena, this study may subsequently contribute to fill the research gap in the area of competency standards where the empirical study is deemed to be insufficient (Young & Allais, 2009). In the area of comparative policy and comparative education, the lessons

from Indonesia will contribute to the enrichment of knowledge regarding the growing interest of competency standards.

1.9 Organisation of the thesis

This thesis comprises seven chapters. Chapter one has presented the introduction to the study. Chapter two reviews and discusses the literature related to this study. It includes the global and regional context of TVET and the Indonesian context of TVET. The theoretical and conceptual bases of national competency standards and policy implementation in the context of developing countries are reviewed. This section develops a theoretical framework for the study to conduct, analyse and interpret the research findings.

Chapter three provides an overview of the discussion of methodology relevant to the study and the ethical issues. It specifies the research design, sampling technique and sample size. This chapter includes a description of the research instruments, the parameter of the data collection and a specification of both quantitative and qualitative data analyses. Chapter four reports, analyses and interprets the quantitative data collected from the questionnaires. Demographic information regarding the characteristics of the participating Vocational Centres, Vocational Schools and teachers is also presented.

Chapter five reports the results from an analysis of policy documents, with a focus on the standards and objectives of the policy of Indonesian Competency Standards (government regulations, ministerial regulations and strategic plans) as a foundation for the implementation.

The regulations and documents are collected from two sources. These are the MoM, which is the provider of Vocational Centres and more importantly the authority for the development of Indonesian Competency Standards, and also the MoEC which is the regulator and the provider of Vocational Schools.

Chapter six reports the second phase of the study derived from interviews with a subset of participants (teachers, directors of Vocational Centres, principals of Vocational Schools, heads of ministries, certification agencies and a member of parliament). It describes, analyses and interprets the qualitative data of the research. Four themes that emerged from the analysis on the effectiveness of the implementation of the Indonesian Competency Standards policy are presented. In the chapter seven, the results from the quantitative and qualitative data are discussed. In addition, conclusions, implications and proposed recommendations are provided.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter begins with definitions of qualifications and competency standards, followed by a clarification of the relationship between four inter-connected policies of

(1)   National competency standards (NCS);

(2)   National qualification frameworks (NQF);

(3)   Competency based education and training (CBET); and

(4)   Certification of competency.

The following section discusses the rationale for competency standards in improving the relevance between the TVET sector and the labour market and how the policy has progressed so far. The details of the policy of the Indonesian Competency Standards and a brief discussion about the Indonesian TVET in its current development and challenges will be presented. This will be followed by a discussion of how the implementation theory/framework is applied in the current study, filling the gap in the present TVET discourse. The chapter concludes with a summary of the literature review.

2.2 Qualification and competency standards

2.2.1 The definition

There are various ways in which qualification and competency standards can be defined. The Australian Qualifications Framework (2007) defines a qualification as:

> Formal certification, issued by a relevant approved body, in recognition that a person has achieved learning outcomes or competencies relevant to identified individual, professional, industry or community needs (AQF, 2007, p. v).

In the United Kingdom, a qualification is defined as "a certificate of achievement or competency specifying awarding body, qualification type and title" (OECD, 2003, p. 99). Lastly, according to the European Centre for the Development of Vocational Training a qualification is:

> An official record (certificate, diploma) of achievement, which recognises successful completion of education or training, or satisfactory performance in a test or examination and/or the requirement for an individual to enter or progress within an occupation (Tissot, 2004, p. 124).

From these definitions, the main elements of qualification can be identified as (1) recognition given by an approved body, (2) measurable learning outcomes or competency, (3) competency standards and (4) official certification.

In the Australian Qualification Framework (AQF), competency is defined "as the possession and application of both knowledge and skills to defined standards, expressed as outcome, that corresponds to relevant workplace requirements and other vocational needs" (AQF, 2007, p. v). In Indonesia, the regulation about Indonesian Competency

Standards (Chapter 1, Article 1) defines competency standards as "the description of competencies embracing knowledge, skills, expertise and work attitudes that are relevant to tasks and requirements of the regulatory authorities" (Peraturan, 2007). In the UK, the National Occupational Standard (NOS) or units of competency is defined as standards of occupational competence developed by a standards setting body and approved by the regulatory authorities (OECD, 2003). There are several terms used interchangeably in the literature of competency standards. For example, the term "unit standards" is used in South Africa and New Zealand; "unit of competency" is used in England; "unit" in Scotland; "occupational skills standards" in Malaysia, and "competency standards" is used in Australia, the Philippines, Sri Lanka, Latin America and Indonesia (ADB, 2011; Allais, 2007; Peraturan, 2012c; Stanwick, 2009; Zuniga, 2005).

In this literature review, the policy of national competency standards (NCS) is discussed as an integral component of the broader policy of national qualification framework (NQF). The justification for the integration of the two policy terms is supported by leading scholars in the field and by authoritative institutions, for example "Certificate qualifications are based on nationally endorsed competency standards" (OECD, 2003, p. 74). In addition Veal (2009) asserts that:

> The discussion of competencies is never far away from a discussion of national qualification frameworks, since any successful national qualification framework must be based upon an acceptance of measurable competencies (Veal, 2009, p. 2764).

In Australia,

> *"Competency standards are combined to form the vocational qualifications within the Australian qualification framework (AQF), which is a unified system of twelve national qualifications in schools, vocational education and training and the higher education sector" (Dyson & Keating, 2005, p. 8).*

Moreover, Tuck (2007) claims that an effective NQF relies on four factors: "(1) management of the framework; (2) standards and qualifications development; (3) quality assurance of education and training and (4) assessment and certification" (Tuck, 2007, p. 31). Hence, NCS plays a role as an instrument to measure and classify the qualifications (Allais, 2010; Young, 2005). The measurable competencies, standards or unit standard, assessment and certification are all features of NCS that underpin the effectiveness of a qualifications framework.

The current study also argues for the interconnectedness of the four policies of NCS, NQF, certification of competency and CBET. The literature uses a range of terms for CBET which include outcome-based education (OBE) and competency-based training (CBT) (Spreen, 2001; Tuck, 2007). In the guidance book for the development of the Regional Model of Competency Standards (RMCS), the International Labour Organisation (ILO) asserts that "Skill standards are now the common basis for vocational training programs, and testing and certification in many countries" *(ILO, 2006).* In addition, the ILO states that

> *literature concerning competency standards in most of the cases comes with three other connected policy agendas/initiatives of qualification framework (NQF), CBET and certification of competency (ILO, 2006).*

Considering that the relevant literature discusses NQF, with few focusing on NCS, it should be noted that the policy of Indonesian Competency Standards has been in place nine years prior to the promulgation of the Indonesian Qualification Framework (IQF) in 2012. Accordingly, the current study posits that the policy of NCS is an integral part of the broader policy of NQF and therefore the literature review addressing NQF is associated with the discussion of NCS.

NQF is a relatively new and fundamental issue in workforce and educational policy. The history of NQF dates back to 1983, when the 16-plus Action Plan was launched in Scotland (Raffe, 2003; Young, 2003). The Action Plan was the first scheme offering a modular package for 16-18 year old youth with particular competencies (Raffe, 2008). The detail in the module was the earliest form of a competency standard, for example:

> Each module was defined primarily in terms of learning outcomes and associated assessment criteria; the module descriptors suggested appropriate learning and teaching approaches and contexts of learning, but lecturers and teachers had substantial discretion in how to 'flesh out' each module. Modules were internally assessed with a simple pass/fail outcome (Raffe, 2008, p. 23).

The milestone in NQF followed in 1987, when the National Council for Vocational Qualification (NCVQ) was established in the UK (Allais, 2010). In 1990, the New Zealand Qualification Framework (NZQF) was created and was fully operationalised in 1997, making it the first official "National Qualification Framework" in the world (Allais, 2010). Rapidly growing interest in NQF then followed in Malaysia,

Mexico, Australia, Scotland, Singapore, Brazil, France, other European countries and countries in Africa, South America, and the Asia Pacific (Allais, 2010; Mahmood, 2009).

2.2.2 Driving factors

Global interest in NCS/NQF arose because of a number of political and economic factors. The assumption that employers are in the best position to identify training needs is reflected in the primary role of the private sector in neo-liberal economies (Allais, 2003; Young, 2005). Most of the development of NCS is led by the private sector rather than unions or governments (Young, 2009b). The second political context of the development of NCS/NQF is shown by the initial motive of certifying unqualified school leavers (Young, 2005). Previously, the unqualified workforce only had opportunities for employment in manual jobs. The third political function of the development of NQF provides a political instrument to control employers (Young, 2009b). The gap between the training sector and the workplace is a persistent problem. NCS/NQF, therefore, swaps the control from educational provider to employers in determining workforce employability (Allais, 2007; Young, 2003).

Improving lifelong learning is also considered to be a political factor in the development of NQF (Veal, 2009). The qualifications from an NCS structure certify those who want to be recognised as skilled regardless of when and where they have learnt. The last political factor of NCS/NQF is offering equality regardless of the socio-cultural

background or gender of the candidate (Tuck, 2007; Veal, 2009). This factor is beneficial both in countries with multicultural backgrounds or countries in developing a more democratic system.

There are multiple economic factors behind the pervasive development of an NQF, for example: (1) global pressure influencing the spread of globalisation (Veal, 2009), (2) labour mobility and migration at the national, regional and international level (Paryono, 2009), (3) labour mobility requires mutual recognition of competency standards and (4) the expectations of consumers (Veal, 2009).

Developed and developing countries have different driving factors behind the development of NQF. Expanding opportunities to enter into global markets is the first motivating factor behind the development of NQF in developing countries, whilst developed countries want to sustain their productivity (Paryono, 2009). Developing countries with large populations or limited natural resources develop NQFs to supply a skilled workforce for developed countries. Mutual recognition of workforces across countries is one of the goals (Paryono, 2009; Veal, 2009).

Paryono (2009) posits that the increasing labour mobility across borders contributes to the development of NQF. According to the data from the Global Commission on International Migration (2005), the number of international migrants is estimated to have doubled in the past 25 years, although total proportions are, on average, no more than around three per cent (GCIM, 2005). Furthermore, Paryono (2009) details that the migration is mainly from places with lower economic

prospects to countries with higher economic prospects and also internal migration within regions.

2.2.3 Policy borrowing

Much research into NCS/NQF reveals that policy borrowing has extended the global adoption of NCS (Allais, 2010). The most borrowed model of policy for NQF comes from three countries of England, Scotland and New Zealand where NQFs have been in place since the 1980s (Young, 2005). Nowadays, more than 138 countries have implemented, or are adopting NQF into their national policy (Young & Allais, 2013b). Allais categorises the adoption of NQF in five stages which include: (1) officially established through policy/regulation and the framework works for the objective of NQF; (2) a country that in the process of development and implementation of NQF; (3) a country that is exploring the model of NQF suits with the national context; (4) for a country that is considering to adopt NQF and (5) a country that has established or is establishing a competency-based or competency framework with different levels and areas (Allais, 2010).

Scholarly literature about policy borrowing has advised the problems, the potential cost, the dangers and the risks of policy borrowing in the introduction of the policy of NCS/NQF. Among the advice is that borrowing the policy of NCS/NQF is understandable though highly problematic (Young, 2005) and a risky process (Coles, 2006). Accordingly, scholars and international agencies have advised countries introducing NCS/NQF to carefully consider before borrowing

the policy. The issues to be considered include local and cultural contexts, the level of education provision, policy resources, national identity and policy environment (Allais, 2010; Coles, 2006; Young, 2009a).

Allais (2010) argues that policy borrowing became the dominant trajectory of the adoption of NCS/NQF because:

> *"Many countries appear to be influenced more by the claims made about NQFs in other countries than by their proven track records, without considering differences in contexts, and without understanding all aspects of how the framework was developed and implemented (Allais, 2010, p. 3).*

Careful adoption and moving from policy borrowing into policy learning were among the recommendations (Chakroun, 2010), since

> "Whether and how these externally induced reforms are locally implemented is an issue of great importance. Borrowing is not copying. It draws our attention to processes of local adaptation, modification, and resistance to global forces in education" (Steiner-Khamsi, 2006, p. 5).

In brief, policy borrowing speeds up the global adoption of NCS/NQF, however countries introducing the policy have been advised to thoroughly learn from the experiences of the early adopters and take into account the local environment before rolling out the initiative (Chakroun, 2010).

The following section discusses in a more detailed account of policy borrowing which can be defined as issues relating to how the foreign example is used by policy makers at all stages of the processes of initiating and implementing educational change (Phillips & OCHS, 2003). David Phillips develops a composite model of the process of

policy borrowing in education which incorporates four broad processes of (1) cross-national attraction; (2) decision; (3) implementation and (4) internalisation/indigenisation (Phillips & Ochs, 2007).

Phillips identifies eights impulses of the cross-national attraction to borrow a policy from overseas. They include internal dissatisfaction, systemic collapse, negative external evaluation, economic change/competition, political and other imperatives, novel configurations, knowledge/skills innovation and political change. Further, Phillips asserts that novel configurations may initiate from globalising tendencies, for example, effects of EU education and training policy and various international alliances (Phillips & Ochs, 2007). The four stages of educational policy borrowing developed by Phillips and Ochs (Phillips & Ochs, 2007) and these four stages are presented in Fig. 2.1.
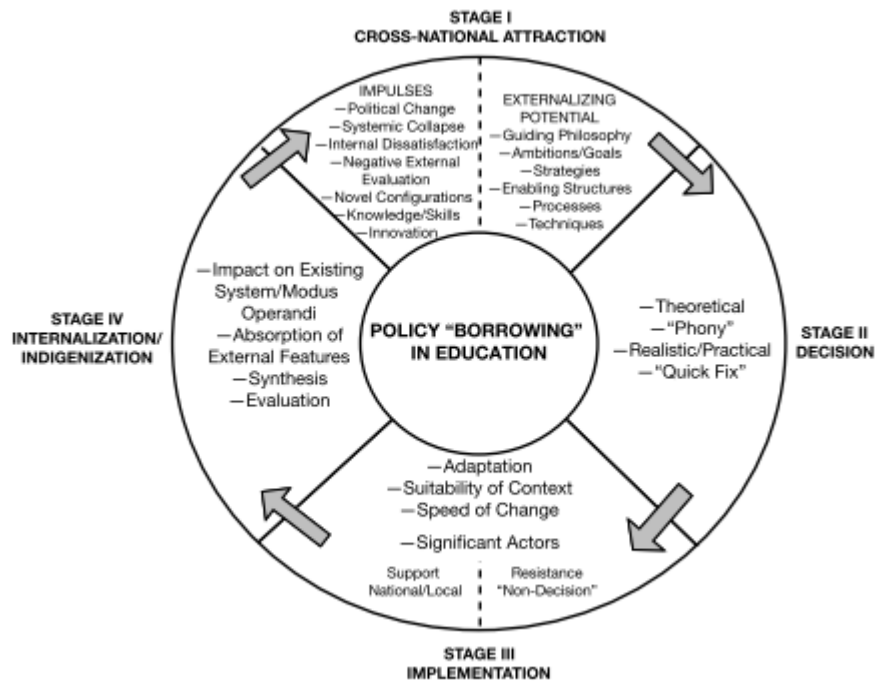
Figure 2.1 The four stages of educational policy borrowing by Phillips and Ochs (2007).

(1)   Cross National Attraction: impulses and externalising potential

The first step of the model refers to the reasons why one nation may need to borrow from another country. The reasons can differ from internal dissatisfaction, collapse of a system due to a natural disaster or war, negative external assessment like the results of international studies or research, economic crisis and competition, political and other demand for satisfying voters. Understanding the motives behind educational borrowing plays an important role in understanding why a particular educational policy is being borrowed. Phillips & Ochs (Phillips & Ochs, 2007) maintain that development of educational reform is a process which begins with a guiding philosophy or ideology relating to

ambitions/goals, moving through its strategies followed by developing policy structures and finally the process and techniques. Any changes to the process will lead back to the guiding philosophy.

(2)   Decision

The second step refers to the types of decisions made by policy makers. Decisions can be theoretical, realistic and practical, quick fix and/or phoney. Decisions that can be described as "theoretical", "quick fix" or "phoney" are difficult to implement (Phillips & Ochs, 2007, p. 57). "Theoretical and "quick fix decisions" are usually made by governments for political reasons. Often such decisions involve aims that are too broad and cause problems for implementation; or the local contextual factors are not considered and no follow-up activities take place. However, borrowed policies become more realistic and practical when motivations are clear and contextual factors are considered.

(3)   Implementation

The underlying factors that contribute to the success of the implementation are identified as "the contextual conditions of the borrower's country" and the speed of change of "attitudes of the "significant actors" (Phillips & Ochs, 2007, p. 58). According to Phillips, some people in place have the power to delay, speed up or stop the change, thus implementation can be more effective when applied with reduced amount of power.

(4)   Internalisation/indigenisation

The last two steps refer to what Phillips and Ochs (2007) names "internalisation" or "indigenisation" or "domestication" of policy (p. 59).

At this stage the borrowed practice "becomes part of the system of the education of the borrower country" (p. 59). Phillips (2007) made a detailed case study analysis of a very successful implementation of borrowed educational practices from Switzerland to London schools. The systematic analysis of all the four steps of the model suggested "careful consideration of the local and national context across all the four stages" (Phillips & OCHS, 2003, p. 458). The local and national context included components of the culture of the classroom such as tolerance for students' mistakes, the respective roles and responsibilities of the teachers in both countries and the seating arrangement in class. All of this contributed to the successful implementation of the borrowed policy.

The examples provided above highlight the importance of making a detailed study of how the international trends in national competency standards from developed countries were borrowed and implemented in Indonesia which was categorised as a developing nation. It also suggests the strategies of the adoption the global policy trend into the local and a unique environment of a province in Indonesia.

2.2.4 National competency standards and education reform

Educational reform is the pivotal aspect of the establishment of NQF. NQF itself is part of the reform by which other aspects of educational reform are expected to follow (Allais, 2007, 2010; Tuck, 2007; Veal, 2009; Young, 2005, 2009a). This reciprocal relationship between NQF and educational reforms, theoretically, is one of the most

promising benefits for all countries with TVET systems. NCS/NQF promises educational reform by shifting the orientation from supply-driven qualifications into demand-driven and more importantly by emphasising outcome-based education and training (Young, 2009a). Young, furthermore, argues that the benefit of an NCS/NQF is to initiate educational reform by the development of competency-based education and training (Young, 2009b). This argument is also noted by the International Labour Organisation as the impact of adopting an NQF. Tuck (2007) concludes that NQF "can play an important role in supporting reforms" (Tuck, 2007, p. 24).

The change in orientation from supply-driven to demand-driven education and training will also drive reform in the curriculum and assessment and evaluation model (Tuck, 2007; Young, 2005). This is because NCS is led by employers who claim to be in the best position to identify the workplace needs regarding education and training (Young, 2009b). Moreover, NQF requires radical reform in education not only for curriculum and assessment related aspects, but also for reform in teacher qualifications, teaching methods, teaching materials and more importantly in changing the orientation of the whole education system.

As a crucial part of the growing interest of NCS/NQF across the globe, Young (2009a, 2009b), Tuck (2007), and Allais (2010; 2007), and Allais (2010) advise policy makers to carefully take into account the option of choosing NQF as the pillar of education reform. Furthermore, Veal (2009) advocates that policy makers ponder other educational policy reforms rather than establishing NQF, due to the huge resources

needed. Initially a limited number of empirical studies had been carried out in NQF (Young, 2007). An example of the flaws in the qualification model in driving educational reform, was revealed by Allais (2007), in her critical study of the implementation of the South African Qualification Framework. Allais concludes that:

> This specific type of qualification framework cannot provide a basis against which learning programmes can be designed, delivered, assessed, and evaluated. It also cannot be either the stimulus or regulatory mechanism for provision. However, by claiming to be the mechanism to drive educational reform, it is likely to divert attention and resources away from increasing the quality and quantity of education provided (Allais, 2007, p. 377).

However, due to limited study in this area, Allais (2007) recommends that more empirical research in the field of implementation of NCS/NQF is needed to discover other countries' experiences in establishing NQF and more importantly the influence on educational reform in aggregate.

Implementation is one of the critical aspects in a successful application of the policy of NCS/NQF in bridging the gap between education, training and the workplace. As "a revolutionary change", Young argues that "all countries implementing national qualification frameworks have faced problems" (Young, 2009a, p. 2917). This is due to two crucial aspects: (1) the failure of the governments to anticipate the radical implications of the changes and (2) the lack of political support or adequate resources. Conceptually, the key to successful implementation of an NQF relies on: (1) policy coherence across different ministers (Tuck, 2007), (2) genuine support and trust among

stakeholders i.e. employer organisations and worker organisations (Tuck, 2007; Young, 2007), (3) the clarity of the policy aims (Tuck, 2007), and (4) preliminary studies to identify potential problems and the development of the best implementation model. Successful implementation of NQF is determined by the leverage of the authority to handle its inhibitors. Young (2009a) identifies three possible inhibitors: (1) over-complex approaches; (2) over-ambitious visions and (3) top-down strategy.

The existing literature has addressed the challenges in the implementation of NCS/NQF. However, little attention has focused on researching NCS/NQF under the guise of implementation theory as a tool for analysis. There has been little attention given to the consideration of NCS/NQF as a policy issue and an object of policy study (Allais, 2010). The previous study by Allais (2010) about the implementation of NQF in 16 countries reveals the problems in implementation but they have not been conceptualised under the guise of a policy perspective.

2.2.5 Indonesian Competency Standards and TVET

In Indonesia, the concept of Indonesian Competency Standards grew from *Paspor Keterampilan* (Skill Passport) that was proposed in 1997 in the document *Keterampilan Menjelang 2020 untuk Era Global* (Skills toward 2020 for Global Era) by the Ministry of Education and Culture (MoEC). The proposal of the Skills Passport covered four levels of competencies that included international, regional and national

standards and general skills as a passport to work in home and small industries with the emphasis on improving livelihoods in rural and remote areas (Supriadi, 2002, p. 453). Nevertheless, this proposal did not eventuate due to the Indonesian economic and political crisis at the end of 1990s.

In 2003, the agenda of national competency standards returned when the Manpower Act was promulgated. This was led by the Ministry of Manpower (MoM) not by the MoEC (Supriadi, 2002). In the same year, the first version (amended in 2004 and 2007) of the Ministerial Regulation in relation to Indonesian Competency Standards, was promulgated in template form and has been used since 2003 as a basis for the guidance and development of unit competency standard regulations (Peraturan, 2007). At present there are approximately 295 Indonesian Competency Standards regulations derived from this template (Kemenakertrans, 2013b).

The development of Indonesian Competency Standards was underpinned by four regulations. The first is Act Number 13 regarding Manpower that was regulated by the President Megawati Sukarno Putri on 25th March 2003 (Undang-Undang, 2003a). The second is the Ministerial Decree (KEPMEN) number 227 related to the Procedure of the Development of National Competency Standards that was decreed by the Ministry of Manpower in 2003. This Ministerial decree was amended twice, in 2004 and in 2007 (Peraturan, 2007). The third is the Government Regulation Number 23 about Indonesian Professional Certification Authority (BNSP) promulgated on the 5th of August 2004

(Peraturan, 2004). The fourth legal document is the Government Regulation (PP) Number 31 about the National System for Manpower Training (SILATKERNAS) that was decreed on 22nd September 2006 under President Yudhoyono's administration (Peraturan, 2006c).

However, those regulations that support the policy of Indonesian Competency Standards are problematic for the following reasons. The problem of legal drafting of the policies of Indonesian Competency Standards and the Certification Authority is revealed by the absence of chronology in the timeline of the legislation. The BNSP is the institution responsible for the development of the competency standard (an element of Indonesian Competency Standards) and is also responsible for the certification of Indonesian Competency Standards. However, the policy of Indonesian Competency Standards was promulgated earlier (October 2003) than the regulation of the BNSP that was introduced some ten months later (August 2004) (Kemenakertrans, 2003; Peraturan, 2004). The same problem can also be seen in the chronology of the legislation of the Indonesian Qualification Framework (IQF). International experiences place national qualification frameworks (NQF) as an umbrella regulation for NCS (Allais, 2007). Accordingly the Indonesian Qualification Framework should have been regulated earlier than Indonesian Competency Standards.

Analysing the regulations related to Indonesian Competency Standards also reveals the problem of inter-ministerial overlap. The Indonesian Competency Standards is regulated and developed by the Ministry of Manpower (MoM) while the draft of the Indonesian

Qualification Framework (IQF) was developed by the Ministry of Education and Culture (MoEC) (Kemenakertrans, 2003; Kemendiknas, 2010). Young has noted concerns of overlapping of government ministries in developing the NQF (Young, 2005, 2009a). An example of a successful implementation of NQF without overlapping ministerial function is that of New Zealand, which used a single authority to regulate the synergy between the education and workplace sectors (Young, 2009a).

Under the domain of the Ministry of Education and Culture (MoEC) Indonesian National Competency Standards is one of the official resources in the development of Vocational Schools' curriculum, especially in the development of the curricula and syllabi for the vocational subjects (known in the Vocational School system as the *Produktif* subjects). The influence of the Indonesian Competency Standards policy on the Vocational School curriculum is evidenced in two policy documents. The first is in the research paper of the 2006 Vocational Schools' curriculum, which is known as KTSP (school-based curriculum). In the Indonesian legal drafting protocol, research papers report the results of empirical studies and the analysis of a proposed regulation or policy (Peraturan, 2005b). The research paper of the KTSP acknowledges that the development of the core vocational subjects (known as *Produktif* subjects) must refer to the Indonesian Competency Standards (Kemendiknas, 2007b, p. 6).

The second policy document is "the handbook of the development of syllabus in the KTSP" curriculum for Vocational Schools

(Kemendiknas, 2007b, p. i). This handbook provides a detailed correlation between the students' competencies in Vocational Schools' curriculum and the competencies described in Indonesian Competency Standards. The handbook states that: "The *Produktif* subjects (the core vocational subjects) are aimed at catering for pupils with competencies according to the Indonesian Competency Standards" (Kemendikbud, 2007a, p. 10).

2.2.6 Certification agencies

The Indonesian government established a special agency responsible for the implementation of certification of competency under the Indonesian Competency Standards framework. The establishment of a National Authority for Certification of Profession (BNSP) was mandated by the 2003 Manpower Act as stated in Article 18 Paragraph 4: "In order to carry out certification of competency the government set up the National Authority for Certification of Profession (BNSP)" (Undang-Undang, 2003a). Seventeen months after the enactment of the 2003 Manpower Act, the government promulgated the establishment of BNSP under the Government Regulation number 78 Year 2004. However, the BNSP was only fully operational at the beginning of 2005 (Sulistyaningsih, 2010).

The regulation mandates one primary task of the BNSP, as stated in Article 3: "BNSP works for certification of competency" (Undang-Undang, 2003a). Additionally, the regulation sets out that BNSP is an independent institution responsible to the President. However,

financially and administratively BNSP is attached to MoM, as the regulation states in Article 10 that the secretariat of BNSP is located in MoM and in the article 11, it maintains that MoM proposes that the list of the board members of BNSP be approved by the President (Undang-Undang, 2003a). The regulation further mandates the BNSP to establish the professional certification body (LSP) as the institution to license the establishment of assessment centre (Assessment Centre) (Sulistyaningsih, 2010). The secretariat of BNSP is under the *Direktorat Jenderal Pembinaan Pelatihan dan Produktivitas* (Directorate General for Training and Productivity) with a total of 28 staff in 2013 (Kemenakertrans, 2013b). The Position of Board of BNSP and the Secretariat of BNSP in MoM's organisation can be seen in Figure. 2.2.
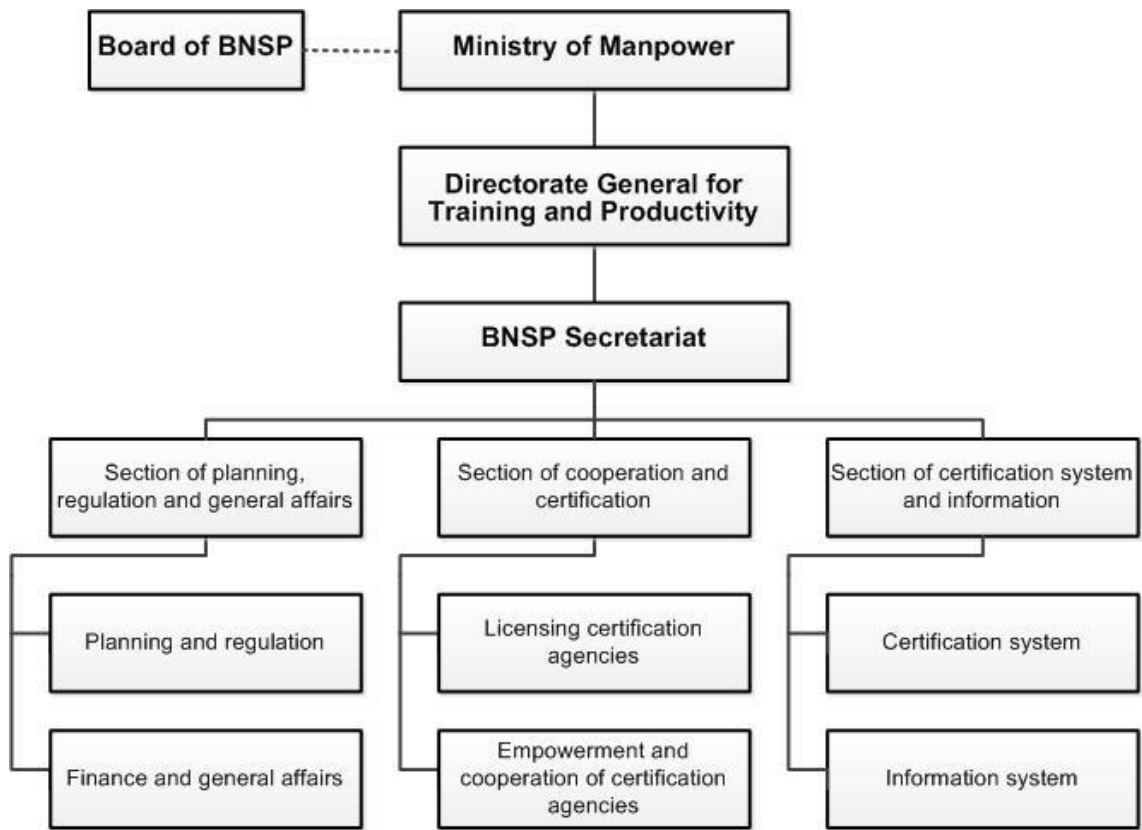
Figure 2.2 The position of Board of BNSP and the Secretariat of BNSP in MoM's Organisation (Kemenakertrans, 2010a)

According to a report published in 2014, the BNSP established 113 professional certification bodies (LSPs) in 2013 and increased these to 133 in 2014 and is expected to reach 300 LSP in 2015 (BNSP, 2014c). From the same report, there were 1715 assessment centres (Assessment Centres), 7881 assessors and 1,954,858 certificates of competency granted in the period from 2006 to 2013 (Kemenakertrans, 2013b).

2.3 Global and national context of TVET

The TVET sector is the central pillar of the development of the standardised competency system and therefore the qualification of training participants. The growing attention globally to vocational education is on the rise, underpinned by a belief in its ability to strengthen economic growth and national competitiveness (Maclean & Wilson, 2009). UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training and UIS (UNESCO Institute for Statistics) claimed that 80 % of occupations require technical and vocational skills, which is one of the driving factors in the development of TVET (Maclean & Wilson, 2009). Also, the need for education of 50 million worldwide in the productive age group (15-20 years old) is another important reason behind the increasing attention paid to vocational education (Maclean & Wilson, 2009). The two rationales mentioned above clearly highlight the belief that vocational education plays an important role in both current and future workforce development.

In spite of rising interest in vocational education, many issues surrounding this education stream have been identified. In this section, the two groups of identified issues will be compared. Firstly, UNESCO-UNEVOC named 13 global issues related to vocational education (Maclean & Wilson, 2009). The 13 issues are image, access, facilities, planning and administration, curriculum, teaching and learning, teacher qualification and conditions (salary, living standard, working environment), information and communication technology, finance,

testing and certification and the relationship between education and enterprises. Secondly, in a regional context, SEAMEO Voctech (Southeast Asian Ministers of Education Organisation Regional Centre for Vocational and Technical Education and Training) identified ten issues confronting TVET. They are ICT in vocational education, relevance of curriculum, assessment, research and development, access and equity, management and quality assurance, poverty reduction, life-long learning, promoting decent work, and breaking down the barriers between formal-informal-non formal approaches (Omar & Paryono, 2008).

In Indonesia, policy makers and educational practitioners have had to deal with complex external problems regarding education and training. A large population (the fourth largest in the world), low GDP (105th in the world), a high rate of both educated and uneducated unemployment, a rural and urban gap in development and the growing trend towards rural to urban migration, are all examples of the external challenges facing vocational education and training (Gray & Paryono, 2004). Internally, education in Indonesia faces three major problems: (1) access, (2) quality, and (3) relevance (Ali, 2009; Kemendiknas, 2007c; Suzetta, 2009).

The problem of access to education is illustrated by the fact that in 2005, 3.2 % of children aged 7–12 years old were unschooled, as were 16.5 % of teenagers aged 13 – 15 years old (Kemendiknas, 2007c). In addition, the literacy rate was also low. The data published by the Ministry of Education and Culture (MoEC) shows that 15.4 million

(10.21%) of the population aged 15 years old and below were illiterate (Kemendiknas, 2007c). The problem of access is also indicated by the gap between rural and urban areas and between high and low economic status of the population (Tilaar, 2006). These access gaps were more evident in secondary and tertiary education (Kemendiknas, 2007c).

The domination of private Vocational Schools with 73.62% (5,589) of the total 7,592 Vocational Schools and the ability of the government to provide only 26.38% (2,003) public Vocational Schools signifies a potential problem in the overall quality of Indonesia's Vocational Schools (Direktorat PSMK, 2012). The data from the Ministry of Education and Culture in 1999 cited by Bangay (2005) stated that, on average, the performance of private secondary schools in Indonesia was categorised as "insufficient". The lack of financial support and limited resources are impediments to the development of private schools in Indonesia. Private schools in Indonesia, in contrast with privately owned schools in many developed countries, are run by religious organisations or by non-profit foundations (Bangay, 2005). Improving the quality of Vocational Schools is a huge task, especially given the large number of students (3,095,704) and teachers (238,426). Data from the Ministry of Education and Culture (MoEC) also indicates that the training background of 40 % of Indonesian teachers was not relevant to position (Kemendiknas, 2007c). A consistent educational policy and the sustainability of financial support are two factors that need to be addressed for the improvement of quality and relevance of Vocational Schools in Indonesia.

A possible reason for the low quality of education in Indonesia is shown by the limited budget for education and training. According to a report by Asia Times Online,

> the Indonesian education budget was the lowest in Asia, and only amounted to seven per cent of the State Budget in 2000, while the neighbouring countries of Malaysia, Philippines, Singapore and Thailand allocated from 25 to 35 per cent of their annual budget to education (Raihani, 2007, p. 179).

Supriadi stated that the quality of TVET depends on greater investment than in other forms of education, otherwise it will deteriorate if given a limited financial budget (Supriadi, 2002).

Inconsistency in educational policy is another crucial problem in Indonesia's education system. Many commentators such as Iwan Jayadi, Bramma Aji Putra and H.A.R Tilaar have stated that every five years, when a new minister is appointed, they will change the policy of the previous minister (Jayadi, 2009; Putra, 2011; Tilaar, 2004). For example, in 2004 a competency-based curriculum (KBK) was introduced under the policy of Malik Fadjar (2001-2004), but two years later a new minister was appointed (Bambang Sudibyo, 2004-2009) and the new school-based curriculum (KTSP) was introduced (Raihani, 2007). The 2004 competency-based curriculum (KBK) was implemented to develop nationally standardised competencies, to link school leavers with job and to accommodate local needs (Raihani, 2007). However, the competency based curriculum policy that attempted to link education and manpower development with the implementation of National Competency Standard (NCS) has not been put in place. This was

because the newly appointed minister decreed the new policy of the 2006 school-based curriculum (KTSP) instead of continuing the policy of competency-based curriculum from the previous minister (Putra, 2011; Tilaar, 2004).

Another illustration of the development of Vocational Schools in Indonesia is the policy to expand their capacity by increasing the ratio of vocational schools to general schools (SMA) from 70% SMA to 70% Vocational Schools by 2015. This policy was developed without a comprehensive supporting study but driven by the fact that secondary school leavers made up the biggest proportion of the unemployed (Kemendiknas, 2007c). Meanwhile, a study carried out by the World Bank reveals that this target "is unlikely to be achieved" (Chen, 2009, p. 5).

Notwithstanding the issues discussed above, the current climate is one of an increased expectation of TVET, while noting the tremendous challenges of improving the quality and growing the delivery of training. Institutionally, TVET is imperative to the success of the policy of NCS/NQF.

2.4   Experiences from the earlier implementers of NCS/NQF

This section discusses the findings from two studies categorised as the earlier experiences in implementing the policy of NCS/NQF. The two studies were conducted by Stephanie Allais (2010) in 16 countries for the International Labour Organisation (ILO) and a study by Ernsberger (2012a) in India. The 16 countries of the Allais study were

Australia, Bangladesh, Botswana, Chile, Lithuania, Malaysia, Mauritius, Mexico, New Zealand, Northern Ireland, Russia, Scotland, South Africa, Sri Lanka, Tunisia, Turkey and Wales. Allais acknowledges the complicated analysis of a comparative study in dealing with the diversity in a country specific context of the development and implementation of NCS/NQF. Moreover, Allais discloses that no policy implementation framework/theory was applied in her study: rather the focus was on three main issues: (1) Monitoring or analysing the impact of NCS/NQF; (2) The evidence of impact of the policy and (3) Stakeholders' view of the impact of NCS/NQF.

The study by Allais identified underlying issues in the implementation of NCS/NQF. The first identified topic was the eminent relationship between competency standards and the qualification framework. In Botswana: "Qualifications consisting of parts which could be separately awarded, and which were defined through learning outcomes or competencies" (Allais, 2010, p. 39). In Sri Lanka, "there is a seven-level National Vocational Qualification Framework which so far has competency standards for 45 qualifications, based on 63 skills standards" (Allais, 2010, p. 41). In the first issue, the problematic implementation of competency standards as a foundation of qualification was revealed. For example, in Botswana the development of competency standards was reported as slow and "most training providers do not offer courses based on the newly developed standards" (Allais, 2010, p. 40). A similar problem was reported in South Africa where "most of the outcomes-based qualifications and unit standards

(another term for competency standards) have never been used" (Allais, 2010, p. 34).

The lesson from a successful implementer, for example, New Zealand, supports that the key to success in the implementation of NQF is underpinned by the adoption of unit standards in their training programs and therefore their qualifications. The experiences of earlier implementers suggest that the effectiveness of the implementation of competency standards would have an impact on the success of the recently promulgated policy of Indonesian Qualification Framework.

The second issue emanating from Allais's study concerns implementation agencies with particular issues in their capacity and inter-organisation tension. In Sri Lanka, 11 ministries operated TVET institutions where curriculum design, training processes and assessment varied from institution to institution. This diversity was believed to be the cause of the unmet industry demand (Allais, 2010). The implementation of NCS/NQF in Turkey experienced a lack of accredited institutions to conduct testing and certification activities. Russia on the other hand was dealing with uncoordinated processes among the agencies responsible for the development and implementation of NQF. The study by Ernsberger in India raised a similar problem of political division between ministries and the different priorities between them (Ernsberger, 2012b). These experiences from other countries suggest that a complex organisation where 13 ministries operate TVET would have an impact on the process of implementation due to issues of conflict of interest and tension between

ministries with the same or different agendas on Indonesian Competency Standards and IQF.

Another important theme that arose from the study was the problem of support from external bodies. The two studies emphasised the decisive contribution of external bodies, mainly from industry for the successful implementation of NCS/NQF. Among the countries dealing with weak support from industry were Botswana, Bangladesh and India (Allais, 2010; Ernsberger, 2012a).

The study of Allais and Ernsberger addresses the problem of implementing agencies, curricular resources, conflict of interest and external bodies in how NCS/NQF was implemented in 17 countries. However, the absence of implementation theory in both studies is not able to provide a detailed account of implementation issues that posed problems from the perspective of the grass roots level implementers.

2.5   Van Meter and Van Horn policy implementation framework

In achieving the purpose of this study, the implementation of the Indonesian Competency Standards was evaluated under the lens of the Van Meter and Van Horn implementation model. In this section, Van Meter and Van Horn's model is contested with a model of policy implementation analysis developed by Sabatier and Mazmanian. Among the two mainstreams in the implementation analysis, the top-down and the bottom-up, the two compared models are categorised under the group of the top-down policy analysis (Mazmanian & Sabatier, 1989; Pulzl & Treib, 2007). The policy of Indonesian Competency Standards

can be categorised as a top-down policy as it was developed by the central government and expected to be carried out by implementers in lower level districts, schools and centres (Peraturan, 2007).

The area of contestation includes variables embraces in the policy implementation analysis, the application of the model in recent studies and the strength of the model in comparison to the other. Mazmanian and Sabatier developed a model of implementation analysis with 16 independent variables related to three broad categories of tractability, ability of the statute to structure implementation and non-statutory variables that affect implementation (Hill & Hupe, 2002; Mazmanian & Sabatier, 1989).

1. Tractability of the problem. Tractability has to do with whether the social problem that a statute is addressing is easy to understand and deal with. Four variables in this model are related to that:

   a. Technical difficulties

   b. Diversity of target group behaviour

   c. Target group as a percentage of the population

   d. Extent of behavioural change required (Mazmanian & Sabatier, 1989; P. A. Sabatier, 1986).

2. Ability of statute to structure implementation. It deals with the extent to which policy formulators really contend with implementation during the early phase of making policy. Seven variables are related to that:

   a. Clear and consistent objectives

   b. Incorporation of adequate causal theory

c. Initial allocation of financial resources

d. Hierarchical integration within and among implementing institutions

e. Decision rules of implementing agencies

f. Recruitment of implementing officials

g. Formal access by outsiders (Mazmanian & Sabatier, 1989; P. A. Sabatier, 1986).

3. The non-statutory variables affecting implementation incorporate five contextual and environmental factors:

a. Socioeconomic conditions and technology

b. Public support

c. Attitudes and resources of constituency groups

d. Support from sovereigns

e. Commitment and leadership skills of implementing officials (Mazmanian & Sabatier, 1989; P. A. Sabatier, 1986).

One broad variable categorised as a dependent variable in the implementation process comprises five sub-variables of:

a. Policy outputs of implementing agencies

b. Compliance with policy outputs by target groups

c. Actual impacts of policy output

d. Perceived impacts of policy output

e. Major revision in statute (Mazmanian & Sabatier, 1989, p. 22)

Moreover, Mazmanian and Sabatier develop their model which proposes six conditions of effective implementation: (1) policy objectives are clear and consistent, (2) the program is based on a valid causal theory, (3) the implementation process is structured adequately, (4) implementing officials are committed to the program's goals, (5) interest groups and (executive and legislative) sovereigns are supportive, and (6) there are no detrimental changes in the socioeconomic framework conditions (Mazmanian & Sabatier, 1989).

In analysing implementation process, the Van Meter and Van Horn model on the other hand is considered as simpler by proposing six broad variables which include standards and objectives, resources, inter-organisation communication, characteristics of the implementing agencies, economic, social and political conditions (external factors), and disposition of implementers (Hill & Hupe, 2002; Horn & Meter, 1977). In developing their theoretical framework, Van Meter and Van Horn describe themselves as having been 'guided by three bodies of literature' (1975: 453). The first is organisation theory, and particularly work on organisational change, the second is studies of the impact of public policy and particularly of the impact of judicial decisions and some studies of inter-governmental relations (Horn & Meter, 1977; Meter & Horn, 1975).

The Van Meter and Van Horn's comparatively straightforward model provided a valuable starting point for a number of studies of implementation processes (L. J. O'Toole, 1986; L. J. O'Toole & Montjoy, 1984). Their model intends to direct the attention of those who study

implementation rather than provide prescriptions for policy makers (Rampedi, 2003). The six factors of the Van Meter and Van Horn are described here:

a.   Standards and objectives

The first factor in the implementation processes model addressing standards and objectives by which the performance of implementation processes can be ascertained. Van Meter and Van Horn argued that the objectives and the goals of a particular policy need to be identified to assess whether a policy is accomplished or unsuccesful (Horn & Meter, 1977). Policy standards and objectives can be identified from policy papers established prior to the policy making process, law/regulation underpinning the policy, strategic plan and other relevant documents (Horn & Meter, 1977). Some policy objectives are manifest and easily measurable, however, in most situations researchers are dealing with hazy indicators as a result of ambiguities and contradictions in the referred policy documents, regulations and programs guidelines (Horn & Meter, 1977). In the situation of indeterminate evidence available, Van Meter and Van Horn suggested that an individual researcher has to build and deduce policy standards, objectives and performance indicators to assess the implementation processes (Horn & Meter, 1977).

b.   Resources for implementation

Van Meter and Van Horn made the point that policies are not self-executing. For that reason, they set the second factor of successful implementation as the availability of resources to facilitate

implementation processes (Horn & Meter, 1977). The resources may be in a form of a fund, facilities, something of value and incentives to encourage implementers and implementing agencies to take part in the policy delivery. Van Meter and Van Horn argue that funding is not sufficient. Other forms of resources may be needed to refer to the context of the policy.

c.   Inter-organisational factors in implementation

In a top-down system of policy implementation, from central government to district or school level, inter-organisational communication and enforcement activities are vital to implementation. Van Meter and Van Horn highlighted the important process of communication between top level of policy and the grass roots level implementation. In particularly, transmitting policy standards and objectives from top into lower level in mobilising the lower level implementers to take part in the policy implementation. Among the ways of communicating standards and objectives are propagation, persuasion, coordination and harmonisation. Effective inter-organisation communication entails clarity of standards and objectives from top level and accuracy and consistency of information. Distortion of information therefore will create ambiguity of policy direction and as a result will obstruct effective implementation. Van Meter and Van Horn's model identifies two methods for inter-organisational enforcement, the first is providing technical assistance for implementers in order to act as directed by top level agencies; the second method is

enforcing sanctions for non-committed implementers (Horn & Meter, 1977).

The Van Horn and Van Meter's model does address conflicting information among the agencies or between hierarchical levels of implementers, however the model does not address tension, rivalry and also conflict of interest between two implementing agencies.

d.   Characteristics of the implementing agencies

This component of the model highlights the formal structural features of organisations and the informal attributes of their personnel that impact the agency's capacity to implement the policy (Horn & Meter, 1977).   It includes elements that affect an agency's ability to implement policies: (1) the competence and size of implementers; (2) the degree of hierarchical control within the implementing agencies; (3) political resources (e.g., support among legislators and executives); (4) the vitality agency and implementers; (5) the degree of "open" communications; and (6) the agency's formal and informal linkages with the "policy-making" or "policy-enforcing" body (Horn & Meter, 1977).

e.   External factors (economic, social and political conditions)

This factor addresses external conditions or environmental variables that may impact on implementation, and thus the effectiveness of a particular policy. Van Meter and Van Horn identified the following elements within this component to assess economic social and political conditions: economy, social, public opinion and also political conditions. Another part of the external factors is scanning the

interest groups that support or oppose to the policy and also identifying the attitude of elites whether the high level profile in the implementation jurisdiction are favourable or unfavourable to the policy (Horn & Meter, 1977).

f.   The disposition of implementer

Each component of this model is filtered through the perceptions of the implementers within the area where the policy is delivered (Horn & Meter, 1977). The disposition of implementers' concerns about comprehension of the policy, intensity of support, response to the standards and objectives (acceptance, neutrality and rejection). Implementers may be reluctant to participate in implementation because they don't know what the policy is dedicated to, what the objectives of the policy are and what the benefits of the policy being implemented are (Horn & Meter, 1977). Comprehension therefore underpins their following response toward the policy, whether they accept, remain neutral or reject participation. Those who hold intense negative response toward the policy may disobey or oppose the imposed program (Horn & Meter, 1977).

The Van Meter and Van Horn model of implementation analysis is extensively utilised (Hill & Hupe, 2002; L. J. O'Toole, 1986). To name some of them: the study of Rampedi in evaluating the implementation of vocational education in South Africa (Zeelen, Rampedi, & Jong, 2011); the study of Harris in evaluating the sport development program in the UK (S. Harris, 2013a); the study of Webster (2005) of education policy in the USA; the study of Alex Marsh and Bruce Walker (2006) of housing

policy in the UK; Skille (2008) for sport policy in Norway, and the study of Baharom in evaluating the implementation of human resources development in Malaysian public universities (Baharom, 2008b).

The Mazmanian and Sabatier's model has also been widely utilised in policy implementation studies (Hill & Hupe, 2002; L. J. O'Toole, 1986; P. Sabatier, 2005). Among the two recent studies found are Friedman's study in the US about developing and implementing effective policy in children's mental health (Friedman, 2003) and Kearns and Lawson about housing stock transfer in Glasgow (Kearns & Lawson, 2008).

The current study inclined towards employing the model developed by Van Meter and Van Horn after contested the strengths and the weakness of the models (Hill & Hupe, 2002), the variables relevant to the context of the study (L. J. O'Toole, 1986) and the research environment in area of survey. Mars and Walker assert that the model was powerful and relatively simple (Marsh & Walker, 2006). Rampedi concludes that the Van Meter and van Horn's model represents very complex phenomena and processes, that are sometimes difficult to comprehend, in simple 'language' (Rampedi, 2003, pp. 34-35).

The policy of Indonesian Competency Standards has been in place for more than a decade with little indication of effective implementation. Simple and clear identification research tools are needed for quick identification of the factors of the implementation problems. The results therefore point out the problematic elements of the implementation and therefore addressing the clear location to

improve the policy. The lesson from the implementers mentioned earlier highlights the importance of making a detailed study of what works in the Indonesian Competency Standards in terms of implementation theory. Moreover the current study evaluates the front line implementers' attitudes toward Indonesian Competency Standards by analysing their views on how the problems and what improvements to the implementation can be identified.

The work of Van Meter and Van Horn is beneficial in understanding the complexity of the implementation of the policy in Indonesian TVET, because the policy embraces at least three parties. These are the Ministry of Education, the Ministry of Manpower and the Certification Authority. In addition the implementation framework has been extensively applied for implementation studies from various regions (USA, Africa, Europe and Asia) covering policies in the field of education, human resources development, sports development and also housing policy (Baharom, 2008a; S. Harris, 2013b; Kyshun Andre Webster, 2005; Marsh & Walker, 2006; Rampedi, 2003; Skille, 2008).
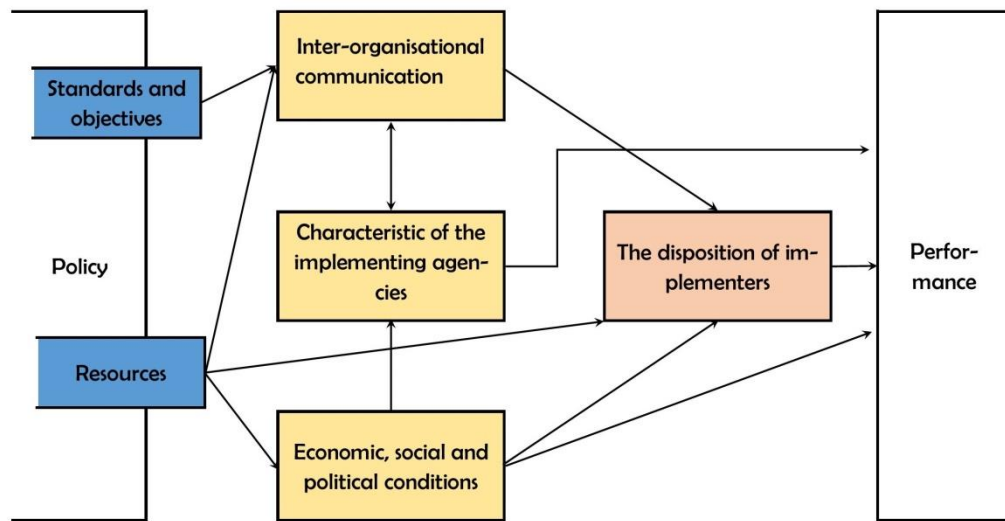
Figure 2.3 The model of the policy implementation process by Van Meter and Van Horn (1975)

2.6   Conceptual framework of the study

The conceptual framework of the current study is inspired by the earlier review of literature with a specific purpose in guiding the research and in locating the study in TVET scholarship. The effectiveness of the implementation of the policy of Indonesian Competency Standards is measured by two categories of macro and micro implementation performance (Breman, 1978; Kohoutek, 2009). They are:

1. Macro implementation performance. Macro implementation performance assesses the effectiveness of the implementation at institutional level through calculating the number of assessment centres compared to the total TVET institutions. In addition, the proportion of areas of competencies of assessment centre and the

total courses in TVET are also calculated to measure implementation at the institutional level.

2. Micro implementation performance. Micro implementation performance measures the effectiveness of the policy of Indonesian Competency Standards at classroom level through teachers' performance in delivering two aspects of Indonesian Competency Standards (certification and curriculum aspects) in their teaching activities.

The standards and objectives of the Indonesian Competency Standards will be analysed from the regulations that underpinned the policy; the policy paper established prior to the policy making process; the strategic plan and other relevant documents. The primary concern of this approach is to address the question of how well the government established the policy and how well prepared they were for successful implementation of Indonesian Competency Standards.

The second analysis evaluates the availability of resources to facilitate the implementation processes. These resources may take a number of forms: funding, workshop facilities for training and incentives to encourage implementers and implementing agencies to take part in the policy delivery. Apart from analysing the resources provided by the government, this factor also focuses on the effort of implementers in generating funds to support the implementation of Indonesian Competency Standards in their TVET institutions.

Inter-organisational communication analyses the interactions between the top-level implementers and the grass roots implementers in

the process. The ways of communicating standards and objectives are socialisation, publication programs, persuasion, coordination and harmonisation. The original model does not directly address the problem of tension, rivalry and conflict of interest between two implementing agencies. However a review of the current literature does raise problems related to inter-organisational rivalry in implementation since the ministries responsible for education, manpower and industry have the same agenda on the policy of Indonesian Competency Standards.

The characteristics of the implementing agencies focus on the commitment, competency and size of implementers in delivering the policy of Indonesian Competency Standards.

External factors address economic, social and political conditions or environmental aspects that may impact on implementation, and thus the effectiveness of the policy of Indonesian Competency Standards. From the review of the existing literature the external factors that may directly or indirectly influence the implementation includes the role of industry, perceived conditions for effective implementation and general public opinion about the policy.

The disposition of implementers towards the policy encompasses a number of aspects such as, understanding of the policy and availability of support for the policy. The disposition of the grass roots implementers directly influences policy implementation.

2.7 Chapter summary

This chapter presented a review of the literature concerning the policy of Indonesian National Competency Standards in relation to the three inter-connected agendas of national qualifications framework (NQF), competency based education and training (CBET) and certification of competency. Most research in this area has focused on the implementation of NCS/NQF, which supports the view that competency standards are essential, and plays a central role as one of the foundations of the success of NQF. Competency standards, therefore, aim to bridge the gap between the two worlds of TVET and industry.

Several studies have confirmed that the implementation of NCS/NQF requires a supportive policy environment and a strong base of educational provision. However, there appears to be a paucity of empirical studies using implementation theory as a lens and tool of analysis. The implementation process framework has identified important factors for effective implementation. They are: (1) standards and objectives; (2) resources for implementation; (3) inter-organisational communication; (4) characteristics of implementers; (5) external factors and (6) disposition of implementers.

The current study was conducted to examine how the policy of Indonesian Competency Standards is being developed and implemented in delivering its objectives and to determine its effectiveness. As Indonesia implemented the policy nine years before the promulgation of the Indonesian Qualification Framework (IQF) in 2012, the current

study is timely in evaluating how the Indonesian Competency Standards as the basis of the broader policy of IQF are being implemented. The success and failure of the implementation of competency standards therefore, will influence the implementation of the policy of IQF.

CHAPTER THREE: METHODOLOGY OF THE STUDY

3.1   Introduction

This chapter outlines the methodology used in the current study to evaluate the implementation of the policy of the Indonesian Competency Standards (SKKNI in the two types of Technical and Vocational Education and Training (TVET) institutions operated by Ministry of Manpower and Ministry of Education. The chapter begins with the research questions, research design, instrument development, sampling techniques and their justification. It also specifies Human Research Ethics approval for the research and the data analysis.

3.2   Research questions

In attempting to achieve the objectives of the study, the questions for research were:

1.   How effective was the implementation of the policy of the Indonesian Competency Standards in the two types of TVET institutions operated by MoM and MoEC in Yogyakarta Province?

2.   How effective was the implementation of Indonesian Competency Standards as measured by its policy standards and objectives, resources, inter-organisational communication, characteristics of implementers, external factors perceived by stakeholders and teachers' disposition and teachers' performance in implementing the certification and the curriculum aspects of the policy?

3.3   Research methodology

The current study consists of quantitative and qualitative components, which provide distinctive approaches in the educational policy study. As both components are combined in answering the research questions, the research design can be classified as mixed methods. Creswell and Clark (2011) describe mixed methods research as a mixing procedure for collecting and analysing quantitative and qualitative research in a single study in order to understand research problems. The benefit of mixed methods can provide opportunities for analysing the multidimensional realities by a variety of data resources and data collection techniques (Johnson & Onwuegbuzie, 2004). However, mixed methods research not only combines two different strands of research, it also involves merging, integrating, linking, embedding or mixing quantitative and qualitative data (Creswell, Clark, Gutmann, & Hanson, 2003).

The utility of mixed methods can provide opportunities for presenting the multidimensional realities by a variety of data resources and data collection techniques. Creswell et al. (2003) affirmed that it is impossible to understand the complexities of social phenomena by using either merely quantitative or merely qualitative techniques. The benefit of mixed methods can provide opportunities for analysing the multifaceted realities by a variety of data resources and data collection techniques. The research design consisted first of collecting quantitative data through questionnaires and then collecting qualitative data through interviews and documents to help explain and elaborate on the

quantitative results. The researcher can capture the best of both quantitative and qualitative data, that is, to obtain quantitative results from a large sample population in the first phase, and to elaborate these findings through an in-depth qualitative exploration of the combined interviews and document in the following phase.

The quantitative data was collected using questionnaires with teachers at Vocational Centres and Vocational Schools. The questionnaires for this study are in Appendix 1. The qualitative data for this study was collected using semi-structured interviews with senior officials in the various institutions Vocational Centres, Vocational School, MoEC, MoM, Assessment Centres, LSP, BKSP, member of parliament and BNSP as well as teachers. Interviews were also conducted with the national authorities of the Indonesian Competency Standards in the MoM, the BNSP and a resource person in the MoEC.

3.4 Research design

3.4.1 Research location

The study was conducted in Yogyakarta Province which was ranked in the top five (33 provinces) according to the Human Development Index (HDI) in Indonesia for four consecutive years between 2009 and 2012 (BPS, 2009, 2014). The four indicators in the calculation of the HDI index were life expectancy; literacy index; mean number of years schooling and standard of living. The province is also a popular education hub where students from all over the Indonesian archipelago come to study. It has 374 secondary schools and 125

tertiary education institutions (115 private and 10 public) (BPS, 2013a). The province provided representative characteristics of government performance indicators established by the Ministry of Internal Affairs which categorised districts into best and least performance (Nugroho, 2011). Two districts in the five recorded the best government performance scores: they were District 2 (urban area) and District 3 (rural). In 2010 ranking, the government used 173 indicators to evaluate the performance among 33 provinces and 491 districts (Nugroho, 2011). The five districts in the province represent the variation in rural and urban areas (BPS, 2008). One district was situated in an urban area and four districts were situated in rural areas. The province was also representative of the variation of Vocational Schools among the group piloting the international standards Vocational School (RSBI), the piloting of national standards Vocational School (RSBN), and regular schools. The RSBI, RSBN and regular schools were generally perceived by the community as representing the rank of school quality (MK, 2012). RSBI Vocational School was considered as the best, followed by RSBN Vocational School and regular Vocational School. In addition, the Yogyakarta Province had a variety of Vocational Schools under their provider types (public and private) (BPS, 2008, 2013a).

3.4.2 Participants

To address the aims and objectives of the research, data collection was focused on seven groups of participants directly and

indirectly involved in the implementation of Indonesian Competency Standards in Vocational Centres and Vocational Schools in Yogyakarta Province. The data and information from the seven groups of participants were expected to gauge understanding of the implementation process and its effectiveness in the province. The details of the participants who were recruited for this study are as follows:

1)   Teachers of Vocational Centres and Vocational Schools

The participants were teachers of Vocational Centres and Vocational Schools who taught vocational subjects. The number of teachers who taught vocational subjects was initially unknown. The only data available was the total number of teachers for all subjects in each district without classification of their teaching subjects (see Table 3.1) (Direktorat PSMK, 2009). To obtain the number of teachers and trainers who were teaching vocational subjects, the researcher collected the primary data from the selected Vocational Centres and Vocational Schools then categorised them into groups of the intended classifications (teachers from the *Normatif*, the *Adaptif* and the *Produktif* subjects).

Table 3.1

Vocational Schools and Teachers in the Three Districts of Research

No	District	Public Vocational School	Private Vocational School	Total	Teachers
1	District 1	13	23	36	1239
2	District 2	8	20	28	1504
3	District 3	7	25	32	1224
	Total	**28**	**68**	**96**	**3976**

Source: *DI Yogyakarta dalam Angka* (Yogyakarta in Figures) (BPS, 2008)

The numbers of teachers in Table 3.1 included all teachers who taught the three groups of subjects in the Vocational School system (Kemendikbud, 2007b). The three groups were the *Normatif* subjects, the *Adaptif* subjects and the *Produktif* subjects (core vocational subjects).

Only the teachers from Vocational Schools who taught the *Produktif* subjects (the core vocational subjects) participated in this study, because teachers in this group were directly influenced by the policy. Vocational Centres on the other hand, did not have teachers for non-vocational subjects as the curriculum focused on vocational training only (Chen et al., 2011). As a result all teachers in the two Vocational Centres were participants in this study.

For the qualitative data, teachers from Vocational Centres and Vocational Schools were selected by the snowball method (Elam, Ritchie, & Lewis, 2003; Morgan, 2008). There was no fixed number of samples needed using this technique because the main objective was to

reach data saturation from the interviewees. However "some researchers consider a sample size of 15 to 20 as appropriate for saturation of themes during analysis (Given, 2008, p. 195).

2) The directors of Vocational Centres and principals of Vocational Schools

The directors and principals who participated in the study represented two groups from the implementing and non-implementing institutions. However, as the number of Vocational Centres was only two, the directors of the two Vocational Centres were interviewed for this study regardless of their implementation status. The selection of Vocational Schools' principals also represented the existing three groups of Vocational School (RSBI, RSBN and regular Vocational School) (Direktorat PSMK, 2006a, 2006b):

a)   Vocational Schools under the group of RSBI (piloting international standards Vocational Schools),

b)   Vocational Schools under the group of RSBN (piloting national standards Vocational Schools) and

c)   Regular Vocational Schools.

Principals of Vocational Schools from the regular Vocational Schools group did not participate in interviews since this group represented under-resourced Vocational Schools in which the Indonesian Competency Standards were not their concern (MoEC District 1, personal communication, May 8, 2012). The selection of Vocational Schools' principals also represented the type of providers (public and

private Vocational Schools) for the implementing and non-implementing groups, and also from the RSBI and RSBN groups.

3) **Heads of ministries**

a. MoEC

Heads of MoEC from district, provincial and national level participated in this study. At district level, three heads of the MoEC from three districts participated. One head of provincial MoEC, and two other senior officials from the Central MoEC were also participants.

b. MoM

Heads of MoM from district, provincial and national level participated in the study. At district level, two heads of MoM from three districts participated, and one head of district MoM was excluded as the Vocational Centres in the district had closed at the time of data collection. In the governmental structure, Vocational Centres at the district level were under the auspices of the district level of MoM (Chen et al., 2011). In the situation where Vocational Centres did not exist, interviewing the Head of the MoM was considered as irrelevant. Senior officials from provincial and national levels of MoM also participated in this study.

4) **Professional certification agencies**

Participants from four institutions represented this group, which included heads of Assessment Centres (Assessment Centres), heads of Professional Certification Bodies (LSPs) and senior officials from provincial and national certification authorities. In Yogyakarta Province, Assessment Centres were available in five areas of competency. They

were Telematics (*Telematika*); Automotive-Motorcycle (*Otomotif-Sepeda Motor*), Metal and Machinery (*Logam dan Mesin*), Electrician (*Instalasi Listrik*) and Accounting Technician (*Teknisi Akuntansi*). Existing LSPs in the province were two LSPs in Tourism, LSP Garment as a branch of the Central LSP Jakarta and LSP Automotive as a branch of Central LSP Jakarta. At the time of data collection a national level representative from LSP Accounting Technician Jakarta attended a certification program at a Vocational School in District 2.

5)   Member of Parliament

The researcher also interviewed an additional participant who was a member of parliament affiliated with the Commission of Education, Manpower and Social Affairs.

The process of selection and determination of the sample of the participants for both quantitative and qualitative data collection is addressed in the next section.

3.4.3 Selecting participants

At institution level, the two Vocational Centres in the three selected districts participated in this study. Accordingly, two directors and all teachers were the target group for interviews and the questionnaires. For Vocational Schools, on the other hand, a purposive sampling was applied to select the school representing the existing variations from a total of 113 Vocational Schools. In a purposive sampling,

"...researchers handpick the cases to be included in the sample on the basis of their judgement of their typicality or possession of the particular characteristic being sought. In this way, they build up a sample that is satisfactory to their specific needs" (L. Cohen, Manion, & Morrison, 2007, pp. 114-115).

The selection of Vocational Schools represented various classifications of (1) implementing and non-implementing groups, (2) public-private providers and (3) rural-urban (District 1 and 3 situated in rural and District 2 from urban area). The first technique to purposively selecting Vocational Schools represented implementing and non-implementing groups, the researcher collected information from the provincial office of the Ministry of Manpower (MoM). The office had initial information about Vocational Schools in the province that had been involved in certification programs. The researcher visited Vocational Schools listed by the MoM to crosscheck whether the initial information was true or not. From the first visit to the listed Vocational Schools, the researcher also received new information about Vocational Schools not in the initial list from the MoM and also Vocational Schools where the status as an assessment centre had expired. The distribution of Vocational Centres and Vocational Schools in the three selected districts is presented in Table 3.2. The list of Vocational Schools representing rural-urban district, public-private and implementing and non-implementing is presented in the Table 3.3.

To ensure the representativeness of the sample, the respondents were selected from different locations spread across the Province of Yogyakarta, with various characteristics in terms of their characteristic

of district (rural-urban), types of institution (public-private), the implementation status (implementing-non implementing. To maintain the representativeness of the sample the researcher also interviewed participants from institutions listed in the regulation about the implementation of the policy. They were representing relevant institutions from national, provincial, district and school/centre level. Moreover, to make sure there was adequate data, the researcher kept interviewing until responses began to be repetitive (termed saturation) (Miles & Huberman, 1994).

Table 3.2

The Number of Vocational Centres and Vocational School in the Three Districts of Research

District	Vocational Centres	Vocational School
District 1	1	44
District 2	0	33
District 3	1	36
Total	2	113

Based on the variation in the characteristics of TVET institutions, the final list of the Vocational Centres and Vocational Schools participating in this study appear in the following table.

Table 3.3

The List of Vocational Centres and Vocational School Participating in the Study*

Non-Implementing Vocational Centres and Vocational School	District	Implementing Vocational Centres and Vocational Schools
Vocational Schools M D#1 (private)	District 1 (rural)	Vocational Schools N1 D#1 (public)
Vocational Centres D#1		Vocational Schools NS D#1 (public)
Vocational Schools N3 D#2 (public)	District 2 (urban)	Vocational Schools N1 D#2 (public)
		Vocational Schools M3 D#2 (private)
Vocational Centres D#3	District 3 (rural)	Vocational Schools N2 D#3 (public)

Note:
* The names of Vocational Centres and Vocational Schools in the Table 3.3 and 3.4 are pseudo names.

The number of targeted teachers and the returned questionnaires from the nine TVET institutions is as follows:

Table 3.4

List of Institutions, Number of Targeted Teachers and the Rate of Return

List of Vocational Schools/Vocational Centres	Number of teachers	Returned	Rate of return (%)
SMK NS D#1	49	49	100.00
SMK N1 D#1	30	21	70.00
SMK M D#1	40	32	80.00
SMK N1 D#2	21	17	80.95
SMK N3 D#2	45	45	100.00
SMK M3 D#2	50	39	78.00
SMK N2 D#3	50	41	82.00
BLK D#1	18	15	83.33
BLK D#3	21	20	95.24
Total	**324**	**279**	**86.11**

3.5 Research instruments

This section outlines the process of developing the research instruments that are derived from literature on the implementation process developed by Van Meter and Van Horn (1975). The instrument assessed three main aspects of the implementation of Indonesian Competency Standards. They were:

1. The effectiveness of the implementation measured by:

    a. Macro indicators (number of Assessment Centres compared to total TVET institutions; the percentage of teacher and students certified) and

    b. Micro indicators (teachers' performance in implementing the curriculum and certification aspects of the policy).

2. Implementation processes and

3. The relationship between teachers' disposition and performance in implementing Indonesian Competency Standards in their teaching activities.

The researcher developed two types of research instruments. The first was a research questionnaire as a tool for the collection of quantitative data. The second was an interview schedule for collecting qualitative data. The variables and the scale of the questionnaires can be seen in the following table.

Table 3.5

Variables and Indicators of the Research Questionnaire

Variable	Scale/Factor
Implementers' disposition to the policy	1. Comprehension 2. Understanding 3. The direction of their response toward the policy
MICRO INDICATOR of teachers and trainers' performance in the classroom	1. Syllabus that refers to Indonesian Competency Standards 2. Teaching method refers to competency based training 3. Assessment method 4. Teachers' and trainers' attitude to endorse students to participate in certification
MACRO INDICATOR of policy performance	1. Participation level of the students and teachers in certification of Indonesian Competency Standards 2. The number of Vocational Centres or Vocational Schools established Assessment Centres

The respondents rated each item in the questionnaires on a four point Likert-type scale according to their personal preference (L. Cohen, Manion, & Morrison, 2011; Kerlinger, 1986). Anchor points for the

Likert scale were 1=strongly disagree; 2= disagree; 3=agree; and 4=strongly agree.

The interview schedule was developed based on the five factors in the implementation process (Meter & Horn, 1975). These were standards and objectives, resources for implementation, inter-organisational communication, characteristics of the implementing agencies, and external factors (interview schedule Appendix 3).

3.5.1 Validity and reliability of the quantitative data

This section discusses a procedure to determine the construct validity of the questionnaire. Validity "refers to whether an instrument measures what it was designed to measure" (Field, 2009, p. 11). The construct validity for the questionnaire used in this study was examined by the statistical technique of Principal Component Analysis (PCA), which is an embedded technique of Factor Analysis (FA) that is elaborated in numerous works (Raskin & Terry, 1988; Ware et al., 1998). FA is applied "to understand the structure of a set of variables, to construct a questionnaire to measure an underlying variable, and to reduce a data set to a more manageable size" (Field, 2009). One of the prerequisites for FA is the correlation matrix (the correlation between items) should be greater than 0.00001 which means that variables have to be inter-correlated, but they should not correlate too highly (extreme multi-collinearity and singularity) (Field, 2009).

The results of the pilot study show that the questionnaire on teachers' disposition records KMO sampling adequacy of 0.838 which is

above the commonly recommended value of 0.60 and categorised as meritorious (Kaiser, 1974, as cited in Hutcheson, 1999, p. 225). Bartlett's test of Sphericity (Chi-Square 1854.748, df 300, Sig. .000) indicated that correlations between items were sufficiently large for PCA (Field, 2009). For reliability, Cronbach's Alpha = 0.826 which is considered as good (George & Mallery, 2006). Although the results of the PCA showed three factors/scales with eigenvalues greater than 1, the scree plot indicated two factors/scales were the best solution (Costello & Osborne, 2005). The two factors/scales accounted for 50.99% of total variance with item loading scores ranging from .63 to .79. Factor loadings for the first scale of teachers' comprehension ranged from 0.67 to 0.75 and the mean score was 2.80 with a standard deviation of 0.48. Factor loading for the second scale of teachers' degree of support ranged from .63 to .79 and the mean score was 3.11 with a standard deviation of .39.

The second set of items in the questionnaire measured teachers' performance in implementing the Indonesian Competency Standards in their teaching. Fifteen initial items were developed and the results of the construct validity assessment using PCA are as follows: KMO sampling adequacy was .912, which is classified as marvelous/superb (Kaiser, 1974, as cited in Hutcheson, 1999, p. 225). Bartlett's test of Sphericity (Chi-Square 1289.746; df 66; Sig. .000) indicated that the correlations between items are sufficiently large for PCA (Field, 2009). For reliability Cronbach's Alpha= 0.923, which implies that the questionnaire had very good internal consistency (Oppenheim, 2001; Pallant, 2011). The

results of the PCA showed that there were two components with an eigenvalue greater than one. The two factors/scales accounted for 67.05% of total variance with item loading scores ranging from 0.60 to 0.84. The two factors/scales named teachers' performance in implementing the curricular aspect of Indonesian Competency Standards and teachers' performance in implementing the certification aspect of Indonesian Competency Standards. Factor loading for teachers' performance in implementing the curricular aspect of Indonesian Competency Standards ranged from .74 to .81 and the mean score was 2.94 with a standard deviation of .72. Factor loading for teachers' performance in implementing the certification aspect of Indonesian Competency Standards ranged from .60 to .84 and the mean score was 2.71 with a standard deviation of .68. The results of factor analysis are in Appendix 8.

3.5.2 Trustworthiness of the qualitative phase

Trustworthiness, as an alternative concept for the quantitative terms of validity and reliability, elicits three attributes of qualitative research: credibility, authenticity and transferability (Rothbauer, 2008). These three attributes are achievable by the application of the technique of triangulation. Rothbauer states that triangulation is one "of the central ways of validating qualitative research evidence" (Rothbauer, 2008, p. 43). Ritchie (2003) adds that triangulation helps "to check the integrity of, or extend, inferences drawn from the data" (Ritchie, 2003, p. 43). Qualitative method literature identifies four basic types of

triangulation; (1) data triangulation; (2) investigator triangulation; (3) theory triangulation; and (4) methodological triangulation (Patton, 2002; Rothbauer, 2008).

Trustworthiness of the qualitative phase of the current study was established by ensuring the integrity of the data collection process by applying coding validation. This was achieved by comparing coding results from a selected sample of interview transcripts by the researcher and an independent coder. The coding validation was a process to ensure inter-rater reliability in qualitative data (Gibson & Brown, 2009). The results showed that there was 89.5 % (17 of 19) agreement in the coding and 10.5 % (two codes) created multi-interpretation. The multi-interpretations were resolved prior to the final round of the analysis.

Data validation was set up through a repeated process of coding, carefully checking the transcripts and reflecting on the transcripts. When the researcher had finished one round of the coding process a thematic map was drawn. The researcher repeated the coding process three times to get a stable thematic map (Boyatzis, 1998; Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006). The last thematic map subsequently became the resource for reporting the qualitative results that included relevant direct quotes.

Moreover the data collection triangulation in this study was carried out by combining the three techniques of interview, observation (i.e. in assessment processes for certification in three different Vocational Schools) and document analysis (Miles & Huberman, 1994;

Patton, 2002; Silverman & Marvasti, 2008). In this study, the researcher interviewed informants from various institutions (Vocational Centres, Vocational School, MGMP, MoEC, MoM, Assessment Centres, LSP, BKSP, and BNSP) who were representative of four hierarchical levels (school/centre, district, provincial and national).

Another form of triangulation was also carried out by gathering documents related to school level curriculum (KTSP), syllabi, examination documents, regulations and also copies of teachers' certificates of competency from the Indonesian Competency Standards certification. The collected documents benefited the triangulation process by confirming, acknowledging or contrasting the findings from interviews. For example, a participant showed an official document that explicitly demanded that teachers have a recognised certificate of competency to assess students' skills in the final Vocational School test. This exemplifies how documents helped the interview direction in evaluating the implementation the policy of the Indonesian Competency Standards by contrasting the document and the observed action. Interviewing participants from multilevel officers (school-district-provincial-national), multi districts, and several schools was a form of testing consistency (Patton, 2002, p. 248).

3.6   Data collection

3.6.1 Overview of the fieldwork process

The fieldwork took place in Yogyakarta Province between January 2012 and June 2012. Two letters of permission from the provincial

government of Yogyakarta were required as a letter of permission to conduct research was only valid for three months. The first letter of permission to conduct research was valid from 21st of November 2011 to 21 February 2012 (dated 21 November 2011). This first letter of permission to conduct research fulfilled the administrative prerequisite for the ethics approval from the Human Research Ethics Committee of the University of Newcastle. The informal process of the data collection, especially the snowball process, started after the first letter of permission was granted. Permission to conduct the research by the Human Research Ethics Committee (HERC) of the University of Newcastle was granted on Wednesday 1st February 2012 (Reference Number: H-2011-0338). The distribution and collection of questionnaires from research participants finished at the end of May 2012 and the collection process for the qualitative data (interview and documents) was completed by the end of June 2012.

3.6.2 Interview participants

The semi-structured interviews for this study gathered data from five groups of stakeholders on the policy of the Indonesian Competency Standards. These heterogeneous groups represented the key actors for the implementation of the policy. Moreover, the involvement of various groups of stakeholders ensured all views were represented. A total of 79 people representing groups of teachers, principals, heads of ministries, certification authorities and a member of parliament participated in the

interviews. For the interviews, only one informant from provincial and one from national level declined an invitation to be audio-recorded.

Most of the interviews were conducted in the office of the interviewees, except interviews for teachers that varied from teachers' offices, noisy training workshops, to private homes and classrooms. In many cases, especially when the researcher was interviewing teachers, other teachers in the offices or workshops got involved, participated and also expressed their views concerning the topic of conversation. In this situation, a single interview turned into a group interview and in several cases the names of the other teachers were not recorded. In several cases, principals delegated the interview to their vice-principals or special staff responsible for public relations.

Table 3.6

Number of Interviewees from Five Groups of Stakeholders

No	Stakeholders	Number	Level
1	Teachers	38	SMK/BLK
2	Principals and directors	13	SMK/BLK
3	Head of ministries: a. MoM b. MoEC	7	District level
		3	Provincial level
		5	National level
4	Certification agencies (Assessment Centre/LSP/BKSP/BNSP)	12	Provincial and National level
5	Member of parliament	1	Provincial level

Some interviews were not recorded for various reasons: (1) the interview was short because the informant indicated that their school did not have any activity related to the certification or teaching of the

SKKNI; (2) the interview was part of the snowball processes for directing to relevant interviewees; (3) two interviewees refused to be taped (one was a member of parliament and the second was an executive in a national level government agency).

3.6.3 Data collection procedure

Together with the ethic approval from Human Research Ethics Committee (HERC) of the University of Newcastle and the research permission from the provincial government, the questionnaires were then distributed to the respondents, along with an invitation to be interviewed. The survey participation was voluntary and the respondents were advised that their responses were confidential. The questionnaires and consent forms were returned in sealed envelopes and put in box located in the Principal's office. Consent forms from the Vocational Schools' principals and Vocational Centres' director, head of ministries, certification agencies and a member of parliament were mailed directly to the researcher.

Interviews with teachers, principals and directors were conducted by the researcher at the school/centre sites, during the usual school/training hours. Dates and times of the interviews were determined according to the availability of the teachers who consented to participate in the project. Interviews with participants from government, certification authority and certification agencies were performed in their offices. All of the interviews were conducted in Bahasa Indonesia and audio recorded except refusal from one

interviewee. There was no need for an interpreter since the researcher himself is from Indonesia.

At the outset, the interviews began with the researcher introducing himself and explaining the purpose of the research. An information statement and consent form was provided to each of the respondents. Respondents were advised that their interviews and anonymity would be protected. Consent or permission to audio-tape the interview was asked of respondents. Respondents were also advised that the data would be aggregated and each respondent's identity would not be revealed. Respondents were informed that their comments would be quoted. After obtaining approved consent from respondents, the interviews then were conducted and the researcher informed the respondents when the interview recorder was about to start or stop.

The duration of each interview and drawing was between 45 and 90 minutes. The transcriptions were corrected and checked by the researcher before undertaking the coding and analysing the transcriptions. The process of data collection is presented in the following flowchart:

```
┌─────────────────────────────────┐
│      Research ethic approval      │
└─────────────────────────────────┘
                  ⇓
┌─────────────────────────────────┐
│       Research permission:        │
│   From provincial and district    │
│              level                 │
└─────────────────────────────────┘
                  ⇓
┌─────────────────────────────────┐
│       Documentary analysis:       │
│   Government regulation (national/ │
│  provincial/district), school/     │
│  centre regula-tion, teaching      │
│  syllabi, government report        │
└─────────────────────────────────┘
                  ⇓
┌─────────────────────────────────┐
│       Quantitative analysis:      │
│  Questionnaires distribution and   │
│            collection              │
└─────────────────────────────────┘
                  ⇓
┌─────────────────────────────────┐
│        Qualitative analysis:      │
│     Semi-structured interviews     │
└─────────────────────────────────┘
```
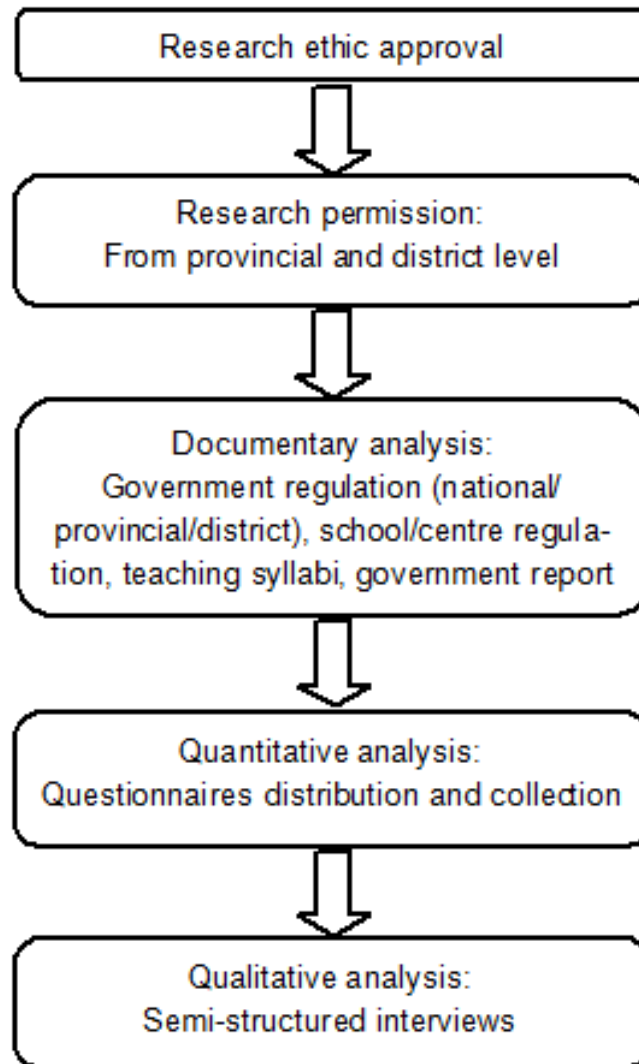
Figure 3.1 Flowchart of data collection procedure

3.7 Data Analysis

3.7.1 Survey analysis

The analysis of the data gathered from the survey method focused on descriptive aspects of samples (descriptive analysis), comparative analyses among the relevant variables, exploratory factor analysis and correlation between teachers' disposition and teachers' performance. The quantitative data analysis for this study included (1) descriptive

analysis, (2) exploratory factor analysis and (3) regression analysis (Gall, Gall, & Borg, 2005). The four areas of quantitative analysis were facilitated by IBM SPSS Statistics (2013, Version 20). In the descriptive analysis the distribution of teachers by subjects and distribution of Vocational School by districts were analysed and presented. The regression analysis was conducted to investigate the predictive power of the independent variables. Field (2009) asserts that "regression analysis is a way of predicting an outcome variable from one predictor variable (simple regression) or several predictor variables (multiple-regression). This tool is incredibly useful because it allows us to go a step beyond the data that we collected" (Field, 2009, p. 198). The predictor variables in the current study are teachers' comprehension and teachers' intensity of support and the dependent variables are teachers' performance in implementing the curriculum and certification aspects of Indonesian Competency Standards.

3.7.2 Interview analysis

The analysis of the qualitative data applied thematic analysis (Boyatzis, 1998; Flick, 2009) using the five factors in the implementation process developed by Van Meter and Van Horn (1975) and the six conditions of effective implementation conceptualised by Sabatier and Mazmanian (Mazmanian & Sabatier, 1989; P. Sabatier & Mazmanian, 1979) as the coding references. Supplementary coding references were also developed by extracting some essential

characteristics from the data and the research questions (Boyatzis, 1998; Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006).

As a consequence, the current study set theory-driven coding or prefigured coding as a start list (Boyatzis, 1998; Crabtree & Miller, 1999; Creswell, 2013; Miles & Huberman, 1994; Namey, Guest, Thairu, & Johnson, 2007; Thornberg, 2012). Boyatzis affirms that

> "Theory-driven code development is probably the most frequently used approach in social science research. The researcher begins with his or her theory of what occurs and then formulates the signals, or indicator, of evidence that would support this theory. The elements of the code are derived from the hypotheses or elements of the theory (Boyatzis, 1998, p. 33)".

The coding process of the interview transcripts followed Boyatzis' model of theory-driven coding that proceeded in three stages as follows:

Table 3.7

Boyatzis's Theory-Driven Approach in Coding Process

Stage	Theory-driven approach
I	Deciding on sampling and design issues
II	(1) Generating a code from theory (2) Reviewing and rewriting the code for applicability to the raw information (3) Determining the reliability
III	(1) Applying the code to the raw information (2) Determining validity (3) Interpreting results

(Boyatzis, 1998, p. 44)

The process of analysing data was assisted by QSR NVivo (2013, Version 10) qualitative data software (Bazeley & Richards, 2000). Guided by theoretical framework of implementation process developed by Van Meter and Van Horn (1975), four themes and 15 sub-themes

identified and emerged from the qualitative data. The list of themes and sub-themes are as follows:

Theme 1: Characteristics of the implementing agencies

1. Commitment of the implementing agencies

2. Competence and size of the implementers

Theme 2: Inter-organisational communication in implementation

1. Tension between two ministries

2. Multi-interpretation in the 2003 Education Act

3. Communication, coordination and cooperation

4. Internal tension in certification body

Theme 3: Resources for implementation

1. Financial resources

2. Sources of financial support for certification

3. Policy incentives

4. Curriculum resources

5. Workshop facilities for training

Theme 4: External factors

1. Demand from industry

2. International/regional pressure

3. Harmonise supply and demand

4. Public awareness.

3.7.3 Documentary analysis

Documents included in the study were materials that would advance understanding of the implementation of SKKNI in relation to the research setting and study participants. The documentary analysis

was aimed to examine the "topic" of the collected documents whether they were in agreement with interview or inconsistent (Prior, 2008). The analysis of the topic in the document was also intended to examine how strong was the legal document supporting the implementation of the policy of SKKNI. During this research, several documents were made available in relation to interview answers such as teachers' certificate of SKKNI, the certificate of accreditation of assessment centre, the structure of SMK/BLK's curriculum and relevant regulations to the implementation (national, provincial, districts and school levels' regulations). The documents of teachers' certificates of SKKNI for example were needed verify that the interviewees were truly certified in SKKNI and as a consequence their opinions would be related to their certification status. The same purpose was applied for the certificate of accreditation of assessment centre. The documents about the structure of Vocational Centres' and Vocational Schools' curriculum were needed to analyse how well was the existing curriculum adopting SKKNI, this was especially for SMK, in dealing with the issue of national curriculum versus school level curriculum. The documents about the top-down regulation (national-provincial-district-school) for the implementation of the Indonesian Competency Standards were needed to evaluate whether national and lower level governments had decreed any thorough regulations to guide the implementation. If they had, how well the regulations were prepared to ensure policy was correctly carried out from national to school/centre level.

3.8   Summary of the chapter

This chapter outlines the methodology applied in the study, a survey providing quantitative data and interviews providing qualitative data. The sections included the research design, the sampling methods, the determination of the validity and trustworthiness of the data extraction tools, and the data analysis. The main purpose of this chapter was to outline the methods and the techniques applied to answer the two research questions. The following chapter reports the results of data analysis.

CHAPTER FOUR: ANALYSIS OF QUESTIONNAIRE RESULTS

4.1 Introduction

The effectiveness of the implementation of the policy of Indonesian Competency Standards is measured by evaluating its performance at the macro and micro level. The implementation process on the other hand, is analysed using standards and objectives; the availability of resources to facilitate the implementation processes; inter-organisational communication; characteristics of the implementing agencies (commitment, competency and size of implementers); external factors and the disposition of implementers towards the policy.

This chapter reports the data analysis of the survey questionnaires collected from teachers of selected TVET institutions in Yogyakarta Province, Indonesia. The first section reports the response rate of the questionnaire and presents the descriptive aspects of the data, which includes the teachers' and students' participation in the certification of competency under the Indonesian Competency Standards framework. The next section presents the results of the analysis of the two main research variables of teachers' disposition to the policy and teacher performance in implementing Indonesian Competency Standards in their learning processes. The last section presents a chapter summary.

4.2   Macro indicator of implementation performance

Macro implementation performance assesses the effectiveness of the implementation at the institutional level by calculating the number of assessment centres (Assessment Centre) compared to the total number of TVET institutions. The calculation utilised in the current study was in accordance with the government method to measure its target in the implementation of Indonesian Competency Standards at the institutional level. The documents of Petunjuk Teknis (Programs Guidelines) published by the Ministry of Education (operating Vocational Schools) and also the document of *Rencana Strategis* (Strategic Plan) published by Ministry of Manpower (operating Vocational Centres) revealed that increasing the number of Assessment Centres in Vocational School and Vocational Centres was part of the government target (BNSP, 2014b; Direktorat PSMK, 2013a). In addition, the proportion of areas of competencies of Assessment Centre and the total courses in TVET is also calculated to measure implementation at institutional level in a more precise parameter.

4.2.1 Assessment Centre

Assessment Centre has a broad meaning covering all aspects of TVET assessment. This includes management, regulation of certification of the Indonesian Competency Standards and more substantially, the physical quality of training workshops in the TVET system. The process of obtaining a certificate for the establishment of a Assessment Centre from the national authority is a bottom-up process initiated by the

school, proceeded by the certification authority and approval is granted by the National Professional Certification Authority (BNSP) for a two year licence period (BNSP, 2007).

In the three districts, where the research was undertaken, there were only eight Assessment Centres. The eight Assessment Centres were operated by six Vocational Schools (see Table 4.1 below). There were no Assessment Centres operated by Vocational Centres. There was only one Assessment Centre in each Vocational School, with the exception of Vocational School NP District 3 that had three Assessment Centres in one school. A total of eight Assessment Centres had certification for four courses: Automotive, Telematics, Accountant Assistant and Metal and Machinery. Compared to the 45 courses that were available in Vocational Schools and 22 vocational courses in Vocational Centres, the number of certification areas in the Assessment Centres represented 5.97% of the total courses.

Table 4.1

The Distribution of Assessment Centres in the Three Districts of Research

District	SMK	SMK with Assessment Centre	Assessment Centre	%	BLK	BLK with Assessment Centre
District 1	44	2	2	4.55	1	0
District 2	33	3	3	9.09	0	0
District 3	36	1	3	2.78	1	0
Total	113	6	8	5.31	2	0

The Assessment Centres in District 2 were based in Vocational Schools in the areas of Automotive, Accounting and Telematics. The Assessment Centre in District 1 was in the area of Telematics and Automotive. Assessment Centre in District 3 was in the area of Automotive, Metal and Machinery, and Telematics. Only one Assessment Centre (in Telematics) was located in a privately owned Vocational School.

4.2.2 Demographic data for participants

The majority of the respondents to this survey were teachers in Vocational Schools (87%) and affiliated with public TVET (75%). The proportion of the teachers located in each of the three districts was 42% in District I, 36% in District 2 and 22% in District 3. Sixty per cent of respondents were currently teaching at TVET institutions where Assessment Centres had been established. The majority of teachers (62%) were uncertified in the particular Competency Standards in which they were teaching. The distribution of respondents based on the five aspects of demographic background are presented in Table 4.2.

Table 4.2

Distribution of Participants by Five Aspects of Demographic Background

Demographic background	Categories	Number of respondents	% of total
Certification status	Certified teachers	105	38
	Uncertified teachers	174	62
TVET type	Vocational School	244	87
	Vocational Centre	35	13
TVET provider	Public	208	75
	Private	71	25
Assessment Centre establishment status	With Assessment Centre	167	60
	Without Assessment Centre	112	40
District	District 1	117	42
	District 2	101	36
	District 3	61	22

4.2.3 Teacher and student participation in certification of Indonesian Competency Standards

One of the key indicators of a successful outcome of the policy of Indonesian Competency Standards in the TVET sector was teacher and student participation in the Certification of Competency under the SKKNI framework. In all aspects and categories, a majority of teachers were uncertified (174 teachers or 62%) with 105 teachers (38%) certified. For the 105 certified teachers, the area of certification covered eight industry sectors and 63 sub-sectors. The eight sectors are as follows: Processing Industry (16 sub-sectors), Automotive (14 sub-sectors), Information and Communication (12 sub-sectors),

Construction (9 sub-sectors), Electricity (7 sub-sectors), Garment, Public and Individual Services, Real Estate Rental and Commercial Services (2 sub-sectors).

The data in Table 4.3, collected from the heads of Assessment Centres and the Provincial Office of the Ministry of Manpower (MoM), provides an estimate of student participation in the certification of Indonesian Competency Standards. For students in Vocational Schools, the provincial figure indicates that participation was below one per cent. However, if the number of students participating in certification is compared to the number of students in the sample Vocational Schools (419 students of the total 9,139), the participation level is slightly higher (5%). For students from Vocational Centres, a report from the Ministry of Manpower revealed that in the 2011 financial year, 120 employees and students of Vocational Centres undertook certification in the two industry areas of automotive, tourism and restaurants. However, the report did not specify the number or the location of the participants from Vocational Centres.

Table 4.3

Students Participating in Certification of SKKNI

TVET type	Students participating in certification	Total students in the province	%
Vocational Centres*	120	2,748	4
Vocational School**	419	79,582	1
Total	**539**	**82,330**	**1**

* The number of participating students here appears in a report by Ministry of Manpower that does not distinguish between students and employees. As a consequence, the actual number of participants from Vocational Centres may be less.

** The number of participants is based on information from heads of Assessment Centres.

4.3 Micro indicator of implementation performance

Micro implementation performance measures the effectiveness of the policy of Indonesian Competency Standards at classroom level through teachers' performance in delivering two aspects of the policy (certification and curriculum aspects) in their teaching activities.

4.3.1 Analysis of the micro indicators of the implementation

This section reports the results of statistical analysis of the data obtained from 279 questionnaires, which were completed by teachers from two types of TVET, Vocational Centres and Vocational Schools. The data represents teachers sampled across four independent variables namely from public and private TVET providers, certification status of teachers, teachers of TVET (with and without a Assessment Centre) in three districts in the Yogyakarta Province of Indonesia.

The factor analysis of the data collected through survey questionnaires generated two scales in Teacher Dispositions to the policy. The two factors were named Teacher Comprehension of the policy of Indonesian Competency Standards and Teacher Support for the Indonesian Competency Standards. The factor analysis of the second variable, Teacher Performance, in implementing the policy also produced two scales specifying teacher performance in implementing both the curriculum and certification aspects of Indonesian Competency Standards.

The next section reports the results of the statistical analysis on

1. The relationship between teacher comprehension of the policy on Indonesian Competency Standards and teacher performance in implementing the curriculum and the certification aspects of the policy.

2. The relationship between teacher support for the policy and teacher performance in implementing the curriculum and the certification aspects of SKKNI.

4.3.2 The relationship between teacher comprehension and teacher performance in implementing the policy

A standard multiple regression analysis was conducted to examine the relationship between teacher comprehension of and support for the policy of Indonesian Competency Standards The regression analysis was conducted on the subjects with paired data of the questionnaire about teacher disposition and the questionnaire

about teacher performance (n = 190). A linear regression model with all possible predictor variables in the regression model is presented in Table 4.4.

Using the enter method where "all of the predictors are placed into the regression model in one block" (Field, 2009, p. 271), it was found that teacher comprehension and teacher intensity of support for Indonesian Competency Standards explained a significant percentage of the variance in a teacher's performance in implementing the curriculum aspects of Indonesian Competency Standards, $F(2, 187) = 25.60$, $p < .01$, $R^2 = .21$, R^2 Adjusted $= .21$, which means that 21 % of variation in the dependent variable was explained by the set of independent variables. The effect size was $f^2 = .27$ which is a medium effect(J. Cohen, 1988, 1992).

Table 4.4

Results of Standard Multiple Regression Analysis for Factors Predicting Teachers' Performance in Implementing the Curriculum and Certification Aspects of the Policy

Dependent variable	Predictor variable	B	β	p
Curriculum performance	Constant	.49		
	Comprehension	.51	.35	.00
	Intensity of support	.32	.17	.03
Certification performance	Constant	-.22		
	Comprehension	.40	.29	.00
	Intensity of support	.57	.32	.00

B : Unstandardised regression coefficient; *β* : Standardised regression coefficient; *p* : Significance

Using the same enter method it was found that teachers' comprehension of and teachers' intensity of support for Indonesian Competency Standards explained a significant amount of the variance of a teacher's performance in implementing the certification aspects of Indonesian Competency Standards, $F (2, 187) = 37.28$, $p< .01$, $R^2= .29$, R^2 Adjusted$= .28$. The effect size was $f^2= .41$ which is a large effect (J. Cohen, 1988, 1992). This means that 29% of variation in the dependent variable was explained by the set of independent variables ($R^2 = 0.29$, adjusted $R^2 = 0.28$). According to Hair et al. (Hair, Black, Babin, & Anderson, 2009) the minimum R^2 that can be found statistically significant with a power of .80 for a sample size between 100 and 250 and two independent variables are .13 for $a = .01$ and .10 for $a = .05$. The findings therefore suggest that the effects of two scales of teachers' disposition were stronger for teachers' performance in implementing the certification aspects of Indonesian Competency Standards ($R^2 =29\%$) than for the curriculum aspects ($R^2 =21\%$).

Furthermore, the analysis indicates that teacher comprehension and intensity of support for Indonesian Competency Standards made a unique and significant contribution to curriculum and certification performance in implementing the policy in their learning activities. The two variables of teacher comprehension and teacher intensity of support were found to significantly and uniquely to contribute to the prediction of teacher performance in implementing the curriculum aspects and the certification aspects of Indonesian Competency Standards. The beta values for the comprehension and intensity of support were .35 and .17 respectively, indicating that as teacher comprehension of Indonesian Competency Standards and intensity of support increase, teacher performance in implementing the curriculum aspects of the policy also increases. Moreover, the beta values for the comprehension and intensity of support were .29 and .32 respectively, indicating that as teacher comprehension of the policy and intensity of support increase, teacher performance in implementing the certification aspects of Indonesian Competency Standards also increases.

4.4   Summary of the chapter

The analysis shows that there were no significant differences between the distribution of the certification status of teachers and the four demographic aspects of TVET types: Vocational Centres and Vocational School; TVET providers; public-private institutions; the establishment status of Assessment Centres; TVET with Assessment Centre and without Assessment Centre and districts, (District 1, District 2 and District 3). The analysis identified significant differences

between teacher comprehension of the policy and teacher intensity of support for the policy of Indonesian Competency Standards based on the certification status of teachers. In addition there were significant differences in teachers' comprehension of the policy based on the establishment status of the Assessment Centre.

The analysis also found that there were significant differences between a teacher's performance in implementing the curriculum and the certification aspects of Indonesian Competency Standards based on their certification status. Certified teachers had a higher mean of performance in implementing the two aspects of Indonesian Competency Standards compared to uncertified teachers.

The results from the regression analysis showed that teacher comprehension of the policy and teacher intensity of support for the policy made a unique and significant contribution to a teacher's performance in implementing the curriculum aspects and the certification aspects of Indonesian Competency Standards in their teaching and learning activities.

The results set the platform for exploring the process and the effectiveness of the implementation of the policy in more depth through the qualitative analysis of interviews, reported in Chapter Six. The next chapter (Chapter Five) reports on the document analysis which will shed more light on the research question concerning the standards and objectives of the implementation of the policy of Indonesian Competency Standards.

CHAPTER FIVE: AN ANALYSIS OF POLICY DOCUMENTATION AND IMPLEMENTATION OF THE INDONESIAN COMPETENCY STANDARDS POLICY

5.1   Introduction

This chapter reports on the documentary analysis of the Indonesian Competency Standards (SKKNI) policy implemented in two types of Technical and Vocational Education and Training (TVET) institutions in Yogyakarta Province, Indonesia. It also reports on the analysis of the standards and objectives of the policy as the foundation for policy implementation.

The Van Meter and Van Horn (1975) (outlined in Chapter 2) will be used to frame the analysis of the documentation related to the standards and objectives of the Indonesian Competency Standards policy. The policy is reflected in numerous documents such as program regulations and guidelines. The main sources for the analysis were the pertinent regulations, the strategic plan for the Ministry of Manpower, the information book of the Directorate of Training and Productivity of the Ministry of Manpower, a blueprint of Indonesian TVET toward 2020, a research paper produced for the development of the curriculum of Vocational School (SMK) and guide books accompanying the curriculum of Vocational Centres (BLK) and SMK. The list of regulations and documents for analysis is presented in Table 5.1 below.

Table 5.1

Regulations and Documents for the Analysis

Ministry of Manpower		Ministry of Education	
Name of regulation or document	**Number/ year**	**Name of regulation or document**	**Number/ year**
Manpower Act	13/2003	Skills Toward 2020 for the Global Era	2002
Ministerial Decision about the Procedure of the development of SKKNI	227/2003	National Education System Act	20/2003
Ministerial Decision about the Amendment of Ministerial Decision number 227 Year 2003	69/2004	Government Regulation about the National Standards of Education	19/2005
Government Regulation about the National Training System	31/2006	Ministerial Regulation about the Content Standards	22/2006
Ministerial Regulation about the Amendment of Ministerial Decision number 69 Year 2004	21/2007	Ministerial Regulation about the Graduate Competency Standards	23/2006
Strategic Planning of the Directorate for Instructors and Training Staff (Bina Intala)	2010	Ministerial Regulation about the Implementation of Ministerial Regulation number 22 and 23 Year 2006	24/2006
Ministerial Regulation about Standardisation System of National Working Competency	05/2012	Research paper of the development of SMK's curriculum	2007
Ministerial Regulation about the Amendment of Ministerial Regulation number 21 Year 2007	8/2012	Guidebook for Technical Assistance in Developing Curriculum of SMK	2008
Information book on Training and Productivity	2013		

All the original documents were written in the Indonesian language (Bahasa Indonesia), and have been translated and summarised as required for this study.

5.2 Indonesian Competency Standards Policy: Problems with the standards and objectives

5.2.1 Policy borrowing

The policy of Indonesian Competency Standards was borrowed from the International Labour Organisation (ILO) under the guidelines of the Regional Model of Competency Standards (RMCS). The acronym of RMCS is stated in the 2003 Ministerial Regulation on the development of Indonesian Competency Standards policy, and also in the 2007 and 2012 amendments (Kemenakertrans, 2003; Peraturan, 2007, 2012b). For example, in the 2007 Ministerial Regulation, the acronym of RMCS appeared in two articles. The first was in Article 1, stating the definition of RMCS as "A *model of the development of competency standards applying work processes of producing goods and services in industry agreed by Asia Pacific countries". RMCS was noted again in Article 5 which states: "The development of the draft of Indonesian Competency Standards applying RMCS model which refers to the demands of workplace"* (Peraturan, 2007).

The adoption of RMCS into the Indonesian model of competency standards and skills recognition was not modified to take into account the culture and policy environment in Indonesia. In fact, the ILO introduced the RMCS to Asia Pacific countries, advised those nations

introducing the policy to develop and modify it "based on consideration of a good menu of options, capacity to assess needs, and understanding of the potential costs, risks, and benefits of different approaches and policies" (Allais, 2013, p. iii).

Indonesia was not alone in borrowing a policy related to competency standards. The study by Spreen (2001) examining outcome-based education in South Africa, and Allais' study (2013) on National Qualification Frameworks (NQF) in 16 countries, found that policy borrowing had been common practice in many countries, regardless of the fact that many of them failed to obtain the promised benefits.

5.2.2 Research papers underpinning Indonesian Competency Standards policy

As a borrowed policy, the Indonesian Competency Standards policy was not underpinned by a theoretical or empirical justification based on research evidence. It could be argued that a research study of this type prior to the legislation of the Indonesian Competency Standards would be essential to understand the policy environment and the strategy to implement and achieve the policy objectives. According to Cochran and Malone (2010), policy formulation and policy documentation aim to address five main issues: policy planning in dealing with the problems; goals and priorities; options available to achieve those goals; costs and benefits of each option and the externalities, either positive or negative associated with each alternative (Cochran & Malone, 2010, pp. 49-50).

In the Indonesian context, the establishment of a policy paper outlining the implementation of Indonesian Competency Standards would be essential to deal with two important challenges. First, the Ministry of Education along with the other 13 ministries were involved in the management and financing Indonesian TVET institutions (see Chapter One, pp. 7-8). The regulation of and authority on curriculum were enacted by the Ministry of Education. The financing of policy, teacher recruitment and the quality of training workshops were part of the internal Ministries' responsibility (Peraturan, 2008). In addition, private Vocational Schools represent 75% (9,257) of the total 12,421 SMKs nationally (Kemendikbud, 2011, 2012). The Indonesian Competency Standards policy had to take into account a complex and fragmented management in the TVET sector.

Policy standards "can be utilised to assess the quality, clarity, consistency and accuracy of a national level direction" (Horn & Meter, 1977, p. 107). There appears to be no evidence in any research papers that provides informatio allowing the policy makers of Indonesian Competency Standards to shape the policy formulation and policy documentation to address policy planning in dealing with the problems, goals and priorities, options available to achieve those goals, costs and benefits of each option and the externalities, positive or negative associated with each alternative (Cochran & Malone, 2010, pp. 49-50).

The second challenge was the basic tenet in the development of Indonesian Competency Standards to promote industry-based competency standards, which meant industry was one of the important

stakeholders in the development of its implementation (Allais, 2013; ILO, 2006, 2009). The Indonesian Competency Standards policy did not address the roles industry, business chambers and professional associations could play.

Given the situation where 13 ministries were involved in the administration, management and financing Indonesian TVET institutions, an inter-organisational communication strategy would be essential. Without such a strategy, successful implementation of a policy is compromised. Successful implementation requires individuals who are implementing the policy understand the standards and objectives of the policy and ensure that the organisation's communication with implementers is clear, accurate and consistent (Horn & Meter, 1977). Therefore the standards and the objectives need to be clearly stated so that implementers know exactly what is expected.

In the Indonesian legal system however, a research policy paper is only required if it is an Act, a Law or a Government Regulation at National, Provincial or District level (Undang-Undang, 2011). Regulations under the ministry do not necessitate a research paper. However the Ministry of Education for example, did publish a research policy paper and invited public consultation prior to the enactment of the 2003 National Education Act and for the foundation of the Ministerial Regulation for the 2006 Curriculum (Kemendikbud, 2007b). In contrast, the Ministry of Manpower did not publish a research policy paper for the Indonesian Competency Standards policy, (Uwiyono, 2003). Given the strategic position of the Indonesian Competency

Standards, and more importantly the cross-ministry nature of the regulation, empirical evidence to underpin the policy of the Indonesian Competency Standards would be viewed as essential to bring participants on board (Peraturan, 2005b; Uwiyono, 2003).

The approach by the Indonesian Competency Standards in translating the Australian Key Competencies for use in the policy was another example of the poor establishment of the policy as well as a tendency to take shortcuts in the policy making process. All Indonesian Competency Standards regulated between 2003 and 2011 used seven key competencies that were copied and translated from the Australian version of Mayer Key Competencies (Hall & Werner, 1995; Kemenakertrans, 2003; Mayer, 1992; Peraturan, 2007; Williams, 2010). The seven key competencies were: (1) collecting, analysing and organising information; (2) communicating ideas and information; (3) planning and organising activities; (4) working with others and in teams; (5) using mathematical ideas and techniques; (6) solving problems and (7) using technology. However, the Australian government had previously replaced the Mayer Key Competencies with employability skills in 2001 (Cushnahan, 2009). No research policy paper was written justifying the preference and rationale for the Australian version of Key Competencies, and no argument was mounted for a fit with Indonesian Competency Standards. The Australian government assisted Indonesia in the initial stage of the development of the Indonesian Competency Standards under the project, Indonesia-Australia Partnership for Skills Development (BNSP, 2014a).

In comparison to Australia, where ample literature was published arguing the concept of the development of the key competencies (and also later with the set of employability skills), the key competencies in the Indonesian Competency Standards did not drive any debate or academic discourse; no publications could be found that discussed the matter. The second problem was related to how the key competencies would be implemented and operationalised in the two aspects of Indonesian Competency Standards policy: the curriculum and the certification aspect. The Key Competencies in the Indonesian Competency Standards were also not detailed and no guidebook or supporting materials outlining how the Key Competencies would be assessed in the certification of the Indonesian Competency Standards were available. Furthermore, in the 2012 amendment to the regulation of the development of Indonesian Competency Standards, the Key Competencies were eliminated from all new Indonesian Competency Standards regulated after 2012, without a rationale and without any academic debate (Peraturan, 2012b).

Another issue in the Indonesian Competency Standards policy was the inadequate development of modules for teachers. This was one of the core elements of the Regional Model of Competency Standards (RMCS model) adopted by the policy (ILO, 2006, 2009). In the global framework for skill development and skill recognition, modules are used in Competency-Based Education and Training (CBET) in the TVET sector, by specifying how competency standards are adopted in

education and training activities (Smith & Keating, 2003; Stanwick, 2009; Wheelahan & Carter, 2001).

Official data from the Ministry of Manpower identified 20 training modules out of a total 295 Indonesian Competency Standards that had been developed in the ten-year period since the promulgation, equating to 6.8% of the total number. The pace of the development of the modules was slow. There were 20 modules developed over an eight-year period between 2004 and 2011, which translates into 2.5 modules per year. The highest number of modules developed was in 2005 when five modules were developed and the lowest number was in 2009 and 2011 with one module in one year (Kemenakertrans, 2013c). Provision of funding for the development of modules in a new policy rarely matches the demand. Teachers in Vocational Centres under the Ministry of Manpower were provided with modules for some areas (Chen et al., 2011), but not all.

5.2.3 Financial Resources for Certification

The strategic plan developed by the Ministry of Manpower addressed the four-year certification target and the financial resources available for the implementation of the Indonesian Competency Standards. The strategic plan identified a targeted number of participants in Vocational Centres to undergo training and funded certification of competency (Kemenakertrans, 2010b). However, not all training participants had the opportunity to be included in certification programs.

The following table which summarised from the strategic plan shows the percentage of certified participants from total training participants planned in five years from 2010 to 2014 (Kemenakertrans, 2010b). These participant targets were considered small (on average 12.5 %) compared to the total number of targeted participants in training managed by Vocational Centres nationally. By percentage, the targeted participants to be certified in the Indonesian Competency Standards represented only eight per cent nationally of the total training participants of BLKs in 2010. This increased to 13.33% in 2011, 12.50% in 2012 and 16.67 % in 2013 and 11.75 in 2014 (Kemenakertrans, 2010b).

Table 5.2

Number of Certified Participants from the Total Training Participants in Five Year of Plan by Ministry of Manpower

Year	2010	2011	2012	2013	2014
Training participants	25,000	75,000	80,000	90,000	100,000
Certified participants	2,000	10,000	10,000	15,000	11,750
Percentage	8.00	13.33	12.50	16.67	11.75

The data provides evidence that the internal budget allocation of Ministry of Manpower was inadequate to provide certification for all training participants managed by Vocational Centres. The percentage of the targeted number of participants funded by Ministry of Manpower for certification was significantly lower if the students of Vocational Schools are included as well as TVETs operated by other ministries. For example, in 2011 there were 3.97 million students in Vocational Schools (Kemendikbud, 2012). To date, there is no document available

from the Ministry of Education outlining a budget allocation for certification of Indonesian Competency Standards for teachers and students.

In 2013 and 2015 Ministry of Education provided grants for Vocational Schools to establish an Assessment Centre even though the funds might be considered meagre. For example, in 2015 the Ministry of Education offered a competitive grant to establish 100 Assessment Centres in Vocational Schools of which there were 12,421 schools nationally (Direktorat PSMK, 2015).

The limited budget of the Ministry of Manpower to implement the Indonesian Competency Standards was evident in the national target to establish Assessment Centres in Vocational Centres. In 2009, the Ministry of Manpower identified eight Vocational Centres to be eligible for an Assessment Centre nationally. This then increased to nine Vocational Centres in 2010 and an additional nine Vocational Centres in 2011. The Ministry of Manpower's target for 2012 was to upgrade 11 Vocational Centres to establish Assessment Centres and another upgrade of 11 Vocational Centres in 2013. Funding for these national targets was insufficient given the large number of Vocational Centres. The limited national budget allocation for certification had an impact on the implementation at provincial level.

A report released by the provincial Ministry of Manpower revealed that in the 2011 financial year, the Ministry organised certification for 25 teachers of Vocational Centres and certification for 120 employees and graduates of two types of TVET (90 from the Automotive sector and

30 from the Tourism and Restaurant sector). In the same financial year the provincial Ministry of Manpower provided a competency-based training program for 40 teachers in Vocational Centres (Kemenakertrans, 2011b, 2011c). This represents a small percentage of participants compared to the total number of 410 teachers and 17 courses available in BLKs (BPS, 2013a). This clearly signified the limited financial resources that the Ministry of Manpower had available to implement the policy. It is not unusual that there is mismatch between availability of financial resources and the costs associated with policy implementation.

5.3   Regulations underpinning the implementation of Indonesian Competency Standards

5.3.1 Regulation for the certification aspects

President Megawati Soekarno Putri (23 July 2001 to 20 October 2004) signed the Government Regulation (Number 23 Year 2004) to establish the Certification Authority (BNSP). Article 3 of the regulation mandated the Certification Authority with the single task of managing the certification of competency under the Indonesian Competency Standards framework (Peraturan, 2004). The Certification Authority is directly responsible to the Indonesian President (Article 2), however the budget, facilities and staff are based in the Ministry of Manpower (Article 10). All regulations about the Certification Authority state how the institution functions but do not outline how TVET institutions, for example, will adopt Indonesian Competency Standards policy in their

curriculum and assessment system. In this regard, the relationship between TVET and the Certification Authority resides in the activities related to certification of competency through the Certification Body, which is regulated and controlled by the BNSP.

Yogyakarta Province, along with a few other provinces, established a Coordinating Agency for Certification (BKSP) responsible for the coordination and implementation of SKKNI at provincial level. Two years after the enactment of the establishment of Certification Authority, the Yogyakarta Governor promulgated the establishment of BKSP in Yogyakarta Province (Gubernur, 2011).

The regulation had two objectives in the establishment of the agency:

(1)   Improving the quality of human resources with competency and competitive advantages to fulfil local and international demand and

(2)   Decentralising the certification of competency to the provincial level.

As detailed in Chapter Two, the Governor Regulation encompasses all programs implementing the policy of the Indonesian Competency Standards. Yet, how BKSP assigns these strategic objectives without sufficient resources to carry out its responsibilities is open to question. Article 33 of the Regulation contains uncertainty about the source of the budget of BKSP. Instead of stating a fixed budget to operate BKSP, Article 33 states:

1) Coordinating Agency for Certification (BKSP) required a subsidy from Provincial Budget and National Budget through relevant departments;
2) Other legitimate and non-binding sources.

By not clearly naming the ministries that would fund the budget of BKSP, the Governor Regulation meant it was neither financially secure, nor sustainable. By not identifying departments responsibility for financing BKSP, and using the word 'subsidy' the Governor Regulation represented a non-binding regulation for the implementation of Indonesian Competency Standards.

In Indonesian budget-making regulations, the term 'subsidy' is classified as indirect budget spending, which means spending that is not directly available for program implementation. For example, grants for social organisations, political parties; private schools and salaries for local government staff (Peraturan, 2006a, 2014). In this instance, the Governor Regulation covering the establishment of BKSP may imply that implementation of Indonesian Competency Standards is not considered as one of the provincial program priorities. In 2011 the Governor Regulation Number 2 Year 2006 was amended. However the amendment eliminated one position on the advisory board of BKSP, and added a paragraph stating that the legal basis of the Board of BKSP will be enacted by Governor Decision (Gubernur, 2011).

5.3.2 Regulations for the curriculum aspects

This section analyses the regulations addressing implementation of the Indonesian Competency Standards in the two types of TVET. The

first TVET type was Vocational Centre (BLK) that was under the management of the Ministry of Manpower and the second was Vocational Schools (SMK), which was under the auspices of the Ministry of Education. The critical question to answer is how binding the regulations and relevant official supporting documents were that mandated implementation of Indonesian Competency Standards policy from a curriculum point of view.

For the implementation of the policy in Vocational Centres, three regulations were analysed to examine the link between the policy of the Indonesian Competency Standards and the curriculum of Vocational Centre. The first was the 2003 Manpower Act, which envisioned the demand for a national training system. Article 20 of the 2003 Manpower Act mandates

> (1) To support the improvement of job training for manpower development, a national job-training system that serves as a reference for the administration of job training in all fields of work and/or all sectors shall be developed. (2) Provisions concerning the form, mechanism and institutional arrangements of the national job-training system as mentioned under subsection (1) shall be regulated with a Government Regulation (Undang-Undang, 2003a).

In 2006, the Indonesian government promulgated Government Regulation Number 31/2006 the National Training System, which addressed the function of Indonesian Competency Standards in vocational training. The Government Regulation states that: "The SKKNI mentioned in Article 7 Paragraph 3 becomes the source and reference for the development of training programs and assessment of competency (Peraturan, 2006c)" in the Indonesian training system. At

the lower regulatory level, the functions of the Indonesian Competency Standards in Vocational Centre were more definitive. In the Ministerial Regulation about the Standardisation System of National Working Competency (Number 5/2012) the implementation of the competency standards in Vocational Centre is clearer:

> Article 10: "The implementation of SKKNI in the area of training is aimed for training development programs and accreditation".
> Article 11: "The implementation of SKKNI in the training development programs is especially for curriculum and syllabus development and for evaluating training outcomes" (Peraturan, 2012a).

The legal position of Indonesian Competency Standards policy in the training system of Vocational Centres under the Ministry of Manpower was definitive, as the regulator of SKKNI and the provider of Vocational Centres were under the management of a single ministry (Ministry of Manpower). The following section analyses the position of the Indonesian Competency Standards in Vocational Schools, under the regulation and management of Ministry of Education.

The curriculum policies in Vocational Schools are based on a number of regulations including:

1. The Education ACT No.20/2003, which described the National Education System in Indonesia and became the legal basis for the national education system, reflected increasing democratisation, decentralisation and autonomy in education.

2. Government Regulation No.19/2005 about the National Standard of Education. This regulation set the minimum criteria for the National Standard of Education and functioned as the foundation

for planning, implementing monitoring and evaluating school level education in Indonesia. This regulation briefly explained the Eight Education Standards that were detailed further in the lower level regulations of Ministerial Regulation.

3. Ministry of Education Regulation No.22/2006 was issued to implement the Government Regulation No.19/2005 in the area of Content Standards that provided a detailed explanation of the curriculum structure and learning areas.

4. Ministry of Education Regulation No.23/2006 described the Graduate Competency Standards (SKL) that students were expected to achieve on leaving school. This included SKL for the primary, junior high and senior high levels of schooling, for subject groups, and for each subject.

5. Ministry of Education Regulation No.24/2006 set out the implementation mechanism for the ministerial decrees No.22/2006 and 23/2006.

To investigate the mandate of the Ministry of Education for the implementation of Indonesian Competency Standards in Vocational School, the discussion focuses on the regulation of the Content Standards and Graduate Competency Standards. The two regulations were legislated in order to maintain the minimum achieved standards in the curriculum structure and learning areas (Standards of Content) and the minimum standards of competency for graduates of SMK (Graduate

Competency Standards). The Ministerial Regulation on Content Standards states:

> "The content of the subjects related to the Foundation of Vocational Competency and Vocational Competency is adjusted with the course area to fulfil working competency standards in the workplace" (Peraturan, 2006b, p. 19).

This regulation does not mention Indonesian Competency Standards policy as being the set of competency standards but rather it refers to a set of generic standards that may refer to industry standards in one sector (e.g. Tourism, Automotive) or standards from one enterprise or employer. For successful policy implementation, standards need to be specifically defined (Horn & Meter, 1977).

In the two guidelines for the development of the School-Based Curriculum (KTSP), the Indonesian Competency Standards are referred to in Manual 2. However, the references to the Indonesian Competency Standards in Manual 2 were minimal and were not prescriptive:

> "The *Produktif* subject is a group of subjects aimed to promote working competency in accordance with SKKNI. In the case of unavailability of SKKNI relevant to a particular course, teachers' forum can recommend competency standards representing industry area or association of profession" (Kemendikbud, 2007a, p. 10).

The guidelines for the development of School Based Curriculum also state that "SKKNI is one model of Working Competency Standards" (Direktorat PSMK, 2008, p. vi). Thus, the guidebook implies curriculum developers in Vocational Schools may refer to other competency standards. The guidelines state: "Competency standards for core vocational subjects are adopted from the working competency

standards or other competency standards valid in the workplace and relevant to the SMK qualification level" (Direktorat PSMK, 2008, p. 40).

Additional documentation for the training of teachers in Vocational Schools in developing School Based Curriculum, defines competency standards as

> "...descriptions of functions and tasks or jobs developing students' qualifications. The Vocational Competencies refer to Competency Standards and Basic Competency (SKKD) developed by the Directorate of Vocational Schools (SMK) or other competency standards valid in the workplace/relevant industries" (Direktorat PSMK, 2008, p. 54).

The analysis of regulations and documents from Ministry of Education found that for Vocational Schools, there was one of several menus that a school level curriculum developer might refer to.

The regulation timeline outlined in Table 5.2 below shows the promulgation of regulations related to Indonesian Competency Standards by the Ministry of Manpower preceded regulations decreed by the Ministry of Education. For example, the Ministry of Manpower promulgated the regulation of the Indonesian Competency Standards policy three months after the Education Act (31/10/2003). Further, the regulations related to the Indonesian Competency Standards and the BNSP preceded those of the Ministry of Education which dealt with the Eight Education Standards (Government Regulation number 19-16 May 2005) and also the Graduate Competence Standards (SKL) - the main guideline for the development of Vocational Schools' Curriculum. However, the analysis of the regulation of the educational standards indicated that Ministry of Education did not refer to Ministry of

Manpower regulations about Indonesian Competency Standards policy in establishing regulations directing the Content and also Graduate Competency Standards for Vocational Schools.

In Indonesia, the regulatory overlap, confusion and multiple interpretations of government policy was a trigger for the parliament to introduce the Act of Formulation of Laws and Regulation to function as an instrument for integration, synchronisation and harmonisation of the regulations (OECD, 2012; Undang-Undang, 2011). Yet, the multiple-interpretations in the Education Act and its impact on the implementation of Indonesian Competency Standards have received little attention.

Table 5.3

Regulation Timelines for the Curriculum Implementation of Vocational Centre and Vocational School

Ministry of Manpower			Ministry of Education	
Date	Tittle		Date	Tittle
25/03/2003	Manpower Act	◄		
		►	08/07/2003	Education Act
31/10/2003	Establishment of SKKNI (amended in 2004, 2007 and 2012)	◄		
05/08/2004	GR: Establishment of the Certification Authority	◄		
		►	16/05/2005	GR: Education Standards
		►	23/05/2006	MR: Content Standards
		►	23/05/2006	MR: Graduate Competency Standards
		►	2/06/2006	MR: Implementation of Content and Graduate Competency Standards
22/09/2006	GR: Vocational Training System	◄		
22/03/2012	MR: Standardisation System of Working Competency Standards	◄		

Acronyms:
Government Regulation (GR)
Ministerial Regulation (MR)
Ministerial Decree (MD)

5.4 Policy inconsistency in the implementation of the Indonesian Competency Standards in Vocational Schools

The implementation of the Indonesian Competency Standards policy through the analysis of documents highlighted an inconsistency in the policy by the Ministry of Education. There was a policy inconsistency when dealing with competency standards. This was identified through analysing documents and regulations relevant to skill development initiatives. The analysis compared the blueprint entitled *Keterampilan Menjelang 2020 untuk Era Global* (Skills Toward 2020 for the Global Era) and the Ministerial Regulation about Graduate Competency Standards (SKL). The vocational education blueprint was published for the first time in 1997 then updated in 2002. It clearly addressed the agenda of Certification in Competency Based Education and Training for Vocational School (Supriadi, 2002). The policy paper also highlighted the need for an independent body to develop competency standards and manage certification of competency (Supriadi, 2002). However, the Ministerial regulation regarding Graduate Competency Standards did not refer to any competency standards from the Indonesian Competency Standards and the Ministry of Education established their own internal certification agency and named it Competency Certification Body (LSK) and internal Competency Standards (Kemendikbud, 2009).

The agenda of competency standards and the certification of competency were embedded in the blueprint of *Skill Toward 2020 for the*

Global Era (Priowirjanto, 2000; Supriadi, 2002). However, Ministry of Education was reluctant to impose Indonesian Competency Standards as a national framework for certification of competency in SMK because of the high cost of certification and there was no budget allocation for the program. The Ministry of Education delegated the decision to be implemented at school level. The agendas of competency standards and Competency Based Education and Training were addressed in two research papers. The first was the research paper for the development of a curriculum for Vocational Schools and the research paper prior to the drafting of Ministerial Regulation on the School Based Curriculum (Kemendikbud, 2007b). The Government Regulation on Education Standards signed by the President, did not mention Indonesian Competency Standards or Competency Based Education and Training as a reference point for the development of competency standards in Vocational Schools.

The inconsistency in the policy direction of the Ministry of Education became evident when the agreement of the Association of South East Asian Countries (ASEAN) Economic Community (AEC) came into effect in 2015 (ASEAN, 2008). One point in the agreement was to support the free flow of skilled labour between the ten member countries in ASEAN, even though it was believed it would threaten the domestic job market (Menaker, 2015). In reaction to the upcoming agreement, the Ministry of Education along with other relevant Ministries declared the need to accelerate the certification of competency and also use the Indonesian Qualification Framework as

part of a strategy to deal with what they coined as "labour flooding" from ASEAN member countries (Dewi, 2013). The Ministry of Education, for example, accelerated the establishment of Assessment Centres in Vocational Schools by providing grants for 100 Assessment Centres in 2015 (Direktorat PSMK, 2013a, 2015).

The document analysis in this chapter suggests that policy inconsistency undermined the implementation of Indonesian Competency Standards policy in Vocational Schools. The Ministry of Education as the authority and regulator of Vocational School was ambivalent in its attitude to the competency standards agenda.

5.5   Summary of the chapter

Applying Van Meter and Van Horn's framework in evaluating six aspects of policy implementation, this chapter presented the results of a documentary analysis focussing on the policy standards and objectives of Indonesian Competency Standards policy. This analysis established that in the context of standards and objectives, the implementation of the Indonesian Competency Standards policy encountered five problems. The problems identified were:

1. The Indonesian Competency Standards was borrowed from the International Labour Organisation but was not comprehensively adapted to address the unique Indonesian contextual challenges such as a fragmented policy environment and TVET system, enormous cultural diversity and disparity in regional development;

2. Limited availability of training packages to support Competency Based Education and Training under Indonesian Competency Standards;

3. The Ministry of Manpower, as the regulator and the provider of Vocational Centres, had a limited budget allocation for the costs of certification under Indonesian Competency Standards

4. The policy lacked clear objectives and standards to ensure harmonisation in its implementation by the 13 ministries managing TVET and regulation of resources sharing and

5. A policy inconsistency was identified in the Ministry of Education, the main education regulator in the agenda of competency standards.

Policy standards and objectives is the first of the six factors of the chosen policy implementation evaluation model that provides a foundation and influences resources for implementation, inter-organisational communication in implementation, characteristics of implementers and external issues. The next chapter reports the results of the interview analysis. This addresses resources for implementation, inter-organisational communication in implementation, characteristics of implementers and external issues.

CHAPTER SIX: ANALYSIS OF INTERVIEW RESULTS

6.1   Introduction

This chapter reports the results of the qualitative data analysis on the implementation of the policy of the Indonesian Competency Standards (SKKNI) in Technical and Vocational Education and Training (TVET) institutions in Yogyakarta Province, Indonesia. The data used in this chapter was obtained from interviews with stakeholders in the policy of SKKNI, such as teachers, directors of Vocational Centres (BLKs), principals of Vocational Schools (SMKs), representatives of departments at district, provincial and national level, chairpersons of certification agencies and other relevant stakeholders. The analysis was assisted by the NVIVO 10 software package (Bazeley & Richards, 2000). The Van Meter and Van Horn (1975) framework of analysing an implementation process guided the analysis, particularly in identifying themes in the interviewees' transcripts. The four themes emerging from the analysis were: (1) Resources for implementation; (2) Inter-organisational communication in implementation; (3) Characteristics of the implementers and (4) External factors.

The aim of the qualitative analysis is to identify the underlying factors in the implementation process. The qualitative explanations therefore help contextualise the attitudes of the grass root implementers regarding the implementation process and its effectiveness.

6.2   Theme 1: Resources for implementation

The responses by the study participants are clustered under the following sub-themes: financial resources; curriculum resources and workshop facilities. This section examines the interviewees' attitudes concerning the adequacy of the three resources in supporting the implementation.

6.2.1 Financial resources

The Ministry of Manpower financed the implementation of the Indonesian Competency Standards policy in a limited capacity, given the number of TVET teachers and students involved (Bappenas, 2013; Chen et al., 2011; Peraturan, 2010). The Ministry of Manpower provided limited financial resources to implement programs related to the SKKNI certification, distributing only a small portion of the budget to BLKs across the 33 provinces. Vocational Centres were not involved in planning the allocation of resources, even though there was an expectation of them to participate in the programs provided by either the national or the provincial office of the Ministry of Manpower, albeit with no financial support.

Vocational Centres did not have access to alternative financial resources to fund the implementation of the policy. Vocational Schools, on the other hand, had some level of financial autonomy to be able to send their teachers and/or students to undergo certification or to provide the certification programs internally. This financial autonomy accounted for the findings that voluntary implementation of the policy

occurred in Vocational Schools and not in Vocational Centres. Many interviewees from the two types of TVET said the cost of certification was too expensive, and as a result contributed to the low uptake of two types of TVET in implementing the program.

The following section outlines in more detail the prohibitive costs of certification as specified by the interviewees. From a total of 32 recorded individual and group interviews, 84% (27 interviewees) raised financial concerns about the program with words such as "expensive" (*mahal*), "funds" (*dana*) and "cost" (*biaya*). These concerns regarding the prohibitive cost of certification were raised by interviewees from all levels within institutions; school or centre as well as district, provincial and national levels. Several direct quotes about the cost of certification are included below to illustrate these concerns:

> *"The cost of certification is expensive, it is about Indonesian Rupiah (IDR) 400,000- to 500,000 - (United States Dollar [US$] 38-48)". (SMK Teacher Automotive)*

> *"It is true that the cost (of certification) is expensive, but it is really demanded." (MoM District)*

> *"The certification of SKKNI is too expensive." (Unrecorded interview MoEC National)*

Interviewees from certification agencies representing 18% of the total interviews, considered the cost of certification as not being prohibitively expensive, compared to the benefits gained: the economic value, the recognition, the social significance, the impact and the quality of the certification. For example:

"I heard people complaining about the expensive cost for certification of SKKNI. In my view, people want cheap products or services simply because they don't care about the quality and have low purchasing power. If they are financially able to purchase expensive and good quality products or services they will buy the good one. Certification of SKKNI is relatively expensive but is of good quality". (BNSP National)

The complaint about the expensive cost of the certification was not applicable for employees undertaking the certification as part of their career promotions (for example in the banking sector) (Supomo, 2009).

6.2.1.1 The context of the high cost of certification

Interviewees answered questions regarding the cost of certification and the variable prices, which were based on the type of vocation and the number of unit assessments they were required to complete. According to the interviewees' statements, the cost can be grouped into two levels. In the first cost level, the range was between IDR 125,000 to IDR 175,000 (US $12 to $17) for "Practical Microsoft Office", "Computer Network", "Mechanical", and "Domestic Electricity Installation/Electrician". The second cost level was from IDR 350,000 to IDR 550,000 (US $33 to $52) in the areas of "Garment", "Accountant Technician" and "Automotive".

The certification cost for teachers consisted of two types of certification. The first was the certification for a particular competency and the second was for certification as an assessor. The total cost of the two certifications ranged from IDR 3,000,000 to IDR 5,000,000, (US

$285 to $476). Interviewees also reported that the cost for Recognition of Current Competency (RCC), an assessment to renew their Certificate of competency, would be approximately IDR 7,500,000, the equivalent of US $ 714.

There were complaints by interviewees about the high level of the cost for certification. For example, compared to the Government grant *Bantuan Operasional Sekolah* (BOS - School Operational Assistance) the cost of the cheapest certification was twice the amount of the BOS funding granted, and up to more than nine times to complete all units in the certification. At the time of data collection (2012) the cost of the BOS grant was IDR 60,000 (US $6) per student per semester (Direktorat PSMK, 2013b). In the following year (2013), the National Government significantly increased the cost of the BOS to IDR 500,000 (US $48) per student per semester. Comparing the two versions of the BOS (2012 to 2013), the variation in cost of certification was considerably higher. In fact, the BOS grant was increased to fund the cost of 12 educational items. The items included purchasing text books, stationery, consumable materials, teaching equipment, printing and copying test materials, extra school activities, assessment of competencies, internship programs, maintenance, services, school enrolment and for providing a report to BOS on the funding allocation (Direktorat PSMK, 2013b).

Interviewees from various institutions (BLK Directors, SMK Principals, Ministry of Education and LSP) put the low social-economic background of TVET students as the context of the complaint

concerning the high cost of certification. This contextualisation is relevant, as most of the SMKs implementing the policy collected funds partially or fully from students and parents, except for one private Vocational School where an international donor funded the certification cost.

An interviewee from Ministry of Education District stated that students in the Vocational Schools are from families classed as low and middle income. An interviewee from LSP emphasised that the Vocational School educational pathway is not a preferred one by middle and high income families, compared to General School (Purwaningrum, 2012). This meant that the applicants to Vocational School are normally students from a low economic background. As a consequence, the cost of certification would be considered as "high" (expensive). A Vocational School Principal reported that close to 20% of their students are from middle-income families but the majority (80%) are from low-income families. Another Vocational School Principal said that only local industry could be expected to provide external support for his school, because most of the parents are from a low economic background. BLK was dealing with the same issues. A BLK Director said that in interviewing new applicants, his BLK prioritised students from low-income backgrounds with a high passion and enthusiasm to study.

6.2.1.2 Sources of financial support for certification

6.2.1.2.1 Government project: Ministry of Manpower

For students and teachers in BLKs, government projects in the Ministry of Manpower were the only sources of funding to undertake certification of competency and also to certify teachers as assessors. Teachers at SMKs, on the other hand, had more options available to become certified. Interviewees from Vocational Schools stated that some participants were invited to complete the two types of certification for free (of competency and as an assessor) via a government project either funded by the Ministry of Manpower or Ministry of Education. The Ministry of Education didn't provide funds for BLK teachers or students, but some teachers of Vocational Schools said that Ministry of Manpower had invited them to participate in training and certification of competency. Another option was that teachers at Vocational Schools could obtain funding internally from their school, as some designated schools are permitted to collect funds from students and parents for such programs.

The Ministry of Manpower is the official department to implement the policy of the SKKNI. However, the following data reveals that limited funds were available within this department to deliver the policy at the provincial level. This data was collected from the provincial Ministry of Manpower office and revealed that in the 2011 financial year, the Ministry of Manpower organised certification for 25 teachers of BLKs and private vocational centres (LPKs) and certification for 120 employees and graduates of BLK/SMK (90 from the automotive sector

and 30 from the tourism and restaurant sector). In the same financial year the Ministry of Manpower conducted a competency based training program for 40 BLK teachers (Kemenakertrans, 2011b, 2011c) and provided technical assistance for 40 assessors in the area of Electrical and Spa (Kemenakertrans, 2011a). However, the total number of participants is small when compared to the total number of 410 teachers in the province and the 17 courses available in BLKs (BPS, 2013a).

6.2.1.2.2 Government project: Ministry of Education

Some teachers in Vocational Schools reported that their certification programs were organised and funded by the Vocational Education Development Centre (VEDC), a training centre under the management of Ministry of Education located outside the province. An Vocational School Principal confirmed that teachers from his Vocational School also received an invitation from the VEDC to undertake training and certification of competency. Official reports from Ministry of Education concerning the programs related to the certification of competency are not publically available. This report, therefore, relies on the interviewees' statements regarding the support from the Ministry of Education for certification programs. In addition to this, interviews from various sources such as teachers, vice-principals and principals from the Ministry of Education district and Ministry of Education province confirm the accuracy of this information.

One public Vocational School funded the certification cost from a number of sources; the first source was from the Ministry of Education under the umbrella of Piloting International Standards of Vocational School (SMK RSBI) and the second was from parents. The RSBI school received mixed financial support that was a combination of Ministry of Education and student funds.

> "The advantage of RSBI SMK is *they have school committee funds which can be allocated for staff development (including certification of competency and post graduate programs)." (MoEC Provincial)*

Notwithstanding the various models of financing the implementation of the policy, interviewees expressed a high expectation of the Ministry of Education to be the main financial source for the implementation of the policy (Surono, 2011).

> "The key actor in the implementation is the Ministry of Education. The Ministry of Education is expected to be the main sponsor." (MoM National)

An interviewee mentioned an example from a different province, where the provincial Ministry of Education financially, fully supported the implementation of the policy.

> "A good example came from the Central Java Province which provided a budget for certification for all SMK teachers. Every teacher has been allocated funds for training and certification IDR 1.5 Million each (US $143)." (MoM National)

The amendment of the Indonesian Constitution to allocate 20% of the National Budget for education was one of the reasons to expect more from the Ministry of Education (Undang-Undang, 1945). However,

a key figure from the National Ministry of Education in an unrecorded interview officially refused to impose the certification in Vocational School, and delegated the decision to implement it at school level. In contrast, an interviewee from the national Ministry of Manpower expressed concern about the unwillingness of the Ministry of Education to impose the certification and interpreted it as an indication of reluctance to support the policy.

> "In my view the 20% *budget for education is not only for educational process, but also for improving the output, in the context of SMK, until the students are officially competent and ready for work". (BNSP National*)

He felt that Ministry of Education was reluctant to participate in the certification program because Ministry of Education had considered that the certification agencies might attempt to take the Ministry of Education's budget. The interviewee from BNSP National clarified this:

> *"Don't be misunderstood! The BNSP will not take your 20% budget (the Ministry of Education budget). Don't be insecure! Manage the certification on your own. We will only control the process and the quality of certification programs". (BNSP National)*

Interviewees reported that financial support from the Ministry of Education for certification for teachers or students was scarce. Further, interviewees expressed their feeling that the Ministry of Education was reluctant to financially support certification even though the Ministry of Education had been allocated 20 per cent of the national budget.

6.2.1.2.3 Financial support from parents

Four of the six Vocational Schools implementing the policy received financial support from their students/parents. The Vocational Schools offered a friendly payment method by allowing parents to either pay in full or pay by instalments. Since all Vocational Schools budgets had to be approved by the provincial Ministry of Education, a process to collect money from parents was put in place. Initially, parents were invited to a general meeting where several issues were discussed, including the certification cost. A Vocational School principal detailed the experience of his school that requested students and parents to financially support the certification programs:

> *"In the first year of the certification program, the fee was collected from students prior to the certification. Some students paid the cost via the instalment scheme and some others paid the total in cash, it was not easy for students. In the second year, we included the cost in the school budget, so the payment method and the certification program were established." (SMK Principal District 3)*

Vocational Centres had different approaches to collecting money from parents. Two Vocational Centres in separate districts had different processes in place for collecting money from participating students. Vocational Centre District 1 had a local regulation to collect money from participants. However, considering the low economic background of students, the Vocational Centre did not offer student-funded certification, because they were expecting to get funding from the provincial or national government. An interviewee from Vocational Centre in District 3 said that they did not have any regulation to authorise them to collect money from their students. The Director said:

"There is no umbrella regulation to collect money from students. So, all of our training is for free". (BLK Director)

Two thirds of Vocational Schools implementing the certification collected financial support from students/parents to finance the certification cost. Vocational Centres on the other hand did not collect money for certification from students/parents because of the poor family background of their students and the lack of a regulation that allowed them to do so.

6.2.1.2.4 International donor

One private Vocational School had financial support for the Certification of competency from an international donor (Give2Asia, a charity foundation based in San Francisco, USA). Initial support from the foundation began in 2006 when the school was partially destroyed by an earthquake and continued until 2012 for a skills development program that included the Certification of competency. The foundation agreed to support the certification program for students only. The certification cost for teachers, however, came from the school budget. According to the representative of Assessment Centre Telematics, in the 2012 financial year, the support from the Give2Asia project covered certification costs in Practical Microsoft Office for all Year 12 students in the Computer and Network course at the school.

In 2011 support for certification funded 40 students. At the time the Vocational School sent their students to a private university for certification because the school was not an assessment centre. In the

following year, Give2Asia allocated financial support for the certification of all 78 students. This second assessment was conducted in the Vocational School because the school had established an assessment centre in Telematics. The researcher was at the assessment centre to observe the assessment process.

For students at Vocational Schools, the data generated by this study was placed into four possible financial sources. These are: parents, government, mixed funding by parents and government and international donors (see Figure 6.1).
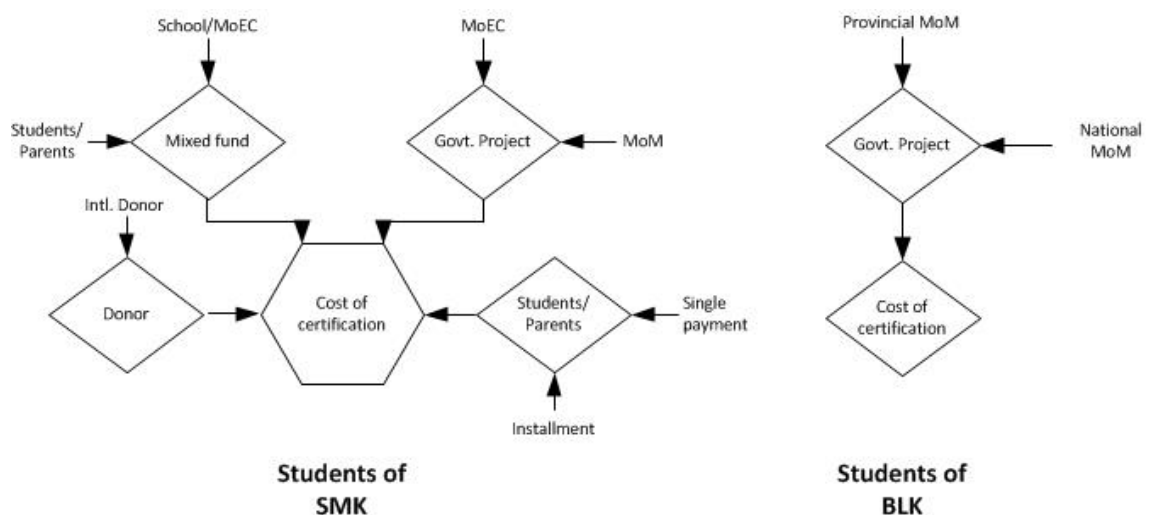
Figure 6.1 Funding resources for certification of students

Students at Vocational Centres, in contrast, had only one source to finance certification costs, which was from the government, particularly from the Ministry of Manpower albeit with very limited funds.

6.2.2 Policy incentives

Certified teachers in varying areas of skills and courses from Vocational Centres and Schools were interviewed about incentives. In answer to the question "Do you get a bonus or allowance for your achievement to obtain the certificate of SKKNI?" The answer was a resounding no. This is in stark contrast to what happens in the pedagogical certification project. Since 2007, the National government has run the teacher pedagogical certification project in order to certify teachers in their pedagogical competency. Successful teachers in this certification project are entitled to a professional allowance which would double their remuneration (Jalal et al., 2009).

In contrast, there was no such allowance for teachers of Vocational Schools who were successful in achieving certification in their vocational competency. The only source of additional income for those certified teachers was when they were hired as assessors for institutions offering the certification programs. This data thus provides evidence that the limited supply of incentives may have contributed to the failure of the policy (Hill & Hupe, 2002; Meter & Horn, 1975; P. A. Sabatier, 1986).

When the money for certification comes from students, principals and teachers there will apply more pressure to guarantee that their students will be successful in certification. This creates a feeling of responsibility, given the funding source is from parents with low incomes. This "feeling responsible" construct could initiate risk-taking behaviour. A Vocational School principal mentioned the risk-taking

behaviour (See Theme 2: Characteristics of the implementers) when their school voluntarily became involved in the implementation of the policy. As a consequence most of the Vocational Schools implementing the policy offered extra lessons or a trial assessments to ensure that their students would pass the assessment for the certification.

6.2.3 Curriculum resources

This section analyses the implementation of the curriculum aspects of the policy in Vocational Schools and Centres. The main question was 'What were the teachers' attitudes toward the existing curriculum in preparing students to achieve the two aspects of the policy of SKKNI?' (curriculum aspects and the certification aspects)

Teachers, Principals, and Heads of assessment centres in Vocational Schools indicated dissatisfaction with the structure of the curriculum, especially the proportion of teaching hours allocated between general subjects (the *Normatif* and the *Adaptif* subjects groups) and vocational subjects (the *Produktif* subjects groups). In the current SMK curriculum subjects are classified into three groups, they are:

a. The *Normatif* (i.e. religion, Bahasa Indonesia (Indonesian language), civic education, sport)

b. The *Adaptif* (i.e. maths, physics, chemistry, English, science, social sciences, computer, entrepreneurship)

c. The *Produktif* (vocational subjects) are subjects represented in the curriculum of Vocational Schools as the core vocational courses.

The data obtained from the Directorate of Vocational Schools show that in Yogyakarta Province the distribution of teachers by their subject groups was dominated by teachers from the general (non-vocational) subjects at the level of 63.74% which comprises of 32.49 % teachers from the *Adaptif* subjects group and 31.25% teachers from the *Normatif* subjects group). The percentage of teachers from the *Produktif* (core vocational) subjects was only 36.25 % of the total teachers of Vocational Schools (Directorate of SMK, personal communication, November 14, 2012).

The results of the thematic analysis from the interviews support the quantitative data that the general subjects occupied two-thirds of the total time allocation and total number of teachers. The *Produktif* subjects (the core vocational subjects) used one-third of the total time allocation and total number of teachers. This proportion impacts on the basic vocational orientation of Vocational Schools, not only in the province where this study took place, but also all Vocational Schools in Indonesia, as the basic structure of the curriculum is a centralised policy (Bjork, 2005; Kemendiknas, 2007a; Raihani, 2007).

6.2.3.1 Curriculum of Vocational School

Implementers expressed frustration about the insufficient time allocated to the *Produktif* subjects. In this regard they questioned the institutional identity of Vocational Schools and also expressed some level of disappointment in implementing the existing curriculum.

"I am not happy with the existing curriculum, but I can do nothing! Why I am not happy? Because we are a vocational school but the time allocated for vocational subjects is less than the general subjects. The 18 hours per week of the total 50 hours per week means only about a third." (SMK Teacher- Computer and Networking)

"The curriculum is not a match (with the demand of Vocational School). We are like SMA plus (general school lessons plus an additional few vocational subjects). The Produktif subject hours are getting lower; we now only have 18 hours per week (of the total 50 hours a week). When the Minister of Education was Mr Djojonegoro (Minister of Education from 1995 to 2000), the time allocation for the Produktif subjects was 75% compared to 25% of the non-Produktif. Moreover, in the current curriculum, SMK also has a subject in Arts and Culture (which is irrelevant to a Vocational School!)" (SMK Teacher- Mechanical)

This type of curriculum variation is actually acceptable under the School-Based Curriculum (KTSP). The following statement from Ministry of Education Provincial confirms this.

"Schools are allowed to add more hours for the Produktif subjects by reducing the others (the Adaptif), or alternatively by putting in an extra hour long lesson, leaving the Curriculum entirely in the teachers' hands." (MoEC Provincial)

In Indonesian educational practice, it is uncommon for a principal to not comply with the national government policy in order to prioritise students' interests. Raihani's study examining the implementation of school-based management, notes that *"teachers have culturally been accustomed to a centralised system"* (Raihani, 2007, p. 179) and *"it will take time to change the cultural behaviours of teachers and other people working in education"* (Raihani, 2007, p. 180).

There is an inequality in the proportion of time allocated to general subjects (the *Normatif-Adaptif* subjects) compared to the core

vocational subjects (the *Produktif* subjects). This inequality between non-vocational and vocational subjects was evident in the subjects examined in the compulsory National Exam which created public disapproval (Zulfikar, 2009). Teachers' attitudes toward the unbalanced portion of subjects in the national exam for Vocational School are reflected by:

> *"The government has set a target that 100% of students will pass the National exam, which means they favour the Normatif and the Adaptif subjects (the National exam only examines three subjects in SMK. They are Maths, Indonesian language and English). On the other hand the Produktif subjects (the core vocational subjects) are ignored.*

> *Evidence of the unbalanced portion of subjects in Vocational School was when schools provided extra hours for lessons on the Normatif and Adaptif subjects in preparing for the National exam and didn't do so for the Produktif subjects. After teachers complained, they then offered extra hours for the Produktif. Nevertheless, bias still existed when the Normatif and the Adaptif got three times the extra hours for lessons, and the Produktif got only one hour.*

> *In fact we had 12 subjects in the Produktif group and only one extra lesson had been allocated to the Produktif. It was extremely inequitable. We are a vocational school. They should change the name from 'Vocational' to 'General' School. They are inconsistent with the basic identity of SMK!" (SMK Teacher-Hospitality and Tourism)*

Despite the complaint regarding inadequate time allocation for the *Produktif* subjects group, other teachers took the opportunity of school autonomy to modify the curriculum in order to meet a more realistic target.

"In my view, the curriculum from Ministry of Education acts as a reference, especially in the KTSP Curriculum where schools can choose whether they will refer to the Ministry of Education or the SKKNI. I myself combined the KTSP and the SKKNI. I deliver the realistic part of SKKNI and put the Vocational School curriculum aside." (SMK Teacher-Welding)

The pattern of responses concerning the vocational identity of Vocational School compared to SMA (the general school) was also supported by unrecorded interviews and informal discussions with teachers and principals of SMKs.

6.2.3.2 Curriculum of Vocational Centre

The curriculum of Vocational Centre is entirely dedicated to skill development. However, interviewees complained that only three courses in Vocational Centres were supplied with a standardised curriculum and training modules from the Ministry of Manpower.

"Three courses in Vocational Centre have complete curricula which refer to SKKNI. They are Automotive, Mechanical Technology and Electrical Installation. The three courses have been equipped with complete training modules. The national government is promoting these three courses and is paying less attention to other courses". (BLK Director)

"Vocational Centre curriculum in three courses applies to the ILO model of modular training". (MoM District)

Interviewees reported that the curriculum of Vocational Centres was fully dedicated to skills development, however only three of the 17 courses that have been developed accord with SKKNI modules.

6.2.4 Workshop facilities for training

This section analyses the interviewees' views about the adequacy of workshop facilities in their institutions. The adequacy of workshop facilities may not directly impact on implementation as students can undergo certification in other assessment centres. However, skill development involves a lengthy and complex process that requires a need for adequate workshop facilities (Maclean et al., 2013; Supriadi, 2002). The interviewees' dissatisfaction with the workshop facilities signifies that the lack of adequate workshops in their institutions impeded their participation in policy implementation (Meter & Horn, 1975, p. 475).

The majority of implementers reported that the provision of workshop facilities were inadequate, out-dated and only met the minimum requirements.

> *"When the SKKNI certification model was launched, many Vocational Schools ccould not fulfil the standards because of the workshop and equipment problems. Especially courses relating to technology (E.g. construction, computer, building, mechanical, etc.)."* (SMK Vice Principal District 1)

> *"To establish an assessment centre, financial obstacles are very obvious. Can we imagine how much money is needed to build a model of a five star hotel?"* (SMK Teacher-Hospitality and Tourism)

> *"We do not have an assessment centre because our workshop and equipment hasn't met the minimum requirements (as an assessment centre)".* (BLK Director)

A representative of Ministry of Manpower at District level said that the workshop facilities in an automotive course in Vocational Centre under his authority were obsolete. He said:

> *"Nowadays cars have been fitted with electric fuel injection systems. In contrast, cars in our workshop are the models with a carburettor fuel system. There should be no more excuses simply because there are no funds to upgrade". (MoM District)*

On the other hand, one Vocational School was more fortunate than others. The only private Vocational School to qualify as an assessment centre in Computer and Network received a grant from the national government entitled JARDIKNAS (National Education Network). This grant included 20 new computer units, a wide area network and high-speed broadband facilities. The Vocational School utilised the ICT centre facilities as the assessment centre for the SKKNI certification.

There was a difference of opinion about the quality of workshop facilities between interviewees from Vocational Centres and Vocational Schools. Interviewees from Ministry of Manpower and Vocational Centres said that the workshop facilities in Vocational Schools were of a higher standard.

> *"I see that the Vocational School is more aggressive (in upgrading their workshop facilities) and their budget is clearly much more. We (BLK) were left behind in workshop facilities." (MoM District)*

In spite of the differences in opinions between the interviewees from the two departments, the inadequacy of workshop facilities in BLK has also been identified in a study conducted by the World Bank (Chen et al., 2011; Peraturan, 2010). Moreover, in the 2010 Strategic Plan, the

Ministry of Manpower set targets to address the quality of workshop facilities. The targets were to have nine Vocational Centres with assessment centres in 2011 nationally and another nine Vocational Centres with assessment centres in 2012 (Kemenakertrans, 2010b). This targeted number was considerably lower than the number required given there were 276 Vocational Centres in 33 provinces in Indonesia (BPS, 2012; Depdagri, 2009; Kemenakertrans, 2012).

6.3 Theme 2: Inter-organisation communication in implementation

This section reports the interviewees' view on the inter-organisational relations between the entities involved in the implementation of the policy of Indonesian Competency Standards. There were two types of TVET institutions, Vocational Centres under the Ministry of Manpower, and Vocational Schools under the auspices of Ministry of Education. This section reports the interviewees' views on three main areas of inter-organisational tension in implementation, multiple-interpretation of the Education Act and communication and coordination. Of the total 57 references from 25 interviews regarding inter-organisational communication, 14% of interviewees addressed the issue of "coordination", 29% "communication issues", and interestingly more than half (57%) of the references addressed the issue relating to "inter-organisational tension" between institutions involved in the implementation.

6.3.1 Tension between Ministry of Manpower and Ministry of Education in implementation

The inter-organisational tension was illustrated by the phrases and words "reluctant to implement"; "envious"; "scramble (*berebut*) for projects"; "contrasting LSP *vis-a-vis* LSK"; and "sectorial ego". Interviewees held different positions and administrative levels in SMKs, certification agencies and Ministry of Manpower. The positions held by the interviewees ranged from teachers, principals, heads of assessment centres, representatives from Certification Body, Coordinating Agency for Certification, Certification Authority and Ministry of Manpower. Based on the administrative levels, the interviewees were from schools as well as provincial and national level agencies.

Interviewees from Vocational Schools were the most affected by the tension in the implementation process. The confusion and tension expressed by interviewees from Vocational Schools were related to the coexistence of two different certification frameworks and two different institutions responsible for the certification of competency. LSP was under the BNSP that was funded by the Ministry of Manpower, LSK on the other hand was managed by the Directorate of Non Formal Education (PNFI) of the Ministry of Education to certify students from its training programs. PNFI used facilities and assessors from a number of different institutions to carry out certification of competency as well as Vocational Schools (Kemendikbud, 2009). Moreover, interviewees reported that certification programs under LSK-PNFI were carried out in Vocational Schools that were already implementing the certification

under the LSP-BNSP. Interviewees viewed this "rivalry" between two certification agencies negatively:

> *"Given the existence of LSP, why does the Ministry of Education then establish LSK? They merely scramble for money, scramble for food. Because of the existence of LSP, Ministry of Education's authority for Certification of competency through LSK has ended. As a consequence Ministry of Education officials lost their projects. There is also a problem for certified students under the LSP because the Ministry of Education does not recognise a Certificate of competency from LSP. As a result, students in Year 12 still need to undergo a skills test." (SMK Vice Principal District 1)*

> *"We are more pragmatic. If the Ministry of Education comes with a certification project under the platform of LSK, we accept it in regard to measuring the curriculum's attainment and at the same time we are open to work with the LSP's framework because of the industrial acceptance." (SMK Teacher, Hospitality and Tourism)*

> *"An SMK Principal who holds two certificates of assessor under the LSP and the LSK always applies the LSP system in his SMK because he believes that the LSP is more accountable." (LSP Accountant Technician)*

At the grassroots level, interviewees expressed their critical, but pragmatic attitudes towards the coexistence of two competing certification agencies. In contrast, interviewees from provincial and national levels expressed the tension in implementation in more idealistic and uncompromising ways.

> *"To the people introducing LSK certification in SMK, I showed them the Government Regulation Number 23/2004 which states: The authority for Certification of Profession is only under BNSP and LSP (Peraturan, 2004). No other model is in the area of Professional Certification System. The Ministry of Education's LSK is clearly breaking the regulation. The Ministry of Education is jealous of the Ministry of Manpower. That's odd!" (BKSP Provincial)*

LSK was officially under the Directorate of Non-formal and Informal Education (Directorate of PNFI) in the Ministry of Education, therefore there was no hierarchical relationship between the Directorate of PNFI and Vocational Schools which were under the Directorate of Vocational Schools. However as reported by the majority of interviewees from the schools, the Directorate of PNFI established TUK in SMKs because they had better training workshop facilities compared to the vocational centres belonging to the Directorate of PNFI. Teachers commented that most TUKs in Vocational Schools had two affiliations, one to certification programs that were operated by LSP of the BNSP and the other certification programs operated by LSK in the Directorate of PNFI. As reported in the previous section, some teachers who were qualified as assessors found that they also had two affiliations in assessment for certification, namely conducting assessment for certification of SKKNI under LSP-BNSP or certification of competency under LSK of the Directorate of PNFI.

> *"Indonesia is odd. The problem of implementation not only exists at the grass root level, but also in the policy makers' at national level. The policy makers in the Ministry of Education assert that they can run certification without the involvement of professional associations, they also run certification for students of SMK but do not refer to the Competency Standards under the SKKNI." (BNSP National)*

Of the total of 336 references regarding LSP and LSK, 80% (269 references) mentioned LSP and 20% (67 references) mentioned LSK separately, only 16 references of the total mentioned LSP and LSK (side-

by-side as agency rivals) once. The percentages reported above show that interviewees from TVET were more familiar with LSP than LSK.

According to the interviewees, LSP and LSK have different standards in the areas of marking criteria, pricing and using the Competency Standards as a reference.

> *"The marking standard between LSP and LSK is very different. LSP is higher. LSK using an ordinal number, whereas the LSP assessment result is either COMPETENT or NOT COMPETENT, so it is very clear." (LSP Garment)*

The coexistence of two certification agencies in SMKs, one of which was under the BNSP-Ministry of Manpower and the other funded by the PNFI of the Ministry of Education, created confusion among the grass roots implementers. Moreover, the coexistence of both certification agencies especially in SMKs, signified the tension and rivalry between the two ministries working on a similar agenda of skill development and both operating TVET institutions.

6.3.2 Multiple-interpretation in the 2003 Education Act addresses certification of competency

Three key interviewees from the Provincial BKSP, BNSP National and Ministry of Manpower National identified regulatory problems in the implementation process. The problems related to what many interviewees considered to be the low participation rate, the reluctance of the Ministry of Education to officially impose the policy for SMK and the "rivalry" between certification agencies under the Ministry of Education and Ministry of Manpower. Sixteen references in five

interviews addressed intense rivalry between the two competing institutions in the certification of competency in SMK, the LSP under the BNSP and the LSK under the auspices of the Ministry of Education. According to one interviewee from BKSP, the Ministry of Education interpreted article 61 verse 3 of the 2003 Education Act in a different way and took advantage of its ambiguity.

The complete quote of article 61 of the 2003 Education Act, which was promulgated on 08/07/2003, is as follows:

> *(1) Certification shall be in the form of Diploma and Certificate of competency; (2) A Diploma shall be awarded to a learner as recognition of the educational achievement and/or completion of a level of education after passing an examination conducted by an accredited unit of education; (3) A Certificate of competency shall be awarded by education providers and training centres to learners, and to learners of community as trainees, as a recognition of the competence to do a particular job after passing a competency examination conducted by an accredited unit of education or a professional certification body; (4) The implementation of the provisions for certification, set forth in verse (1), verse (2), and verse (3), shall be further stipulated by the Government Regulation. (Undang-Undang, 2003b, p. 32)*

The point of multiple-interpretation is in verse 3, which states that education providers, including Vocational Schools, may award a certificate of competency as long as they are an accredited education institution.

The first interpretation of verse (3) is that the certification of competency can be managed by "an accredited unit of education" or by a professional certification body (in the Indonesian context, the LSP). In the context of the Yogyakarta Province, most Vocational Schools were accredited under the National Accreditation Agency (BAN). The

ambiguity of the "or" (in verse number 3) means that the LSP is not the only set of institutions legally administering the certification of competency. The two interviewees from the National Professional Certification Authority (the BNSP) and from the provincial certification coordination (the BKSP) accepted this interpretation. However, these two interviewees and other interviewees from National Ministry of Manpower did not agree that the Ministry of Education should establish their own competency standards, as the Ministry of Manpower regulated it. According to the interviewees, the government regulation in the context of the verse number 3 is the SKKNI policy is regulated and managed by the Ministry of Manpower. The following transcript is a clarification given by an interviewee from National BNSP:

> *"Don't be insecure! Manage the certification by yourselves (Ministry of Education). We will only control the process and the quality of certification programs". (BNSP National)*

BKSP explained why the Ministry of Education established LSK:

> *"Because to establish an LSP takes a long time, it is caused by strict requirements and standards. For me LSK is acceptable in that situation as long as the basic structure and the certification system are in compliance with the BNSP." (BKSP Provincial)*

The main point of the interviewees' grievances was the Ministry of Education initiative to develop their own "Competency Standards" instead of acting in compliance with the existing regulation of the certification of competency under the SKKNI framework. In addition, the time difference between the two misinterpreted regulations (the 2003 Education Act and the SKKNI) was short. The Ministry of Manpower

promulgated the regulation of the SKKNI only three months after the Education Act (31/10/2003). The regulations related to the SKKNI (promulgated in 2003) and the BNSP (promulgated in 2004) preceded Ministry of Education regulations linked to education standards (Government Regulation number 19-16 May 2005) and also the regulation about Graduate Competency Standards (SKL), which is the main guideline for the development of Vocational School Curriculum. However, the regulation about Graduate Competency Standards in Vocational Schools did not refer to the previous regulation.

The establishment of LSK under the Ministry of Education exemplifies interviewees' grievances regarding what they called the "sectoral ego" between different departments working in areas that overlap. Regardless of the time sequence of regulations, the Ministry of Education seemed reluctant to impose Ministry of Manpower regulations, especially in the area of vocational education, which would have harmonised the two interconnected ministries (Ministry of Manpower and Ministry of Education) (Maulia, 2009). The interviewee from the BKSP mentioned another instance. The Tourism Act (Undang-Undang, 2009) which has a similar article related to the competency standard. However there is no other interpretation of the regulation about certification of competency because it refers to the SKKNI, BNSP and LSP.

6.3.3 Communication and coordination

Based on the conceptual framework regarding policy implementation, a lack of communication and coordination hindered the implementation because multiple agencies from two different Ministries were involved. Interviewees from both TVET institutions and national level implementers expressed a consistent account of poor communication during the implementation process. Interviewees from SMKs reported more activities related to communication and coordination than their counterparts in BLK. The bottom-up process and self-initiated policy implementation in Vocational Schools required clear communication and coordination to gain support from relevant stakeholders, especially financial support from parents.

> *"We invited parents to a meeting to explain the certification programs, the benefits and the costs. Most parents agreed and made no complaint about the cost. We also emphasised that this certification is not mandatory. Teachers did the same with their students. As a result parents and students both agreed to support certification programs." (SMK Principal District 3)*

The researcher also witnessed cooperation between two SMKs in the certification of competency. One SMK from District 2 (situated in an urban area) was conducting certification of competency in Practical Microsoft Office with an SMK in District 1, because the urban Vocational School did not have an assessment centre in that competency area, but had an assessment centre facility in Accounting Assistant. This cooperation between Vocational School was the only one observed.

Interviewees from Vocational Centres on the other hand didn't report activities related to communication and coordination, because certification in Vocational Centres was a top-down process from National Ministry of Manpower to Provincial, then District and Vocational Centre.

> *"No coordination between Ministry of Manpower and Ministry of Education, they run the program separately." (BLK Director)*

The role of the Vocational Centre was to select and prepare students when Ministry of Manpower provincial office invited them to send students for certification. The time and the number of students were determined by Provincial Office of Ministry of Manpower as part of the national quota distributed by the National Ministry of Manpower.

At the district level, communication and coordination activities were rare.

> *"No coordination for certification with Ministry of Education in district level." (MoM District)*

> *"The effort to spread the information about certification from LSP or BNSP is deemed as insufficient". (MoEC District)*

Some interviewees from the District Ministry of Education reported on a cooperative initiative with a national level institution under the same ministry regarding an initiative for cooperation for certification:

> *"We are moving forward to start cooperation with LPMP (Educational Management Training Centre) in certification of competency for teachers in Vocational Schools. We are also looking for cooperation with BLK PP which is under the Ministry of Manpower" (MoEC District)*

In Yogyakarta Province, BKSP (the provincial institution responsible for the coordination of their certification programs), rarely had meetings to discuss the implementation process (Gubernur, 2006). An interviewee from BKSP reported that organising a meeting was not an easy task because most of the members were busy with their main jobs. Inadequate dissemination of information concerning the certification programs seemed to weaken the support from the law-maker.

> *"Several Heads of Departments in the Provincial Government did not know about the regulation about certification of SKKNI." (BKSP Provincial)*

A key interviewee from provincial Ministry of Education reported a recent initiative for coordination of implementation between key provincial actors that included the Certification Authority, Ministry of Manpower, Ministry of Education and the Governor of the Province:

> *"Yesterday we met the BNSP executive, the Governor, the representative of Ministry of Manpower and myself (representative of Ministry of Education), we are preparing for a MoU (Memorandum of Understanding for certification programs)." (MoEC Provincial)*

In contrast to the province categorised as best implementer of the policy (the Central Java Province), interviewees from National Ministry of Manpower and Provincial BKSP mentioned this key factor:

> *"The provincial agencies, Ministry of Manpower, Ministry of Education, Business Chamber and the Governor sat together at the same table to discuss and to manage the implementation" (BKSP Provincial)*

In an interview with a board member of BNSP National who was responsible for the certification programs nationally, the researcher asked a question regarding the top priority for successful implementation. The answer given was "communication":

"Communication between the agencies responsible for implementation and the targeted group is the problem". (BNSP National)

He added that:

"It is true that this policy is not popular, many people do not know about this policy." (BNSP National)

This answer verifies the consistent concern about the key role of communication and coordination as expressed by interviewees from the grass roots- through to the national level.

6.4   Theme 3: Characteristics of the implementers

The third factor in the implementation process is the commitment and the competency of implementers involved in the implementation of the Indonesian Competency Standards in TVET sectors. This analysis explored the underlying factors of the commitment observed in the two categories of TVET based on their implementation status. The first group was TVET institutions that had implemented the policy by the establishment of assessment centres and the second group was the TVET institutions that had not institutionally implemented the Indonesian Competency Standards.

6.4.1 Commitment of the implementing agencies

A high commitment to implement the policy was evident from interviews with implementers in various positions. They were TVET teachers, principals, vice principals and staff from certification agencies. The high commitment was driven by beliefs that the certificates could act as "a provision" (*bekal* or *membekali*) for a student's future (67% of the total references). The second factor was "concern about a student's future" specifically the students' employability (17%). Other interviewees viewed the certificate of competency as a ticket (*tiket*) to employment (8%) and the last reference of commitment (8% of the total references) represented by a belief that the certificate of competence would act as a "weapon" (*godo* from Javanese which translates to a weapon or a club) in students' lives after finishing school. Laster Thurow (cited in Hiniker & Putnam, 2009, p. 203) uses the same word "weapon" in a similar context: "...in the twenty-first century, the education and skills of the workforce will end up being the dominant competitive weapon."

6.4.1.1 High commitment

Interviewees from TVET institutions administering certification programs displayed their high commitment by proactively finding solutions if they encountered difficulties in implementation, for example in dealing with minimal resources available for implementation. When resources were difficult to obtain from government, the implementer from SMK looked for alternative sources. For example, from parents by organising meetings with them, to inform them of the benefits of the

program as well as the financial costs if students chose to participate in a certification program.

In circumstances where the existing curriculum had little room to cater for the unit competencies as required by the SKKNI, the grass roots level implementers organised additional hours of practice or lessons to give their students the best opportunity to pass the certification assessment. When access to training for teachers was limited, a principal of an SMK visited a vocational teacher-training centre to acquaint himself with firsthand information about training programs and to enlist the support of the agency to provide training opportunities for the teachers.

Most of the TVET institutions offering the certification programs were dealing with financial constraints because opportunities to apply for full or partial government financial support were not available. There was however one exception: a private Vocational School received financial support from an international donor. Obtaining finance for student certification was an indicator of the commitment by implementers. Implementers had to develop good lines of communication with students, parents, school committees, peer teachers, principals and also the Ministry of Education.

Parental support was the primary target because most of the money came from them. However, without acceptance from the school committee and school executive, this initiative might not have gained sufficient support. The communication with district and provincial

Ministry of Education was another challenge because all school budgets

needed approval from these Ministry of Education levels.

> *"For me, the cost of certification is not the main problem, because it is manageable in spite of the pros and cons from teachers". (SMK Principal District1)*

The implementers' commitment was also exemplified by

sacrificing their income in order to finance their training workshop.

> *"The assessment centre for Accounting Assistant in my school existed before I was appointed as the new principal. I was approached by teachers in this course about whether to drop or continue this TUK. Personally, it will be regretful to discontinue what the previous principal had achieved by establishing the assessment centre. I then decided to continue the certification program with the consequence (the Principal said: dengan resiko which literally means with a risk) of doing extra promotion to attract students to join, and to parents and Ministry of Education for support." (SMK Principal District 2)*

A story of personal sacrifices from a group of teachers at a BLK:

> *"Under our own initiative, we added workshop facilities to meet the requirement for a TUK, without any financial support from the government. To have any hope for the Automotive Course to move forward, we donated part of our personal income." (BLK Teachers)*

Vocational School Principals showed their commitment by taking

the necessary actions under their authority to drive the certification

programs:

> *"I met with course coordinators to explain the importance of the certification of competency. This effort elicited a positive response from them and subsequently I put the budget for certification in the school budget plan. Then the budget was presented to the school committee for approval." (SMK Principal District 2)*

"We endorse every course to have a TUK, we prepare the managerial aspect, prepare the facilities and last but not least, more importantly we also prepare funds." (SMK Principal District 3)

Interviewees from district, provincial and national level, including the Certification Authority, demonstrated their commitment by initiating the process of cooperation between agencies under the same ministry and also with external agencies.

A representative of the District Ministry of Education announced that the department had a meeting with the Educational Management Training Centre (LPMP), which was also under the auspices of National Ministry of Education, to work together in improving the technical competencies of teachers of Vocational School. The representative from Provincial Ministry of Education reported the same initiative for cooperation in certification programs but the cooperation was with the Provincial Ministry of Manpower and the Business Chamber (KADIN) at the provincial level.

6.4.1.2 High commitment in non-supportive environment

Interviewees from TVET institutions and Provincial BKSP noted that even though their institutions were not participating in the implementation programs, they were personally involved in the certification programs.

"I have been involved with this program, so I should continue. Other than that, this involvement comes from my personal motivation to show my presence and my commitment in this field." (LPK Garment)

Institutionally, the provincial BKSP was inactive and the regulation was not implemented. However, the interviewee from BKSP was personally active in the certification program, in training for assessing, and in informing certification programs inside and outside the province.

> *"The implementation of the certification programs relies heavily on an SMK Principal. All SMKs have money, but to be involved in the programs, the question is: How strong is the principal's commitment? In my view, most principals think more about recruiting new students rather than any concern about the students' future after leaving school (preparing them to get jobs)." (SMK principal District 1)*

> *"When I signed the students' certificates (Certificate of Completion from a particular course in BLK), I felt so sad because I was aware that the BLK Certificates have little impact to guarantee jobs." (MoM District)*

This statement was in the context of regret that the Vocational Centre under the authority of the Ministry of Manpower district was not able to certify students with Certificate of competency under the SKKNI model.

> *"I am also sad because what I have done in BLK makes little contribution to their employability. The analogy is that I am fluent in English but do not have a certificate to prove it." (MoM District)*

> *"So far the Provincial Coordinating Agency for Professional Certification (BKSP) has made no contribution. It has only held unproductive meetings which are not our core function." (BKSP Provincial)*

Interviewees with a commitment to implement the policy from the non-supportive institutions reported that, even though the opportunity to be involved in certification activities from their internal institutions

was low, they tried to engage with certification programs provided by external agencies.

6.4.1.3 Low commitment

Low motivation and commitment were other deficit factors in the implementation of SKKNI reported by interviewees. Interviewees from the non-implementing groups justified their decision not to participate. Financial constraints were one of the impediments for BLKs because of the limited opportunities to source alternative funds. However, interviewees from SMKs who had greater autonomy, expressed reasons such as: the policy is not considered as compulsory; there is no regulation for enforcement; limited information from Certification Body or Certification Authority; no penalties existed for non-compliance by the Ministry of Education when teachers assessing students' skills did not have a certificate of competency; a perception that the certification programs were not a priority for the Ministry of Education as they prioritised their internal programs to achieve the Eight Standards of Education (Peraturan, 2005a, 2013).

> *"There is no definite regulation that the final skill test (at Year 12) has to be administered by LSP or industry. Some SMKs hire assessors from a non-credible industry (low quality company) in the final test, and so far there is no enforcement action from the Ministry of Education." (SMK Principal District 1)*

Participants from a higher level in the Ministry of Education showed a low commitment to drive active involvement in the implementation of the policy, and they justified this by prioritising the existing government regulation of Graduated Competency Standards (SKL) of the National Agency for Educational Standards (BSNP) from the National Ministry of Education. Interviewees from three districts of Ministry of Education and the Provincial Ministry of Education agreed that their internal regulations and standards were the main reference points in managing SMKs. In this context, implementing policy from an external department (the Ministry of Manpower) and an internal policy of the Ministry of Education, the Eight Education Standards, might be considered as extending their reach beyond their portfolio.

There appeared to be a consistent attitude between Provincial Ministry of Education and Districts Ministry of Education to secure national policy regarding BSNP and the Eight Education Standards. They referred to the Government Regulation Number 19, 2005 which was amended by Government Regulation Number 32, 2013 (Peraturan, 2005a, 2013). The eight standards are Standards of Content (*Standar Isi*), Standards of Process (*Standar Proses*), Standards of Graduate Competency (*Standar Kompetensi Lulusan*), Standards of Teachers and other Educational Staff (*Standar Pendidik dan Tenaga Kependidikan*), Standards of Educational Facilities (*Standar Sarana dan Prasarana*), Standards of Management (*Standar Pengelolaan*), Standards of Financing (*Standar Pembiayaan*), and Standards of Educational Assessment (*Standar Penilaian Pendidikan*).

> *"Firstly, our main task is to implement the regulations from the central Government, in this context from the 1945 Constitution, the 2003 Education Act, the Government Regulations, Ministerial Regulation, up to the Director of SMK's policy. Secondly, in the context of educational standards, our responsibility is implementing and monitoring the Eight Education Standards." (MoEC District)*

An SMK vice principal, who was an assessor for SKKNI certification, criticised his principal for "playing safe" because of the principal's unwillingness to drive innovation by administering the certification program in their SMK. He then guaranteed that under the existing government program of quality assurance system for schools, the certification of competency would be an acceptable innovation for Vocational Schools.

Interviewees from Vocational Schools under the group of Piloting International Standard Schools (RSBI) indicated a commitment that was driven by National level Ministry of Education. The National level Ministry of Education obliged RSBI Vocational Schools to have competent teachers and three TUKs under a national, international and professional certification agency (Pengasih, 2011). Interviewees from RSBI Vocational School stated that the certification model was matched with the obligation.

> *The researcher: "If I make a priority list, what is the main reason to establish a TUK in this SMK?"*
> *The RSBI project officer: "Certainly RSBI status has driven us to establish TUK and undergo certification programs. One of the requirements to be granted as RSBI SMK is establishing at least three TUKs. If the establishment of TUKs was not the requirement of an RSBI SMK why should we waste money, energy and more?"*

An SMK grouped as RSBI would get additional funds to implement programs to achieve the Ministry of Education's targets. The interviewee added that in the first year of the RSBI status, the Vocational School received IDR 450,000,000 a year (US $42,857) then reduced to IDR 100,000,000 (US $9,524) in the second year and reduced again to IDR 50,000,000 (US $4,762).

In this case, the principal of the RSBI Vocational School expressed a more genuine commitment:

> *"Obviously RSBI SMK should have an added value. The certification and the certificate the students obtained is therefore expected to be something useful for the students' future. It is true that learning is a continuous process. However, the certificate will be a ticket (to enter the job market)." (SMK Principal District 3)*

A teacher from a private RSBI Vocational School and a representative of assessment centre in Telematics in the school stated:

> *The researcher: "Were you the initiator of the establishment of the TUK in this SMK?"*
> *The RSBI project officer: "No, I was not the initiator. The establishment of the TUK was one of the requirements for RSBI SMK. In this SMK we have TUKs in Telematics and Machinery"*

> *"In my opinion, RSBI SMK has to have an added value, we are continuously looking for the most relevant added values for our students and the Certificate of competency at this stage is the most feasible. Because if we put English as the added value for students, the consequence will be systemic and very complicated. In summary, the Certificate of competency is expected to be something useful (a ticket) for the students' future." (SMK Principal District 3)*

Interviewees with a low commitment to implement SKKNI in their institution tended to use the external problems (for example: the insufficient financial support, limited information and low enforcement

activities from Ministry of Manpower and Ministry of Education) as the barriers to participate in certification activities.

6.4.2 The competency of the implementers

The inadequate number of certified teachers in SKKNI made the implementation process more difficult. While SMK dealt with the imbalance of the number of teachers from the core vocational subjects, BLK was dealing with a shortage of teachers:

> *"Many teachers here have retired and up until now there is no replacement with new teachers." (BLK Director)*

> *"We need more teachers and from the existing teachers, no one is certified as an assessor for certification of SKKNI." (BLK Director)*

Another weakness in the implementation was the number and the quality of LSP. Many interviewees complained:

> *"Few LSPs are available in this province." (BLK Director)*

> *"It will be ideal to have teachers qualified as assessors. But the number of LSP in this province is limited and the units of competencies assessed by the LSPs are not complete. This problem has been a barrier to the number of certified teachers." (MoEC Provincial)*

The statement that the number of LSPs is not complete means there was a gap between the ideal responsibility of an LSP Automotive and the area of assessment that they can do. For example, LSP Automotive (Light Vehicle) is responsible for certification of six groups (General: 23 competency units; Engine: 27 competency units; Power Train: 14 competency units; Chassis & Suspension; 20 competency units;

Electrical: 19 competency units; and Body & Painting: 28 competency units). In fact, the LSP Automotive in the province was only able to cater for one area of assessment in the six groups.

Another problem with the existing LSPs:

"The problem is the LSP here is not enthusiastic, the organisation is weak. How can the SMK be expected to be enthusiastic?" (SMK Principal District 1)

Interviewees also expressed frustration with the performance of an LSP:

"Another factor is that the time to release the certificates is too long, it takes half a year to release, and on the other hand the period of validity is two years. The most irritating one is the long process to release the certificates. It is questionable because the LSP is considered as advanced in IT and the place with the most skilled IT experts, but they cannot solve the delay of the certificates." (SMK Vice Principal District 1)

The low number of LSPs becomes an excuse for the non-implementing Vocational Schools:

"We had a problem finding an LSP in this province as a partner for certification. We only know an LSP in Automotive; another problem maybe our limited network, so we don't know if somewhere out there is LSP A, B or C." (SMK Principal District 1)

Conceptually, commitment and competency of implementers or "skilful implementing agency" (Hill & Hupe, 2002; Mazmanian & Sabatier, 1989) plays an important role in successful implementation.

The analyses highlighted two types of implementers. A high commitment was observed in TVET institutions implementing the policy and a low commitment in the non-implementing group. TVET institutions under Ministry of Education had more opportunity to

implement SKNNI, but the commitment and support from higher-level officials was not strong. TVET under Ministry of Manpower had high commitment but limited resources to carry out the policy. In this regard, the few Vocational Schools administering certification programs represented a bottom-up rather than a top-down model of policy implementation.

6.5 Theme 4: External factors

This theme examines the external factors that may have directly or indirectly influenced the implementation of the SKKNI. The theme examined interviewees' attitudes toward the role of industry. The role of industry includes their ideal position and their actual role. Further, the theme investigates interviewees' views about the conditions for effective implementation. There are four sub-themes in the conditions for effective implementation. They are civil effect; international and regional pressure; harmony between supply and demand and public awareness.

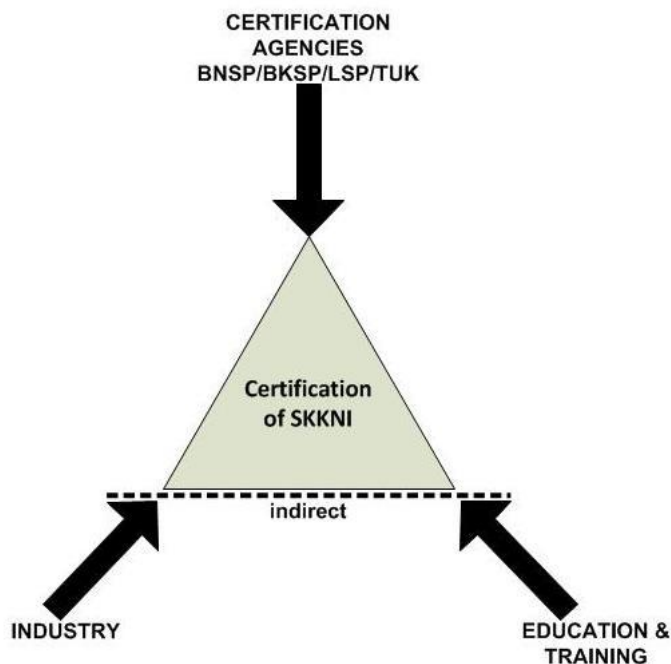## 6.5.1 Demand from Industry

The specific tenet of the development of competency standards and certification programs is that of fulfilling the need for competent workers for industry. This section analyses the interviewees' attitudes tin relation to the demand from industry, the ideal role of industry in the certification programs and the actual role of industry.

6.5.1.1 Ideal position of industry in the certification

The generic term of industry in this study covers four references representing the same concept. The observed four words are "industry", "company", "job market" and "workplace". Of the total 229 references in the interviews, 54% use the word "industry", 21% use "company"; 14% "job market" and 10% use "workplace". The interviewees used the four references interchangeably. For example, interviewees from LSP and Ministry of Manpower National used the four references in a single interview. The term industry in this context, however, is best understood as a single entity with economic objectives that employs workers, representing the complexity of a variety of sectors and their unique environments.

An interviewee from the BKSP illustrated the importance of industry by identifying the factors in the implementation as three pillars, or a triangle of the SKKNI (see the following figure). They are industry, certification agencies and education and training providers.

```
        CERTIFICATION
          AGENCIES
      BNSP/BKSP/LSP/TUK
```



```
        Certification
          of SKKNI
```

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- - - - - - - - - - - - - - - -
          indirect
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INDUSTRY                    EDUCATION &
                             TRAINING
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Figure 6.2 Three pillars of the certification of SKKNI

In the implementation model, the position of industry is indirect, as it does not directly involve itself in the certification program but rather receives the benefits of certified job applicants and/or certified employees. However, industry can act as the "driving factor" in the certification program when it shows a significant demand for certified labour applicants and/or certified employees.

> *"Industry is the important challenge in the implementation, so we prioritise the development of a (closer) link to industry". (MoM National)*

The statement from this last excerpt has two meanings. Firstly, the important position of industry and secondly, the problematic position caused by what the interviewees believe as insufficient awareness from industry. A SMK's vice principal highlighted that

"industry knows that the certificate of competency is important, however they are also aware that the cost of getting certified is expensive".

Industry does not directly involve itself in the certification system and process, but its decisive position in hiring certified employees and recruiting certified applicants would affect certification programs. If industry reluctantly recruits or hires certified employees without the expected skill base, then certification programs will be irrelevant.

6.5.1.2 Actual role of industry in certification

This section reports interviewees' attitudes towards the actual role of industry; the added value of the certificate of competency; the future of certification and the high demand from vibrant sectors in industry. The interviewees' views about the actual role of industry were polarised between high and low demand.

6.5.1.2.1 High demand

Interviewees from provincial Ministry of Education, district Ministries of Education, district MoMs, SMK principals and teachers believed that the demand from industry for certified labour was considered high. Expressions such as the certification of competency being "demanded", "needed" and "promising" were repeatedly expressed to signify their belief.

> *"Our plan is to certify all students because the certificate is needed by companies." (Teacher of SMK-Computer and Network)*

> *"To be honest, for the purpose of our students' future, the certificate of SKKNI is promising." (SMK Teacher-Hospitality and Tourism)*

These positive beliefs regarding the certification of competency were the primary factors motivating SMK principals to establish TUK and to offer certification programs in their institutions.

There was also a strong belief amongst implementers that the certificate of competency produces positive value added for graduates when they are applying for jobs. What they believed to be added value includes:

> *"The Certificate of competency is processed and released by an authoritative institution." (LSP and BNSP National)*

The certificate is released by a national level agency (BNSP and LSP) centred in Jakarta (the capital city)

> *"The certification process is assessed by professional and certified master assessors in their professional field." (SMK Teachers-Hospitality and Tourism)*

This positive attitude towards the certification programs comes from the belief of the future positive impact of the policy. Interviewees from this group also believed that the demand for certified labour in industry would be high in the future. When a Certificate of competency is a compulsory requirement for job application, potential job applicants and students will voluntarily take part in a certification of competency. They also believed that:

> *"It is just a matter of time before industry makes the Certificate of competency compulsory, that people want to enter a job, move from one job to another or want a job promotion, and will need a Certificate of competency." (MoM National)*

Moreover, they believed that in the future, when a Certificate of competency has "civil effect" (for employment and career development) people would voluntarily take part.

Interviewees from BNSP, Ministry of Manpower National, and LSP pointed out the high demand for certified employees in some economically vibrant sectors, for example banking, mining, tourism, hospitality and nursing. They highlighted the factors that made the certification in those fields high, for example the work-related risks in their profession. Interviewees from LSP Accounting illustrated the risks of dealing with public funds or money in the banking sector, which has made certification in many competencies related to banking, mandatory (Supomo, 2009). According to those interviewees, the certification of competency in these vibrant sectors is demanded by industry therefore it will become mandatory for new job applicants and their existing employees. In this regard, they believed that those sectors in industry have contributed to and have become a "driving factor" for certification of competency by making the certificate an important document for job and career promotion.

The implementation of the SKKNI is based on a positive belief, rather than an order from an authoritative institution: this is classified as a voluntarily implementation. This term is used for the first time by an interviewee from LSP who categorised implementation into two areas: mandatory implementation and voluntary implementation. In the classical implementation literature, the word 'mandatory' refers to the

model labelled 'Top-Down Policy' and the latter refers to the 'Bottom-Up Policy' implementation (P. A. Sabatier, 1986).

6.5.1.2.2 Low demand

In contrast, interviewees who believed that the demand from industry was low, underpinned their disagreement by the belief that there was a low expectation about the Certificate of competency and that the impact was low. The majority of the interviewees had contrary beliefs to the high demand group. This group thought that the actual demand from industry for certified candidates and/or employees was low. Representative comments follow:

An interviewee from the provincial BKSP stated

"In the job market the value of the certificate has not been assured. Is there any guarantee that certified applicants will be employed?" (MoEC District)

"The Certificate of competency does not have the "power or authority" to guarantee a job." (LSP-Garment)

Another interviewee added that:

"Industry does not demand the certificate. It demands the completion of a selection test by the industry themselves." (Head of TUK and SMK Teacher-Mechanical)

"I used to propose a budget for the certification program, but the response from Ministry of Manpower District level was that neither the District Government nor industry needs the certificate." (BLK Director)

In an official report of a certification program for instructors in 2011, the provincial Ministry of Manpower clearly stated in the

conclusion that: "*Many industries have not made the certification of competency compulsory*" (Kemenakertrans, 2011c). Negative views about the actual role of industry (low demand from industry) were also expressed by those actively involved in the implementation process. This group of interviewees were aware of insufficient demand from particular areas of industry but they kept the certification programs running as part of a long process for building support from industry.

6.5.2 Conditioning

This section concerns external factors perceived as basic or necessary prerequisites for effective implementation. Under the umbrella term "civil effect", frequently used words are "when" and "if", when expressing expected conditions for successful implementation. The conditions they address include recruitment processes, salary systems, regional and international labour agreement and the harmony between supply and demand in the labour market.

6.5.2.1 Civil effect

Interviewees from various institutional backgrounds believe the civil effect of the certification will become a reality when industry requires a Certificate of competency as obligatory in the employee recruitment process.

An interviewee from provincial BKSP defined the Certificate of competency as

"a ticket to apply and to be considered as a potential applicant".
"If industry has made the Certificate of competency as the main requirement in labour recruitment, people will voluntarily undergo certification." (BKSP Provincial)

The "civil effect" of the certification impacts on remuneration systems. The recognition by industry of the Certificate of competency implies the use of a tiered remuneration system. At the time of the interview there was a rally outside the Ministry of Manpower office protesting about "job (labour) outsourcing". The interviewer and the two interviewees could clearly hear the uproar outside the office. One of the informants said "the noise out the front" (meaning the rally), mainly complained about the remuneration system. In the current situation, when a certificate of competency has not become an important reference for remuneration, industry tends to recruit labour that has higher qualifications but pays them lower than required for their formal qualification.

"For example, industry recruits applicants with a certificate of Diploma 3 (three year study after high school) but pays them as low as high school certificate holders." (LSP Accounting Assistant)

Another interviewee believed that the implementation of the certification of competency

"...will reduce the salary disputes in internal sectors." (MoM National)

Interviewees raised the term of "civil effect" which means the real impact of the policy to the society as a condition that may influence the implementation. They believed that the participation in the

implementation of SKKNI was determined by the perceived "civil effect" of the policy to the society.

6.5.2.2 Regional and international agreement

International and regional pressure through a binding agreement bilaterally or multilaterally is believed to accelerate the civil effect of the certification. An MoM interviewee pointed out that the World Trade Organisation (WTO) and the ASEAN Economy Community (AEC) 2015 "*have driven a considerable number of certification programs in several sectors such as nursing; engineering; architecture; medical; surveying; accounting; tourism and dentistry*".

6.5.2.3 Harmonise supply and demand

Interviewees from National Ministry of Manpower, LSP and district Ministry of Education were concerned about the poor training response to labour market supply and demand cycles. The interviewee from LSP, who was actively involved in the certification program in SMKs in several provinces (DKI Jakarta, Yogyakarta Province, Central Java and South Sulawesi) addressed the need to improve the certification by harmonising the supply and demand cycle.

> *He added, "SMKs in the Accountant Technician course had been enthusiastically conducting a certification of competency in many places. In contrast, the demand for industry to employ certified graduates in this area was considered low." (LSP Accounting Assistant)*

An interviewee from a district Ministry of Education who was planning to propose a certification budget for SMK teachers in the following financial budget expressed a belief that the proposal will be beneficial "*to match with demand from market*".

6.5.2.4 Public awareness

Interviewees were also blaming the poor implementation of certification on low public awareness. Instead of using direct words pointing to industry as the responsible element in certification, some interviewees used the general term of "public awareness" as the external factor influencing the implementation. This generic code signifies the multiple stakeholders in the implementation, for example, parents of SMK or BLK students, media, members of parliament and other random well-known public figures. Following is an example.

In an un-taped interview with a representative Member of Provincial Parliament in D Commission (Committee for Education, Health, Manpower and Social Affairs), the interviewee was not aware of the regulation or the certification program. Instead, the interviewee asked the researcher to supply the regulations related to the issue with a promise to bring the matter to relevant stakeholders. In fact, at the time of interview, the regulation had been in place for about eight years and the interviewee had been a Member of the Provincial Parliament for seven years. This lack of knowledge illustrates two issues. Firstly, the poor communication from the implementers - most of the interviewees blamed the certification agencies (LSP, BKSP and BNSP). Secondly, the

low awareness showed by a Member of Parliament of the issues within their working area of responsibility.

The interviewees' attitudes towards the actual role of industry in the implementation can be divided into two groups – one believing industry has a high demand, and the other much larger group believing that industry has a low demand for the certification programs and certified labours. This finding is typical. Allais's study of the similar innovation initiative of NQF highlights the same challenge worldwide. A study about the role of provincial BKSP in the Province of Central Java in 2010 also points to the industry's lack of involvement in the certification initiatives in the province (Dewi, 2010).

6.6 Summary of qualitative findings from interview

Literature on policy implementation theorises that the characteristics of the implementers contribute to successful implementation (Hill & Hupe, 2002; Meter & Horn, 1975). The lesson from the few SMKs administering the certification programs revealed that the principals' commitment facilitated implementation at the school level. However in a more complex organisation of Ministry of Manpower and Ministry of Education at either district or provincial level, personal commitment had little impact on institutional implementation. Mutual commitment among the key agencies in this environment perhaps will be able to drive implementation effectively. Underpinning the principals' commitments were beliefs concerning the added value of the certification programs for their students' future. In

contrast, interviewees from the non-implementing groups justified their low commitment by arguing that the policy of the SKKNI was poorly regulated and enforced.

The analysis of the interviews concerned with inter-organisational relations revealed that complex implementation structure and the general record of weak inter-organisational relations have impacted on the certification programs (Laurence J., 1993; L. J. O'Toole & Montjoy, 1984). The sub-themes emanating from the qualitative data included the tension between Ministry of Manpower and Ministry of Education, the existence of two competing certification agencies (LSP vs LSK), multiple interpretations of the 2003 Education Act, problematic communication and coordination for implementation and internal problems of LSP. Officially the Ministry of Manpower and the BNSP have responsibility for the implementation of the policy. However, there was some evidence to suggest that their low political and financial leverage has lowered their capacity to harmonise agencies involved in the implementation.

Inadequate financial resources have been identified as the main obstacle of the implementation of the policy of the SKKNI. The cost of certification was regarded as unaffordable for most students of BLK and SMK. SMKs generally had more alternatives for funding than BLK. SMK had four possible sources of certification funding: from parents, government, mixed funds (parents and government) and international donors. The findings support the literature that scarce resources (in this study: financial, curriculum and the low quality of training

workshops) are barriers to the implementation process and as a consequence lowered the efficacy of the implementation (L. J. O'Toole, 2000; L. J. O'Toole, Jr., 2004; Spratt, 2009).

The role of industry was regarded as a decisive external factor for successful implementation of the policy (Young & Allais, 2013a). However, the interviewees' attitudes towards the actual role of industry in the implementation were divided – one believing industry has a high demand, and the other much larger group believing that industry had low demand for the certification programs and certified labours. Other external factors reported influencing to some degree the implementation were international pressure, "civil effect" (perceived impact of the certification programs) and public awareness.

CHAPTER SEVEN: DISCUSSION AND CONCLUSION

7.1 Introduction

This chapter first summarises the major findings reported in the previous two chapters and secondly discusses the results in terms of the research literature in Chapters One and Two. The key findings are structured around the research questions. The chapter concludes with a discussion of the limitations and implications of the study and offers some recommendations for future research.

The research reported in this thesis was guided by two main research questions. Research question one "How effective was the implementation of the policy of the Indonesian Competency Standards (SKKNI) in the two types of Technical and Vocational Education and Training (TVET) institutions operated by Ministry of Manpower and Ministry of Education in Yogyakarta Province and research question two "How effective was the implementation of Indonesian Competency Standards policy when examined against the six factors of the Van Meter and Van Horn's evaluation model:

The six factors for evaluating the policy implementation processes are:

1. Policy standards and objectives developed for implementation.

2. Implementation resources.

3. Inter-organisational communication in implementation.

4. Characteristics of implementers.

5. External factors perceived by stakeholders as influencing the implementation.

6. Teachers' disposition and teachers' performance in implementing the certification and the curriculum aspects of the policy.

7.2 Research question 1:

How effective was the implementation of the policy in the two types of TVET institutions operated by two different ministries in Yogyakarta Province?

Two types of performance indicators assessed the effectiveness of the implementation of SKKNI in the Indonesian TVET sector: macro and micro. The macro implementation performance indicators measured the effectiveness of the implementation at the institutional level by comparing the number of assessment centres in relation to the number of TVET institutions and the number of courses offered. The macro implementation performance indicator also measured the effectiveness of the implementation by evaluating the participation rate of teachers and students in the certification of competency under Indonesian Competency Standards model.

7.2.1 The macro indicators of implementation performance

At the macro level, the implementation of the policy in two types of TVET institutions in Yogyakarta province had some success. After more than ten years since the promulgation of the policy, five per cent of TVET institutions had established assessment centres, all of which were in Vocational Schools and none in Training Centres. The establishment of an assessment centre in the TVET sector is regarded

as a key indicator of the policy implementation. There were assessment centres for four courses (curriculum clusters of competencies) out of the 45 courses offered in Vocational Schools (8.89%). The success of certification of competency is dependent on having assessment centres and assessors (Young and Allais, (2013a). The limited number of assessment centres in TVET institutions in the province indicates that the implementation of SKKNI at institutional level was incomplete.

The second macro indicator was the participation rate of teachers and students in the certification of competency process under the Indonesian Competency Standards. After a period of more than ten years since implementation, the percentage of teachers certified in their area of competency was 38% from 279 teachers who participated in the study and the percentage of students involved in certification of competency was less than one per cent of the total 82,330 students.

7.2.2 The micro indicator of implementation performance

The effectiveness of policy implementation at the micro level was measured by assessing teachers' performance in implementing two aspects of the Indonesian Competency Standards policy in their teaching activities. The results from statistical analysis of the questionnaire show that teachers in Training Centres and Vocational Schools had to varying degrees implemented the certification aspects and the curriculum aspects of the Indonesian Competency Standards in their teaching activities. Teachers' performance in implementing the policy in the classroom had an influence on students' competency,

however, without assessment centres and professional development and training courses for all teachers, success in implementing the policy is compromised.

7.3 Research question 2:

How effective was the implementation of Indonesian Competency Standards policy when examined through the lens of the Van Meter and Van Horn Model (1975).

7.3.1 Policy standards and objectives

After more than a decade since the promulgation of the policy, there were a number of issues related to policy standards and objectives and their implementation. The Indonesian Competency Standards policy was not underpinned by research-based evidence to respond to the basic policy questions (Cochran & Malone, 2010). Critical questions to consider are how the borrowed policy would help inform Indonesia's own policy, their capacity to assess the needs of the economy and to take into account the potential costs, risks and benefits of various approaches and policies (Young, 2013).

The Indonesian Competency Standards policy was not accompanied by a prescriptive set of regulations to guide the implementation process. This guide is especially important when dealing with the complexities of authority and management of TVET in Indonesia, because there were 13 ministries managing TVET institutions. Lack of a mandate may have been deliberate because of the

Government's lack of financial resources to achieve full implementation of the policy (Kemenakertrans, 2010b).

Policy standards and objectives need to be clearly stated because performance indicators assess the extent to which standards and objectives are achieved. Lack of clarity around standards and objectives may lead to different interpretations by the implementers. Loosely defined policy standards and objectives make it difficult for the implementers and researchers because it requires them to deduce what they may be (Meter & Horn, 1975). Standards and objectives need to be clearly defined and understood to ensure effective implementation by individuals and organisations.

The limited number of training modules hindered adoption of the policy. There were 295 modules of the Indonesian Competency Standards in a variety of competency areas that were in the process of being developed and seven per cent of modules have been completed. The provision of professional development workshops was limited, which meant that many teachers were left to their own devices in implementing the policy. Teachers incorporated the competency standards within the existing curriculum in Vocational Schools. As a result, the second core function of the Indonesian Competency Standards policy as a curriculum instrument for competency-based education and training did not occur.

The International Labour Organisation's publications on Regional Model of Competency Standards stressed the important role of Competency Based Training and Education in achieving the objective of

competency standards (ILO, 2006). Therefore the initial expectation that the Indonesian Competency Standards would play out as an instrument to transform the curriculum of TVET into a more work-oriented structure did not occur in practice (Kurnia, Dittrich and Murniati (2014).

It is not surprising that full educational reform was not achieved using National Qualifications Framework or National Competency Standards in the case of Indonesia and in other countries given the lack of evidence that supports the claims made for NQF. Allais (2013) questions the on-going adoption of NQFs given the lack of evidence for success in adopting NQF and related policies such as competency-based frameworks for TVET. The Ministry of Education had the authority to develop a national curriculum, and was the largest TVET provider, however there was a lack of clarity and consistency in the policy itself. As a result, the role of Ministry of Education as the authority and its management for the implementation of the policy was questionable

7.3.2 Resources for effective implementation

The Ministry of Manpower as the regulator of the development of SKKNI had a limited budget allocation for policy implementation in Training Centres given the large number of the centres and students. The limited budget had to be distributed between 33 provinces and more than two hundred Training Centres at district level. Teachers and

students in Vocational Centres therefore had limited funds to access certification in Indonesian Competency Standards.

Certified teachers were not given an incentive for their achievement in attaining a certificate related to their vocational competencies under the Indonesian Competency Standards model. Incentives for teachers are often used by governments as a tool for policy enforcement (Meter & Horn, 1975). The absence of a government incentive contributed to decreased participation by teachers in implementation, especially given that the salaries of Indonesian teachers are low (Jalal et al., 2009). Lack of resources to replace obsolete equipment in training workshops both in Vocational Centres and Vocational Schools made it difficult to implement the policy. Curriculum resources, numbers of teachers and time allocated to teach vocational subjects in Vocational Schools were all inadequate compared to the number of teachers and time allocated for general subjects. This raises a question about the effectiveness of Vocational Schools to prepare students for jobs.

7.3.3 Inter-organisational communication in implementation

In Indonesia, 13 ministries manage and operate TVET. The implementation of Indonesian Competency Standards policy in Vocational Centres and Vocational Schools was a cross-ministerial strategy. Simple policy structure facilitates more effective implementation (Meter & Horn, 1975). In this case, a single authoritative institution was needed in the fragmented management of

Indonesian TVET. Sectorial ego (*ego sektoral*), was identified as one of the main obstacles to the successful implementation of the policy. This tension and rivalry between two ministries compromised the policy goals to achieve its basic function as an instrument for skill recognition.

Multiple-interpretations of educational regulations contributed to the establishment of internal certification of competency and certification agencies by the Ministry of Education. The existence of multiple agencies implementing their own certification of competency may lead to conflict (Horn & Meter, 1977; Meter & Horn, 1975).

7.3.4 Characteristics of the implementers

Commitment and competency or "skilful implementing agency" (Hill & Hupe, 2002; Mazmanian & Sabatier, 1989) of implementers play an important role in successful policy implementation. This was evidenced by formulating financial solutions and initiating cooperation with relevant agencies in some TVET institutions implementing the policy. Vocational Schools had more opportunity to implement the policy as they were able to source additional money from parents and external bodies to fund certification. Ministry of Manpower had a strong commitment to the policy but very little resources to implement it.

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7.3.5 External factors influencing the implementation

The impact of economic, social and political conditions has the potential to make a profound impact on implementing agencies (Meter & Horn, 1975). Dewi's (2010) study in Jawa Tengah Province found that

industry demand for certification played an important role in the effectiveness of the Professional Certification Coordinating Board at the provincial level to boost certification of SKKNI. Industry involvement is the key factor for the effective implementation of NQF and competency standards policy (Allais, 2013), yet there was limited evidence of industry participation in the policy. Similar findings are reported in the study of Webster (2005) in the USA that external factors contribute to successful implementation especially in shaping policy priorities.

7.3.6 Teachers' disposition to the policy and teachers' performance in implementing the certification and the curriculum aspects of SKKNI

Teachers' comprehension and intensity of support influenced their performance in implementing the micro aspects of the policy (the certification and the curriculum aspects in their teaching activities). The findings from this study highlight the importance of providing professional development for teachers' involvement in the implementation process. Certified teachers played the role of "meaningful agent and active decision maker" in the adoption of change (Sleegers, Geijsel, & Van Den Berg, 2002)

7.4 Implications and recommendations

Given the findings outlined above, three policy recommendations are proposed. A number of implications can be drawn from this research. There were some indicators of successful implementation of

the policy. A number of factors contributed to a less successful implementation. The type of resources and amount of resources made available when the policy was introduced affected the quality of communication and the enforcement strategies. Availability of resources can influence the dispositions of implementers. When implementers see that money or resources are available they tend view the policy in favourable light. However a poorly formulated policy, inconsistencies in the policy, sectorial ego and inter-ministerial rivalry, fragmented authority and management of TVET contributed to a negative view of the policy. The policy of SKKNI needs to be reorganised to harmonise with three other inter-connected policies (certification of competency; competency based education and training and the newly regulated Indonesian Qualification Framework).

Research literature evaluating the experiences of other countries successfully implementing the four inter-connected policies suggests the need for a simple and clear policy structure and management as a necessary prerequisite (Allais, 2010; Young, 2005). The reorganisation of the four policies may imply the development of a prescriptive Law that will harmonise the conflict of interest among the ministries involved and ensure adequate resources are available for successful implementation.

Secondly, the policy of SKKNI as an integral part of the four inter-connected policies requires review using research evidence to address the unique and wide diversity in social-cultural-economic-political in Indonesia. The revised policy could incorporate short and long term

strategies for implementation, which clearly defines institutional relationships with authorities in development of curriculum for training packages, certification of competency and also qualification framework. The re-establishment of the policy demands a definitive and binding regulation on how the implementation will be financed.

Thirdly, as in Australia, which somewhat successfully integrated the management of TVET into TAFE (Noonan, 2009) and the Philippines into the TESDA (Alto, Isaacs, Knight, & Polestico, 2000), integration of the management of Indonesian TVET from 13 ministries into a simple management structure is recommended. A less complex authority and management structure for Indonesian TVET should allow a more effective implementation process to be conceived.

7.5   Contribution of the study to existing knowledge

Based on the findings presented above, this study makes a number of contributions to the existing knowledge in the field of implementing the policy of competency standards borrowed from an international agency to improve TVET sector at home.

Young's (2005) work suggested the importance of educational provision as one of the keys to successful implementation of the policy related to qualification frameworks and competency standards. Such notions were important in the design of this study and the analysis of its results. Findings from this study align with Young's finding that educational provision is important to ensure the policy implementation

is successful and to redress the adverse results caused by low participation of TVET institutions.

Allais (2013) led a study that analysed the implementation of National Qualification Frameworks and competency standards in 16 countries. This research study examining Indonesia's experience of implementing a policy of competency standards from a foreign country makes a contribution to the body of research by Allais. In particular it provides research information on what worked and what didn't work in implementing a policy borrowed from overseas and its impact.

A limitation was not being able to interview employer representatives, as they were not part of the initial implementation. Allais (2013) noted that in many of the 16 case studies there was little success in involving employers in implementation of National Quality Frameworks.

In Allais's study (2013) the role of government in NQFs varied. There were examples of strong support from governments and examples where governments did not take an active role and instances where different government bodies were at odds with each other. The experiences from the various case studies suggests that more attention needs to be given to determine what roles the various stakeholders can and should play, in what types of structures and in which processes.

Outcome-based qualifications are seen as a way of driving curriculum reform, changing the processes and bases for awarding qualifications thereby improving relationships between the education and the labour market sectors as well as achieving broader socio-

economic goals. In many countries, participation of employers in the process of identifying skills and defining outcomes and qualifications is mixed, with more success in some areas than others.

It may be more useful for poorer countries or countries with weaker education and training systems to concentrate on building or supporting institutions that can provide education and training. Improving TVET in most countries requires clear investments in intuitions, not just policies that expect them to do more with less or believe that simple competition will drive up quality. Allais's (2013) research suggests that what is key particularly for developing countries is the need to seriously consider their policy priorities as well as the sequencing of policies.

Countries that have been most successful have been those that have treated the development of frameworks as complementary to improving institutional capability rather than a substitute for it or a way of reshaping institutions and have outcomes of qualifications and programmes leading them as intimately related rather than separable.

Indonesia and the countries in Allais's study found that countries had similar reasons for introducing an NQF even though the countries in the study had very different contexts and histories from the country they were borrowing from. A number of countries saw National Quality Frameworks as tools for reforming education and training. Policy borrowing was as a common reason given for why NQFs were being introduced in a number of countries as well as playing a significant role in how they developed. Many countries appear to be influenced more by

the claims made about National Quality Frameworks without giving due consideration to the differences in their contexts and without understanding all aspects of how the framework was developed and implemented.

Indonesia's experience provides research information and analysis about how new National Quality Frameworks are designed internationally, how they are implemented and what their impact has been. Indonesia's story is unique and offers insights into how different countries have their unique understanding of National Qualifications Frameworks and how the processes of implementation and the successes and failures and problems are experienced. Indonesia's story is important because it demonstrates how a model borrowed from another country is not the same model in practice. It is inevitable that there will be problems, and adjustments made to the model during the process.

However there is limited research evidence about the impact, strengths and weaknesses of National Quality Frameworks particularly in developing countries. Most documents and publications about qualification frameworks suggest what qualifications are supposed to achieve, but there is limited information about the problems that have occurred with their implementation or even evidence of actual achievement.

The study reported in this thesis provides an insight into how Indonesia implemented the Indonesian Competency Standards policy in the TVET sector. Implementation of the policy in Indonesia achieved

some successes and identified areas that needed further attention. The policy's standards and objectives were not clearly stated, there were limited resources for implementation, poor communication, tension and rivalry among two ministries managing the policy and operating TVET institutions, insufficient commitment by the key implementers, and low support from external entities (industry, members of parliament and society in general). Teachers' comprehension and intensity of support for the policy influenced their performance in implementing the certification and curriculum aspects of the policy at the classroom level (micro level), however they were not sufficient to drive implementation at the institutional level. This study confirms the utility of the Van Meter and Van Horn's (1975) evaluation model which provided the lens through which its results were analysed and elucidated. The contribution of this research therefore, is not merely that the evaluation of the policy of competency standards implemented in the Indonesian TVET sector, but also the factors relating to the uniqueness of its policy context and the environment have been highlighted. The problems that arose in all six aspects of the implementation process display how a borrowed policy from western society or from an international agency may not work in a developing country without accommodating local policy circumstances and without adequate training for teachers and materials to implement the policy. In this regard, the findings in the current study reinforces the previous counsel of moving from policy borrowing to policy learning from countries that have established the policy (Allais, 2010; Chakroun, 2010; Young, 2005).

7.6 Limitations of the study

One limitation in this study was the absence of industry employers in the Indonesian Competency Standards policy. The role of industry is a key element in making sure that qualifications meet industrys' needs. Industry was not consulted in this study because of the large range of size and diversity (small to large Indonesian enterprises) in many industry sectors, the geographical spread and resources available to undertake the research.

The second limitation is related to the limited documentation available around the discussions and debates that took place prior to the decision to adopt the Regional Model of Competency Standards from the International Labour Organisation into the Indonesian Competency Standards policy. In particular what the rationale was for choosing the Australian Key Competency. Interviews with the key participants in the policy adoption process would shed some light on the formulation of standards and objectives of the policy. The adoption of a National Qualifications Framework and also a policy of competency standards from another country without considering a country's own national priorities and the appropriate approach to take is unlikely to be successful.

7.7 Implications for future research

With regard to the research findings and the limitations of the study, the following future research is suggested. Firstly, in this study,

only stakeholders from two ministries participated. In fact 13 ministries manage TVET institutions in Indonesia. A future investigation should include participants from the other implementing ministries to obtain a more comprehensive picture and a better understanding about Indonesia's internal policy environment.

Secondly, further research could be conducted to investigate views of industry in relation to the implementation of the policy. The investigation should cover various classifications of industry based on industry classification, market orientations (domestic-export) and also geographical areas of their operations.

Third, further research should be conducted to investigate the implementation of the policy in the broader geographical areas of Indonesia that represent large educational and cultural diversities and unique policy environment. SKKNI is a national policy, therefore it is important to understand the challenges for implementation across the far-reaching geography of the archipelago and how implementers at district and provincial level adjust the policy goals to their local environments.

7.8 Conclusion

The results of the analysis conclude that after more than a decade since the promulgation of the policy, the implementation has had mixed results. Accordingly, Indonesian TVET sectors have not reaped the significant benefit of the promises that were anticipated by the adoption of a National Qualifications Framework. The complex

problems reflected in Van Meter and Van Horn's mode of the implementation processes hindered the adoption of the Indonesian Competency Standards in the TVET sector as an instrument for improving its relevance to job market.

The findings of the current study suggest that a borrowed policy from developed countries or an international agency will not be effectively implemented without fulfilling the key implementation factors and having sufficient understanding of the local context and the uniqueness of policy environment. The analysis of the policy implementation process provides an overarching perspective on how a local policy environment may not gel with those of a borrowed policy that was developed in a very different context.

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LIST OF APPENDICES

LIST OF APPENDICES

Appendix 1: Research questionnaire (English version)

	Data Code	

School of Education
The University of Newcastle Australia

RESEARCH QUESTIONNAIRE FOR TEACHERS

The implementation of Professional Certification/SKKNI
in Vocational Schools (SMK) in Yogyakarta Province Indonesia

Student name: **Supervisors:**

Muhammad Sayuti   Dr Don Adams

                                                  Dr Jill Scevak

Abbreviation:

SKKNI   :   Indonesian National Competency Standard
BNSP   :   National Professional Certification Authority
LSP   :   Professional Certification Body
TUK   :   Assessment Centre
SMK   :   Vocational Senior Secondary School
BLK   :   Vocational Training Centre

Notice:
The term of Professional Certification/SKKNI in this questionnaire refers to certification conducted by assessment centres (TUK), professional certification body (LSP) under the management of the National Professional Certification Authority (BNSP).

Introduction

I am conducting a study on the implementation of the policy of the SKKNI in SMKs and BLKs in Yogyakarta Province Indonesia. The purpose of the study is to find out the implementation processes and the outputs of the policy in the relevant institutions.

Before you make decision to complete this questionnaire, please read the information statement enclosed. If you chose to complete this questionnaire, please be accurate and honest. Please note that **THERE IS NO RIGHT OR WRONG ANSWER**. Your views and opinions are very important and will be highly appreciated and respected.

List of SKKNI related to courses in SMK and BLK

SKKNI Title	Number/Year	Number of		
		Competencies	**Programs**	**Modules**
Electrical installation	170/IV/2007	157	16	18
Power distribution	268/VI/2007	145	-	-
Power transmission	269/VI/2007	220	-	-

_____

SKKNI is regulated by Ministerial Decree of the Ministry of Manpower and Transmigration (Nakertrans). Up to now there are about 200 SKKNIs and the development of other SKKNIs are in progress.

PART ONE

Tick ☑ the appropriate box from the scales below which best represents your attitude toward the statement! Please do not miss any single item!

No	Items	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	Referring course/s to the SKKNI's document will guarantee student to pass the professional certification/SKKNI	☐	☐	☐	☐
2.	For teacher, the professional certification/SKKNI is as important as teacher certification	☐	☐	☐	☐
3.	For teacher, SKKNI certificate contributes to teacher competency	☐	☐	☐	☐
4.	I just found the list of SKKNIs from this questionnaire	☐	☐	☐	☐
5.	Attaining certificate of SKKNI raises teacher confidence	☐	☐	☐	☐
6.	Certification of SKKNI cannot guarantee employability	☐	☐	☐	☐
7.	In future a certificate of SKKNI should be the selection criteria in recruitment for new staff	☐	☐	☐	☐
8.	Certificate of SKKNI is not necessary for recruitment	☐	☐	☐	☐
9.	The quality of learning determines the success in certification of SKKNI	☐	☐	☐	☐
10.	Certification of SKKNI needs competency based curriculum	☐	☐	☐	☐
11.	Certification of SKKN has no impact on teachers' competency	☐	☐	☐	☐
12.	For SMK/BLK technical competency is more important than achieving theoretical knowledge	☐	☐	☐	☐
13.	There is no SKKNI certification in my course	☐	☐	☐	☐
14.	I will undergo certification of SKKNI if supported by my SMK/BLK	☐	☐	☐	☐
15.	I just found that there is/are certification of SKKNI in my course/s	☐	☐	☐	☐
16.	I can guide my students to take certification relevant to my course/s	☐	☐	☐	☐
17.	I can explain the role of BNSP, LSP and TUK	☐	☐	☐	☐
18.	I can explain the certification process of SKKNI to students and colleagues	☐	☐	☐	☐
19.	I can list the institutions who develop SKKNI	☐	☐	☐	☐
20.	I read the Ministerial Decree of the SKKNI related to my course/s	☐	☐	☐	☐
21.	I need to encourage my colleague/s to undergo certification of SKKNI	☐	☐	☐	☐
22.	I need to encourage my students to undergo certification of SKKNI	☐	☐	☐	☐
23.	Certificate of SKKNI is not important in the workplaces	☐	☐	☐	☐
24.	Competency based exam is key to the success of certification of SKKNI	☐	☐	☐	☐
25.	I do not need to encourage my students to undergo certification of SKKNI	☐	☐	☐	☐
26.	Teachers' attainment in SKKNI certification has no effect on students' technical competencies	☐	☐	☐	☐
27.	I do not need to encourage my colleague/s to undergo certification of SKKNI	☐	☐	☐	☐
28.	Reference to SKKNI should be made in developing syllabus	☐	☐	☐	☐

PART TWO

From the list of SKKNI, is there any of them that related to your course?

a. None (skip to **PART THREE**)

b. There is/are, please list:

    1) _____

    2) _____

Tick ☑ the appropriate box from the scales below which best represents the frequency of doing the activity!

No	Items	Always	Usually	Rarely	Never
1	The aspects of "basic competency" in my syllabus correspond to competency unit at SKKNI	☐	☐	☐	☐
2	I refer to SKKNI in developing syllabus for the related subjects	☐	☐	☐	☐
3	In developing syllabuses, I refer to SKKNI as learning resource	☐	☐	☐	☐
4	I refer to SKKNI aspects to develop exam material	☐	☐	☐	☐
5	I discuss with my colleagues how to increase teachers' participation in certification	☐	☐	☐	☐
6	I discuss with my colleagues why some teachers may be reluctant to SKKNI certification	☐	☐	☐	☐
7	I modify the existing teaching method to relate to competencies in SKKNI	☐	☐	☐	☐
8	I encourage my colleagues to undergo certification of SKKNI	☐	☐	☐	☐
9	I encourage my students to undergo certification	☐	☐	☐	☐
10	I link my teaching methods to the competencies in SKKNI	☐	☐	☐	☐
11	I direct my students to the certification office/s	☐	☐	☐	☐
12	I direct my students to the right person to be contacted for certification	☐	☐	☐	☐
13	I use SKKNI criteria to develop exam material	☐	☐	☐	☐
14	I explain to my students the certification procedures	☐	☐	☐	☐
15	I suggest to my principal what support should be provided for teachers in certification	☐	☐	☐	☐

PART THREE

1. Have you ever undertaken certification?

   No ☐
   Yes ☐ in what area _____

2. Are you interested to undergo certification?

   Yes ☐ in what area _____
   No ☐ please provide three reasons for your answer!

   a. _____

   b. _____

   c. _____

Thank you for your cooperation!

Instruction for return:

When you have finished answering all questions, please either return this questionnaire to the coordinator in your SMK/BLK or contact him/her to collect it from you. The coordinator's name and contact number are:

Name: _____

Contact number: _____

Would you like to be interviewed to elaborate further of your opinion?

a)   Yes, my contact number is/are _____

b)   No

If your answer is YES, please fill the following consent form and return to the coordinator in your school/training centre in a separated envelope!

Appendix 2: Research questionnaire (Indonesian version)

THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

School of Education
The University of Newcastle Australia

ANGKET PENELITIAN UNTUK GURU

Implementasi Kebijakan Sertifikasi Keahlian/SKKNI di SMK
di Daerah Istimewa Yogyakarta Indonesia

Nama Peneliti:
Muhammad Sayuti, S.Pd., M.Pd., M.Ed.

Nama Pembimbing:
Dr Donald Adams
Dr Jill Scevak

Daftar Singkatan:

SKKNI   : Standar Kompetensi Kerja Nasional Indonesia
BNSP   : Badan Nasional Sertifikasi Profesi
LSP   : Lembaga Sertifikasi Profesi
TUK   : Tempat Uji Kompetensi
SMK   : Sekolah Menengah Kejuruan
BLK   : Balai Latihan Kerja

Penting:
Yang dimaksud dengan **SERTIFIKASI KEAHLIAN/SKKNI** dalam angket ini adalah sertifikasi yang diselenggarakan oleh Tempat Uji Kompetensi (TUK) dan Lembaga Sertifikasi Profesi (LSP) di bawah pengelolaan Badan Nasional Sertifikasi Profesi (BNSP).

Pengantar:
Saat ini saya sedang mengadakan penelitian tentang implementasi kebijakan sertifikasi keahlian/SKKNI di SMK dan BLK di Daerah Istimewa Yogyakarta. Maksud penelitian ini adalah untuk mengungkapkan proses dan hasil implementasi kebijakan tersebut di SMK dan BLK.

Sebelum Bapak/Ibu memutuskan untuk menjawab angket ini, silahkan dibaca halaman penjelasan yang disertakan. Apabila Bapak/Ibu ingin berpartisipasi, mohon dijawab dengan jujur dan teliti. Mohon diingat bahwa tidak ada jawaban BENAR atau SALAH. Apapun pandangan dan opini Bapak/Ibu sangat penting bagi saya dan akan saya hargai dan hormati.

Data Code

DAFTAR SKKNI TERKAIT DENGAN SMK BIDANG STUDI KEAHLIAN:

**TEKNOLOGI DAN REKAYASA SERTA
TEKNOLOGI INFORMASI DAN KOMUNIKASI**

JUDUL SKKNI YANG SUDAH ADA
Audio Video
Bengkel Kendaraan Berbahan Bakar Gas (BBG)
Distribusi Daya Listrik
Inspektur Bendungan Urukan
Instalasi Pemanfaatan Tenaga Listrik
Jaringan komputer dan Sistem Administrasi
Kendaraan Ringan
Logam Mesin
Mandor Installer Rangka Atap Baja Ringan
Mandor Tukang Pasang Beton Precast
Mekanik Heating, Ventilation dan Air Condition (HVAC) (Mekanik Pemanasan, Ventilasi dan Pengakondisian Udara)
Operator Komputer
Pemasangan Pintu Air
Pembangkit Listrik Tenaga Air (PLTA)
Pembangkit Listrik Tenaga Diesel (PLTD)
Pembangkit Listrik Tenaga Uap Dan Batu Bara
Pemeliharaan dan Perbaikan Elektronika Rumah Tangga
Pemeriksa Las
Pengelasan Non SMAW
Pengelasan SMAW
Perawatan Mekanik
Perkapalan
Programer Komputer
Sepeda Motor
Teknisi Komputer
Teknologi dan Komunikasi
Transmisi Daya Listrik
Transportasi Jabatan Kerja Pelaksana lapangan pekerjaan Pemasangan Jembatan Rangka Baja Standar
Transportasi Jabatan Kerja Pelaksana Lapangan Perkerasan Jalan Beton
Transportasi Juru Gambar Pekerjaan Jalan dan Jembatan
Tukang Taman pada Bangunan Gedung

BAGIAN SATU

Silahkan dicentang ☑ atau disilang ☒ pilihan yang paling sesuai dengan pandangan dan keadaan Bapak/Ibu.	Sangat Setuju	Setuju	Tidak Setuju	Sangat Tidak Setuju
No **Pernyataan**				
29. Apabila proses belajar mengajar di SMK tidak mengacu pada kriteria kompetensi di SKKNI, maka siswa akan sulit lulus sertifikasi keahlian/SKKNI	☐	☐	☐	☐
30. Bagi guru, sertifikasi keahlian/SKKNI sama penting nya dengan sertifikasi guru	☐	☐	☐	☐
31. Bagi guru, sertifikat keahlian/SKKNI meningkatkan kepercayaan diri sebagai guru SMK	☐	☐	☐	☐
32. Daftar SKKNI terlampir baru saya ketahui saat membaca angket ini	☐	☐	☐	☐
33. Dengan memegang sertifikat keahlian/SKKNI menjamin kompetensi keahlian guru	☐	☐	☐	☐
34. Dengan memegang sertifikat keahlian/SKKNI tidak meningkatkan jaminan diterima kerja bagi lulusan SMK	☐	☐	☐	☐
35. Di masa yang akan dating, sertifikat keahlian/SKKNI seharusnya menjadi kriteria rekruitmen pekerja	☐	☐	☐	☐
36. Industri belum membutuhkan sertifikat keahlian/SKKNI dalam merekrut pegawai	☐	☐	☐	☐
37. Kelulusan siswa dalam sertifikasi keahlian/SKKNI tergantung kualitas proses belajar di sekolah	☐	☐	☐	☐
38. Membangun kompetensi model SKKNI membutuhkan kurikulum berbasis kompetensi	☐	☐	☐	☐
39. Memiliki atau tidak memiliki sertifikat keahlian/SKKNI tidak berpengaruh pada kompetensi guru	☐	☐	☐	☐
40. Meski sama-sama penting, namun di SMK kompetensi teknis adalah lebih penting daripada pengetahuan teoretis	☐	☐	☐	☐
41. Sampai saat ini belum ada SKKNI terkait dengan kompetensi keahlian yang saya ampu	☐	☐	☐	☐
42. Saya akan ikut sertifikasi keahlian/SKKNI apabila didukung oleh pimpinan sekolah saya	☐	☐	☐	☐
43. Saya baru tahu kalau ada SKKNI yang sesuai dengan pelajaran yang saya ampu	☐	☐	☐	☐
44. Saya dapat memandu siswa saya untuk mengikuti sertifikasi keahlian/SKKNI yang sesuai dengan kompetensi keahlian saya	☐	☐	☒	☐
45. Saya dapat menjelaskan fungsi BNSP, LSP dan TUK dalam proses	☐	☐	☐	☐

sertifikasi keahlian/SKKNI

46.	Saya dapat menjelaskan proses sertifikasi keahlian/SKKNI kepada siswa dan kolega saya	☐	☐	☐	☐
47.	Saya dapat menyebutkan lembaga-lembaga yang terlibat dalam penyusunan SKKNI	☐	☐	☐	☐
48.	Saya membaca SKKNI yang terkait dengan spektrum keahlian saya	☐	☐	☐	☐
49.	Saya perlu mendorong kolega saya untuk mengikuti sertifikasi keahlian/SKKNI	☐	☐	☐	☐
50.	Saya perlu mendorong siswa saya untuk mengikuti sertifikasi keahlian/SKKNI	☐	☐	☐	☐
51.	Saya tidak perlu mendorong siswa untuk mengikuti sertifikasi profesi	☐	☐	☐	☐
52.	Saya tidak perlu mendorong teman guru untuk mengikuti sertifikasi profesi	☐	☐	☐	☐
53.	Sertifikat keahlian/SKKNI belum dibutuhkan di dunia kerja	☐	☐	☐	☐
54.	Sertifikat keahlian/SKKNI yang dimiliki guru tidak punya pengaruh terhadap kompetensi teknis anak didiknya	☐	☐	☐	☐
55.	SKKNI relevan sebagai rujukan penyusunan silabus mata pelajaran produktif	☐	☐	☐	☐
56.	Ujian sekolah yang berbasis kompetensi melatih kesiapan siswa untuk lulus ujian sertifikasi keahlian/SKKNI	☐	☐	☐	☐

BAGIAN DUA

Dari daftar SKKNI di halaman 2, adakah SKKNI yang terkait dengan kompetensi keahlian Bapak/Ibu?

c.   Tidak ada (langsung ke **BAGIAN TIGA**)

d.   Ada, yaitu SKKNI bidang:

   3)   _____

   4)   _____

   5)   _____

   6)   _____

Silahkan dicentang ☑ atau disilang ☒ pilihan yang paling sesuai dengan kebiasaan Bapak/Ibu.

No	Pernyataan	Sela	Sering	Jarang	Tidak Pernah
1	Dalam menyusun kompetensi dasar untuk silabus pelajaran yang saya ampu, saya menyesuaikan dengan unit kompetensi di SKKNI	☐	☐	☐	☐
2	Dalam menyusun silabus saya merujuk kepada kompetensi SKKNI	☐	☐	☐	☐
3	Dalam silabus yang saya buat, saya cantumkan SKKNI sebagai sumber belajar	☐	☐	☐	☐
4	Evaluasi pembelajaran yang saya terapkan mengacu pada kompetensi di SKKNI	☐	☐	☐	☐
5	Saya berdiskusi dengan kolega guru bagaimana meningkatkan partisipasi mereka dalam sertifikasi keahlian/SKKNI	☐	☐	☐	☐
6	Saya berdiskusi dengan kolega guru mengapa sebagian dari mereka enggan mengikuti sertifikasi keahlian/SKKNI	☐	☐	☐	☐
7	Saya memodifikasi metode pembelajaran yang ada agar sesuai dengan kebutuhan SKKNI	☐	☐	☐	☐
8	Saya mendorong rekan guru untuk mengikuti sertifikasi SKKNI	☐	☐	☐	☐
9	Saya mendorong siswa saya untuk mengikuti sertifikasi keahlian/SKKNI	☐	☐	☐	☐
10	Saya mengaitkan metode pembelajaran yang saya praktikkan dengan kebutuhan kompetensi kerja di SKKNI	☐	☐	☐	☐
11	Saya mengarahkan siswa saya ke Tempat Uji Kompetensi (TUK) terdekat	☐	☐	☐	☐
12	Saya mengarahkan siswa saya untuk menemui guru yang terlibat dalam sertifikasi keahlian/SKKNI	☐	☐	☐	☐
13	Saya menggunakan kriteria dari SKKNI untuk mengembangkan bahan Ujian Kompetensi Keahlian	☐	☐	☐	☐
14	Saya menjelaskan prosedur sertifikasi keahlian/SKKNI kepada siswa saya	☐	☐	☐	☐
15	Saya menyarankan kepada pimpinan untuk mendorong guru mengikuti sertifikasi keahlian/SKKNI	☐	☐	☐	☐

BAGIAN TIGA

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3. Apakah Bapak/Ibu sudah pernah mengikuti sertifikasi keahlian/SKKNI?

   Belum   ☐

   Sudah   ☐ yaitu di bidang_____

4. Bagi Bapak/Ibu yang belum pernah ikut sertifikasi keahlian/SKKNI. Apakah Bapak/Ibu tertarik untuk mengikuti sertifikasi keahlian/SKKNI?

   Ya   ☐ yaitu di bidang _____

   Tidak   ☐ tuliskan tiga alasan mengapa tidak tertarik untuk mengikuti sertifikasi keahlian/SKKNI!

             d.   _____

             e.   _____

             f.   _____

Terimakasih atas kerjasamanya!

Appendix 3: Interview schedule (English version)

Interview Schedule

Indonesian National Competency Standard (SKKNI): A policy implementation in Vocational Schools (SMK) and Vocational Training Centres (BLK)

in Yogyakarta Province Indonesia

Version 1 Dated 21/09/2011

This interview schedule is a guideline for the semi-structured interview in this study. There are four research questions that will be explored through individual interview as listed below.

Preliminary:

- Thank the interviewee

- Provide a brief explanation about the study

- Provide assurances about confidentiality and anonymity

- Ensure the interviewee understands that he/she is not obliged to answer all/or some of the questions and may terminate the interview at any time

- Gain the interviewee agreement on tape recording the interview

Opening questions:

1. Could you explain how well does the policy of SKKNI work to achieve the goals?

2. What are the factors determine the success of the implementation of SKKNI?

A. Standard and objectives

Are the enforcement procedures in the SKKNI policy in appropriate detail for the implementers of the policy to follow?

Prompts:

- The policy outline an action plan and timetable for all related institutions, and on all levels

- Guidance books

- The details of your tasks and responsibilities

- Specific targets of the policy such as teachers or students' participation rate in certification

- Description of the desired outcomes and how to measure these outcomes

**B.	Resources**

Is the policy of SKKNI supported by financial resources for its implementation (provincial budget or districts budget)?

Prompts:

- Incentives for teachers and students who want to undergo certification
- The certification cost
- Financial resources (non-government sources) for the policy implementation
- Training package for the implementation of SKKNI
- Others supporting materials for the implementation of the policy

**C.	Inter-organisational communication and enforcement activities**

Have the National Ministry of Education and the Ministry of Manpower and Transmigration and BNSP ever invited your institution for socialisation of the policy?

Prompts:

- Updating and monitoring the implementation of SKKNI
- Meetings between provincial authorities of the implementation and the frequency
- Cooperation between the implementer agencies
- Dispute between departments and institutions in terms of which institution is the most responsible for the implementation
- Outside partners in the implementation of SKKNI

**D.	Characteristics of the implementing agency**

Is there any special unit or taskforce to be developed to lead the implementation of SKKNI? If yes, how involved are their authorities in assisting the implementation?

Prompts:

- Number and performance of staff
- Support of the following elements
- Industries
- School committees
- Profession associations
- House of representative

- Tertiary education
- Other parties

## E.	Economic, social, and political conditions

Is there any budget allocation in the provincial budget and district's budget for certification of SKKNI? If there is, what is the amount of the budget for SKKNI?(refer to the documents)

Prompts:

- Public opinions about SKKNI
- The opinions of the members of the House of Representative about the implementation of SKKNI
- The opinions of the members of the House of Representative from opposition parties

Appendix 4: Interview schedule (Indonesian version)

School of Education
The University of Newcastle Australia

PANDUAN WAWANCARA
Untuk Kepala Dinas Pendidikan Propinsi Daerah Istimewa Yogyakarta

Implementasi SKKNI di SMK dan BLK
Di Propinsi Daerah Istimewa Yogyakarta Indonesia

Pertanyaan pembuka:

3. Bisakah bapak/ibu menjelaskan, seberapa baik kebijakan SKKNI berjalan untuk mencapai tujuan-tujuan yang telah ditetapkan?

4. Faktor-faktor apa saja kah yang menentukan kesuksesan implementasi SKKNI?

C.   Standar kebijakan dan tujuan-tujuannya

1. Menurut bapak/ibu apakah kebijakan pemerintah tentang SKKNI diterjemahkan dalam kebijakan-kebijakan teknis secara rinci sehingga mudah untuk diikuti?

2. Menurut bapak/ibu apakah kebijakan pemerintah tentang SKKNI diterjemahkan dalam kebijakan-kebijakan teknis secara rinci dalam rencana aksi serta jadwal yang jelas untuk masing-masing institusi di semua level?

3. Apabila kebijakan tentang SKKNI telah diterjemahkan dalam rencana aksi, jadwal dan deskripsi tugas yang rinci, apakah rincian tersebut disusun dalam jenjang-jenjang yang runtut?

4. Apakah kebijakan SKKNI dilengkapi dengan berbagai jenis buku panduan?

5. Dalam posisi bapak/ibu saat ini, apakah kebijakan SKKNI merinci tanggungjawab dan tugas bapak/ibu?

6. Menurut pandangan bapak/ibu, apakah tujuan kebijakan SKKNI realistis?

7. Menurut bapak/ibu sendiri, apakah asumsi-asumsi kebijakan SKKNI didukung oleh teori yang mapan?

8. Apakah kebijakan SKKNI dilengkapi dengan target-target spesifik? Seperti tingkat partisipasi guru/siswa/sekolah?

9. Apakah kebijakan SKKNI memenuhi hajat hidup/kepentingan tenaga kerja dan dunia kerja?

10. Apakah kebijakan SKKNI sesuai dengan karakteristik social-ekonomi di wilayah kewenangan lembaga bapak/ibu?

11. Apakah kebijakan SKKNI menyertakan deskripsi-deskripsi outcome/luaran? Serta perangkat-perangkat untuk mengukur outcome/luarannya?

D. Sumberdaya

1. Apakah kebijakan SKKNI disertai kebijakan keuangan? Misalnya untuk pembiayaan yang diperlukan dalam implementasi? Baik melalui RAPBD/APBD

2. Apakah kebijakan SKKNI disertai insentif tertentu bagi murid/guru yang berminat mengikuti sertifikasi?

3. Apakah guru atau siswa yang berminat mengikuti sertifikasi SKKNI mendapatkan potongan harga?

4. Bolehkah saya tahu, berapa biaya ujian sertifikasi?

5. Apakah ada sumber anggaran lain untuk implementasi kebijakan SKKNI? Dari manakah sumber tersebut? Dan bagaimana keberlanjutannya?

6. Apakah disediakan paket pelatihan untuk persiapan sertifikasi SKKNI? Kalau training tersebut ada, apakah dilaksanakan secara gratis? Kalau peserta tidak diminta untuk membayar, dari mana dukungan financial tersebut berasal?

7. Apakah SMK/BLK menerima bahan-bahan pendukung bagi kebijakan sertifikasi SKKNI? Seperti buku, CD/DVD/, majalah, leaflet dan sebagainya?

C. **Hubungan antar organisasi pelaksana dan kegiatan-kegiatan untuk menjalankan kebijakan**

1. Apakah Kementrian Pendidikan, Kementrian Tenaga Kerja dan Transmigrasi atau Badan Nasional Sertifikasi Profesi (BNSP) pernah mengundang institusi yang bapak/ibu pimpin untuk sosialisasi kebijakan SKKNI?

2. Apakah ketiga elemen pemerintah pusat di atas juga melakukan update/pembaharuan data serta monitoring atas implementasi kebijakan SKKNI?

3. Apakah pernah diselenggarakan rapat koordinasi antara Dinas Pendidikan dan Dinas Tenaga Kerja dan Transmigrasi serta lembaga-lembaga yang relevan di tingkat propinsi untuk membicarakan implementasi SKKNI? Apabila pernah, seberapa sering pertemuan itu diselenggarakan?

4. Apakah pernah diselenggarakan rapat koordinasi antara Dinas Pendidikan dan Dinas Tenaga Kerja dan Transmigrasi serta lembaga-lembaga yang relevan di tingkat Kabupaten/kota untuk membicarakan implementasi SKKNI? Apabila pernah, seberapa sering pertemuan itu diselenggarakan?

5. Apakah pernah diselenggarakan rapat koordinasi antara Dinas Pendidikan dan Dinas Tenaga Kerja dan Transmigrasi dan pimpinan SMK dan direktur BLK dan LSP di semua tingkat propinsi untuk membicarakan implementasi SKKNI?

6. Apakah pernah ada kerjasama antara kelima stakeholders implementasi SKKNI? Kalau ada bentuknya seperti apakah? Dari pihak manakah inisiatif kerjasama itu berasal?

7. Apakah kerjasama itu berkelanjutan atau hanya sekali?

8. Menurut KEPMEN tentang SKKNI serta keputusan lain yang terkait, Dinas Pendidikan dan Dinas Tenaga Kerja dan Transmigrasi bertugas memonitor pelaksanaan sertifikasi SKKNI. Bisa dijelaskan apakah:

   a. Pernah dilakukan monitoring?

   b. Bentuknya seperti apakah? Kunjungan? Pertemuan-pertemuan? Laporan tertulis?

c. Apakah monitoring ini berjalan secara periodik? Setiap tahun? Semester? Triwulan? Bulan?

9. Apakah bapak/ibu merasakan adanya persepsi negative antar departemen atau antar institusi tentang siapa yang paling bertanggungjawab atau siapa yang seharusnya mengendalikan implementasi SKKNI?

10. Apakah institusi yang bapak/ibu pimpin memiliki mitra lain dalam implementasi kebijakan SKKNI? Apabila ada, seberapa penting peran dan kontribusinya?

D. Karakteristik institusi-insitusi yang terlibat dalam implementasi SKKNI

1. Apakah di masing-masing departemen dan unit dibentuk penanggungjawab khusus untuk implementasi SKKNI? Bagaimana otoritas unit-unit ini dalam implementasi kebijakan?

2. Apabila unit khusus ini memang ada. Seberapa banyak staf yang membidangi urusan SKKNI?

3. Apakah unit dan staf yang membidangi sertifikasi SKKNI cukup baik kinerjanya?

4. Apakah pelaksanaan sertifikasi SKKNI mendapatkan dukungan dari pihak-pihak berikut:

    a. Industri? Seperti apakah bentuk dukungannya?

    b. Komite sekolah? Seperti apakah bentuk dukungannya?

    c. Asosiasi profesi? Seperti apakah bentuk dukungannya?

    d. Perwakilan rakyat? Seperti apakah bentuk dukungannya?

    e. Perguruan tinggi? Seperti apakah bentuk dukungannya?

    f. Pihak-lain (apabila ada)? Seperti apakah bentuk dukungannya?

E. Economic, social, and political conditions

1. Is there any budget allocation in the provincial budget and district's budget for certification of SKKNI? If there is, what is the amount of the budget for SKKNI?(refer to the documents)

2. Is the purchase power of teachers/trainers/students sufficient to pay the certification cost? Compare to their salary or tuition.

3. What are public opinions about SKKNI as they are reported by the media?

4. What are the opinions of the members of the House of Representative about the implementation of SKKNI?

5. What are the opinions of the members of the House of Representative from opposition parties about the implementation of SKKNI?

6. Is there any element/party that is in opposition to the policy of SKKNI? Who are they and what are their opinions of SKKNI?

E.   Kondisi sosial, ekonomi dan politik

1. Apakah di APBD Provinsi dan Kabupaten/Kota ada alokasi dana untuk sertifikasi profesi? Kalau ada seberapa besar alokasinya? (Kalau ada, pastikan dengan cara melihat dokumen APBD-nya)

2. Apakah daya beli guru/trainer/murid mencukupi untuk membayar biaya sertifikasi? Seberapa besar biayanya dan berapa besar biaya sertifikasi itu dibandingkan dengan gaji mereka atau SPP sekolah mereka?

3. Bagaimana pandangan masyarakat tentang SKKNI sebagai termuat di media lokal? Kliping Koran?

4. Bagaimana pandangan wakil rakyat di Dewan Perwakilan Rakyat? (Wawancara dengan komisi D terkait dengan pendidikan dan ketenagakerjaan).

5. Bagaimanakah pandangan partai-partai oposisi terhadap kebijakan SKKNI?

6. Apakah ada pihak-pihak yang menentang kebijakan SKKNI? Siapakah mereka? Dan bagaimana pandangan mereka tentang kebijakan ini?

Terimakasih atas kerjasamanya!

Appendix 5: Information statement and consent form (English version)

Student Researcher

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Participant Information Statement for the Research Project:

Indonesian National Competency Standard (SKKNI): A policy implementation in Vocational Schools (SMK) and Vocational Training Centres (BLK)

in Yogyakarta Province Indonesia

Document Version 1 Dated 19/09/2011

You are invited to participate in the research project identified above which is being conducted by Muhammad Sayuti from the School of Education at the University of Newcastle. The research is part of the Doctor of Philosophy studies at the University of Newcastle, supervised by Dr Donald Adams from the School of Education, Faculty of Education, and Arts.

Why is the research being done?

The purposes of this study are to investigate the implementation process of the Indonesian National Competency Standard (SKKNI) in Vocational Schools (SMKs) and Vocational Training Centres (BLKs) and to examine the effectiveness of the policy. This study will also measure the teachers and trainers' disposition to SKKNI and will analyse its relationship to teachers and trainers' performance and the outcomes of the policy. The result of the study will be beneficial for improving the implementation model and more importantly for scaling the participation level of the implementers. Stakeholders' involvement has played a vital role in the contribution to the success story of SKKNI in others countries.

This study will identify what the implementers of the policy have been doing in achieving the policy objectives, especially in preparing their students with the competency standard. This information will provide feedback to the policy makers of training sectors for curriculum

development and suggest recommendations for competence-based training and methods to improve teachers and trainers' competency.

In the area of comparative policy and comparative education, the lessons from Indonesia will contribute to the enrichment of knowledge regarding the growing interest of national competency standard. This is because, in spite of the growing interest of a national competency standard, limited empirical studies have been carried out.

Who can participate in the research?

1. Teachers of SMKs and trainers of BLKs that teach vocational subjects.
2. The principals of SMKs and directors of BLKs.
3. Heads of the Ministry of Education and Culture (MoEC) and the Ministry of Manpower (MoM) at the provincial level.
4. Heads of the MoEC) and the MoM) in District 1, District 2 and District 3
5. Heads of Professional Certification Bodies (LSP)
6. Members of MGMP committee (subject panel in the vocational subjects group).

What choice do you have?

Participation in this research is entirely your choice. Whether or not you decide to participate, your decision will not disadvantage you. If you do decide to participate, you may withdraw from the project at any time without giving a reason.

What would you be asked to do?

If you agree to participate, complete the questionnaire and return to the coordinator in your school/centre. At the end of the questionnaire, you will be invited to participate in an interview. If you agree to participate in the interview, fill the consent form and return in separated envelope to the coordinator.

How much time will it take?

The questionnaire should take about 30 minutes to complete and the interview will be about 60 minutes.

What are the risks and benefits of participating?

We cannot provide you with any direct benefits. If you provide your email address to the student researcher, the summary of the findings will be sent to you within six months of completion of the research.

The outcomes of this research will beneficial for improving the implementation model and more importantly for scaling the participation level of the implementers. Moreover, the research result will be important for policy makers in improving their potential leverage to coordinate the implementation of NCS.

How will your privacy be protected?

The questionnaire is anonymous and confidential so it will not reveal your identity. The interview will be recorded on participant approval, and the participant will get an opportunity to read the interview transcript and provide necessary comments.

How will the information collected be used?

The information from this project will be reported in a doctoral thesis to be submitted for Muhammad Sayuti's PhD degree. It may also be reported in conference papers and academic publications. No individual can be identified from the reports of the project.

What do you need to do to participate?

Please read this Information Statement and be sure you understand its contents before you consent to participate. If there is anything you do not understand, or if you have questions, contact the researcher.

If you would like to participate, please complete the questionnaire and return in a sealed envelope to the researcher through school/centre office. If you would also like to participate in the interview, please complete the consent form attached for interview, return to the coordinator in separated envelope and the researcher will contact each participant for the interview to arrange most convenient time to conduct the interview.

Further information

If you would like further information please contact Muhammad Sayuti, on the address given on the front page.

Thank you for considering this invitation.

Your participation would be greatly valued.

Pembimbing Utama   **Calon Ph.D**

Dr Donald Adams   Muhammad Sayuti

This project has been approved by the University's Human Research Ethics Committee, Approval No. H-###. Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or supervisor of the project (Dr Donald Adams, tel.: (61)-2-49215907, fax: (61)-2-49217916) or to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone (02) 49216333, email Human-Ethics@newcastle.edu.au.

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SMK Teachers/BLK Trainers' Interview Consent Form for the Research Project:

**Indonesian National Competency Standard (SKKNI): A policy implementation in Vocational Schools (SMK) and Vocational Training Centres (BLK)
in Yogyakarta Province Indonesia**

Conducted by Muhammad Sayuti under the supervision of Dr Donald Adams from the School of Education, Faculty of Education and Arts

Document Version 1 Dated 19/00/2011

I agree to participate in an interview for the above research project and give my consent freely. I understand that the project will be conducted as described in the Information Statement, a copy of which I have retained. I understand I can withdraw from the project at any time and do not have to give any reason for withdrawing.

I understand that personal information will remain confidential to the researchers.

I have had the opportunity to have questions answered to my satisfaction.

Print Name: _____

Signature: _____ **Date:** _____

The researcher will contact through the number you have given in the questionnaire to arrange the time and place for interview.

Appendix 6: Information statement and consent Form (Indonesian version)

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THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

Penjelasan tentang Penelitian

Standar Kompetensi Kerja Nasional Indonesia (SKKNI): Implementasi kebijakan di Sekolah Menengah Kejuruan (SMK) dan Balai Latihan Kerja (BLK)

di Propinsi DI Yogyakarta Indonesia

Bapak/ibu diharapkan untuk berpartisipasi dalam penelitian dengan judul sebagaimana disebutkan di atas yang sedang dilakukan oleh Muhammad Sayuti dari Jurusan Pendidikan pada Universitas Newcastle Australia. Penelitian ini adalah bagian dari program Strata 3 di Universitas Newcastle di bawah bimbingan Dr Donald Adams.

Mengapa penelitian ini dilakukan?

Tujuan penelitian ini adalah untuk mengkaji proses implementasi SKKNI di SMK dan BLK serta untuk menguji efektivitas kebijakan SKKNI tersebut. Penelitian ini juga akan mengukur sikap guru SMK dan pelatih di BLK terhadap kebijakan tersebut serta menganalisis hubungan antara sikap dengan kinerja dan luaran kebijakan. Diharapkan hasil penelitian ini akan bermanfaat bagi perbaikan model implementasinya serta untuk menilai tingkat keterlibatan para pihak yang terkait dengan implementasinya. Keterlibatan pemangku kepentingan telah terbukti menjadi faktor kunci dalam keberhasilan implementasi kebijakan serupa di beberapa negara yang lain.

Penelitian ini akan mengidentifikasi apa yang telah dilakukan pihak-pihak yang terkait langsung dengan kebijakan ini dalam memenuhi tujuan-tujuan kebijakan terutama dalam menyiapkan peserta didik dengan standard kompetensi. Penelitian ini juga akan memberikan umpan balik kepada para penyusun kebijakan di bidang pendidikan dan pelatihan untuk pengembangan kurikulum serta menawarkan rekomendasi-rekomendasi di seputar pelatihan berbasis kompetensi juga metode-metode untuk meningkatkan kompetensi guru dan pelatih kejuruan.

Di bidang perbandingan kebijakan dan pendidikan, pelajaran dari Indonesia ini akan menyumbangkan pengayaan pengetahuan diseputar isu kompetensi kerja nasional yang banyak diminati ini. Hal ini disebabkan, di samping minat yang besar tersebut, penelitian empiris seputar masalah ini masih sangat terbatas.

Siapa yang akan berpartisipasi dalam penelitian ini?

7. Kepala Sekolah SMK dan Direktur BLK yang terpilih dalam rencana sampel penelitian ini di tiga lokasi, yaitu Kabupaten/Kota 1, Kabupaten/Kota 2 dan Kabupaten/Kota 3. SMK yang dipilih diharapkan mewakili SMK swasta –negeri dari tiga kelompok SMK (RSBI) Rintisan Sekolah Berstandard Internasional; SMK (RSBN) Rancangan Sekolah Berstandar Nasional; dan SMK di luar dua kelompok itu.
8. Guru SMK dan pelatih BLK yang mengajarkan mata pelajaran-mata pelajaran yang terkait dengan bidang kejuruan di SMK dan BLK yang terpilih sebagai sampel penelitian dari tiga lokasi, yaitu Kabupaten/Kota 1, Kabupaten/Kota 2 dan Kabupaten/Kota 3
9. Kepala Kantor Wilayah Departemen Pendidikan Nasional dan Departemen Tenaga Kerja Propinsi DIY
10. Kepala Dinas Departemen Pendidikan Nasional dan Departemen Tenaga Kerja di Kabupaten/Kota 1, Kabupaten/Kota 2 dan Kabupaten/Kota 3 sehingga total enam Kepala Dinas diharapkan turut berpartisipasi dalam penelitian ini.
11. Kepala Lembaga Sertifikasi Profesi (LSP) yang beroperasi di Kabupaten/Kota 1, Kabupaten/Kota 2 dan Kabupaten/Kota 3
12. Pengurus Musyawarah Guru Mata Pelajaran (MGMP) bidang kejuruan di Kabupaten/Kota 1, Kabupaten/Kota 2 dan Kabupaten/Kota 3.

Pilihan-pilihan apa yang bapak/ibu miliki?

Pilihan untuk berpartisipasi dalam penelitian ini adalah mutlak pada Bapak/Ibu. Hanya mereka yang menyatakan bersedia akan dilibatkan dalam penelitian ini. Pilihan untuk ikut berpartisipasi atau tidak berpartisipasi, tidak akan berpengaruh kepada Bapak/Ibu. Apabila Bapak/Ibu memutuskan untuk berpartisipasi, Bapak/Ibu diperbolehkan untuk menarik diri tanpa memberikan alasan serta menarik data yang telah Bapak/Ibu berikan.

Apa saja yang diharapkan dari bapak/ibu?

Apabila bapak/ibu setuju untuk berpartisipasi, Bapak/Ibu akan diwawancarai terkait dengan topik penelitian, sebagian guru SMK dan pelatih BLK akan diminta untuk mengisi angket penelitian.

Berapa lama waktu yang dibutuhkan?

Wawancara akan berlangsung sekitar 1 jam dan dibutuhkan waktu 30 menit untuk mengisi angket.

Apa resiko-resiko dan manfaat dari keikutsertaan Bapak/Ibu?

Kami tidak bisa memberikan manfaat langsung dari riset ini, namun ringkasan penelitian akan dikirim melalui email dalam waktu enam bulan setelah selesainya penelitian ini. Siapa saja yang tertarik untuk mendapatkan ringkasan hasil penelitian harap memberikan alamat email ke peneliti.

Dengan cara bagaimana privasi bapak/ibu akan dilindungi?

Angket penelitian ini adalah anonim dan bersifat rahasia sehingga identitas bapak/ibu tidak akan terungkap. Wawancara akan direkam apabila bapak/ibu menyetujuinya dan bapak/ibu memiliki peluang untuk membaca transkrip dan memberikan komentar yang diperlukan.

Bagaimana informasi yang dikumpulkan akan digunakan?

Informasi dari penelitian ini akan dilaporkan dalam disertasi yang akan diserahkan untuk gelar Doktor nya Muhammad Sayuti. Bisa juga disampaikan dalam makalah konferensi and publikasi ilmiah lain. Tidak ada seorang pun yang bisa dikenali nama dan identitasnya dari laporan penelitian ini.

Apa yang diperlukan untuk berpartisipasi?

Silahkan dibaca penjelasan ini dan yakinkan bahwa bapak/ibu memahami isinya sebelum menyatakan bersedia untuk berpartisipasi. Apabila ada sesuatu yang tidak dimengerti atau pertanyaan yang hendak diajukan silahkan hubungi peneliti.

Apabila bapak/ibu tertarik untuk berpartisipasi, silahkan diisi Pernyataan Kesediaan untuk Diwawancarai (terlampir), selanjutnya peneliti akan menghubungi bapak/ibu untuk mengatur jadwal yang cocok untuk wawancara. Untuk guru SMK dan pelatih BLK yang tertarik untuk mengisi angket, silahkan dijawab angketnya dan dikembalikan ke peneliti dalam amplop tertutup melalui kantor SMK/BLK.

Informasi lebih lanjut

Apabila bapak/ibu menghendaki informasi lebih lanjut tentang penelitian ini, silahkan kontak Dr Donal Adams melalui alamat di atas.

Terimakasih telah mempertimbangkan tawaran ini.

Partisipasi bapak/ibu sungguh berarti bagi penelitian ini

Pembimbing Utama   **Calon Ph.D**

Dr Donald Adams   Muhammad Sayuti

SURAT PERSETUJUAN PENELITIAN

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Surat Persetujuan untuk Berpartisipasi dalam Penelitian

Standar Kompetensi Kerja Nasional Indonesia (SKKNI): Implementasi kebijakan di Sekolah Menengah Kejuruan (SMK) dan Balai Latihan Kerja (BLK) di Propinsi DI Yogyakarta Indonesia

Penelitian oleh Muhammad Sayuti di bawah bimbingan Dr Donald Adams dari School of Education, Faculty of Education and Arts
Document Version 2 Dated 10/01/2012

- Saya setuju untuk berpartisipasi dalam penelitian ini dan menyatakan kesediaan saya tanpa tekanan atau paksaan. Saya mengerti bahwa penelitian akan dilakukan sesuai dengan Penjelasan tentang Penelitian yang sudah saya terima.
- Saya mengerti bahwa partisipasi dalam penelitian ini adalah anonim, sehingga saya tidak bisa menarik hasil wawancara yang sudah terjadi dan terekam.
- Saya mengerti bahwa informasi pribadi hanya akan diketahui oleh peneliti.
- Saya punya hak untuk mendapat jawaban yang memuaskan saat ada yang ingin saya tanyakan.
- Saya bersedia untuk diwawancarai.
- Saya bersedia bahwa wawancara akan direkam.

Nama	:	_____
Instansi	:	_____
Jabatan	:	_____
Nomor telepon	:	_____
Email	:	_____
Tanda tangan	:	_____
Tanggal	:	_____

Appendix 7: Ethics Approval

HUMAN RESEARCH ETHICS COMMITTEE

THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

Notification of Expedited Approval

To Chief Investigator or Project Supervisor:	**Doctor Donald Adams**
Cc Co-investigators / Research Students:	**Doctor Jill Scevak** **Mr Muhammad Sayuti**
Re Protocol:	**Indonesian National Competency Standard (SKKNI): A policy implementation in Vocational Schools (SMK) and Vocational Training Centres (BLK) in Yogyakarta Province Indonesia**
Date:	**01-Feb-2012**
Reference No:	**H-2011-0338**
Date of Initial Approval:	**01-Feb-2012**

Thank you for your **Response to Conditional Approval (minor amendments)** submission to the Human Research Ethics Committee (HREC) seeking approval in relation to the above protocol.

Your submission was considered under **Expedited** review by the Ethics Administrator.

I am pleased to advise that the decision on your submission is **Approved** effective **01-Feb-2012**.

In approving this protocol, the Human Research Ethics Committee (HREC) is of the opinion that the project complies with the provisions contained in the National Statement on Ethical Conduct in Human Research, 2007, and the requirements within this University relating to human research.

Approval will remain valid subject to the submission, and satisfactory assessment, of annual progress reports. *If the approval of an External HREC has been "noted" the approval period is as determined by that HREC.*

The full Committee will be asked to ratify this decision at its next scheduled meeting. A formal *Certificate of Approval* will be available upon request. Your approval number is **H-2011-0338**.

If the research requires the use of an Information Statement, ensure this number is inserted at the relevant point in the Complaints paragraph prior to distribution to potential participants You may then proceed with the research.

Conditions of Approval

This approval has been granted subject to you complying with the requirements for *Monitoring of Progress*, *Reporting of Adverse Events*, and *Variations to the Approved Protocol* as underlined below.

PLEASE NOTE:
In the case where the HREC has "noted" the approval of an External HREC, progress reports and reports of adverse events are to be submitted to the External HREC only. In the case of Variations to the approved protocol, or a Renewal of approval, you will apply to the External HREC for approval in the first instance and then Register that approval with the University's HREC.

- *Monitoring of Progress*

Other than above, the University is obliged to monitor the progress of research projects involving human participants to ensure that they are conducted according to the protocol as approved by the HREC. A progress report is required on an annual basis. Continuation of your HREC approval for this project is conditional upon receipt, and satisfactory assessment, of annual progress reports. You will be advised when a report is due.

- *Reporting of Adverse Events*

1. It is the responsibility of the person **first named on this Approval Advice** to report adverse events.
2. Adverse events, however minor, must be recorded by the investigator as observed by the investigator or as volunteered by a participant in the research. Full details are to be documented, whether or not the investigator, or his/her deputies, consider the event to be related to the research substance or procedure.
3. Serious or unforeseen adverse events that occur during the research or within six (6) months of completion of the research, must be reported by the person first named on the Approval Advice to the (HREC) by way of the Adverse Event Report form within 72 hours of the occurrence of the event or the investigator receiving advice of the event.
4. Serious adverse events are defined as:
    - Causing death, life threatening or serious disability.
    - Causing or prolonging hospitalisation.
    - Overdoses, cancers, congenital abnormalities, tissue damage, whether or not they are judged to be caused by the investigational agent or procedure.
    - Causing psycho-social and/or financial harm. This covers everything from perceived invasion of privacy, breach of confidentiality, or the diminution of social reputation, to the creation of psychological fears and trauma.
    - Any other event which might affect the continued ethical acceptability of the project.

5. Reports of adverse events must include:
    - Participant's study identification number;
    - date of birth;
    - date of entry into the study;
    - treatment arm (if applicable);
    - date of event;
    - details of event;
    - the investigator's opinion as to whether the event is related to the research procedures; and
    - action taken in response to the event.

6. Adverse events which do not fall within the definition of serious or unexpected, including those reported from other sites involved in the research, are to be reported in detail at the time of the annual progress report to the HREC.

- *Variations to approved protocol*

If you wish to change, or deviate from, the approved protocol, you will need to submit an *Application for Variation to Approved Human Research*. Variations may include, but are not limited to, changes or additions to investigators, study design, study population, number of participants, methods of recruitment, or participant information/consent documentation. **Variations must be approved by the (HREC) before they are implemented** except when Registering an approval of a variation from an external HREC which has been designated the lead HREC, in which case you may proceed as soon as you receive an acknowledgement of your Registration.

Linkage of ethics approval to a new Grant

HREC approvals cannot be assigned to a new grant or award (ie those that were not identified on the application for ethics approval) without confirmation of the approval from the Human Research Ethics Officer on behalf of the HREC.

Best wishes for a successful project.

Dr Jean Harkins
Acting Chair, Human Research Ethics Committee

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Human Research Ethics Administration

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Research Integrity Unit
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The University of Newcastle
Callaghan NSW 2308
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Linked University of Newcastle administered funding:

Funding body	Funding project title	First named investigator	Grant Ref

Appendix 8: Factor analysis

In order to test whether groups of items in the questionnaire constituted robust measurement factors, exploratory factor analysis of the items in relevant sections of the questionnaire was conducted. The factor analysis analyses the data collected through questionnaires about teachers' disposition towards the policy of SKKNI which constitutes 27 items and 15 items of questionnaire about teachers' performance in implementing SKKNI into their learning processes. The stages of the factors analysis are as follows:

1. Develop a correlation matrix and examine the correlation coefficients, then eliminate item/s with too low and too high inter items correlation.

2. Examine the communalities and eliminate those below .04.

The results of the factor analysis are presented here:

Teachers' Disposition

1. Correlation matrix

	D01	D02	D03	D04	D05	D06	D07	D08	D09	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20	D21	D22	D23	D24	D25	D26	D27	
D01	1	.256	0	.252	0.1	.231	0.003	.165	.303	.186	-0.1	.174	0	0.1	0.1	0.1	0	0	.143	.149	.204	.274	.191	.159	.134	0.1	0.1	1
D02	.256	1	.121	.337	0.1	.367	-0.02	.210	.367	.245	0.1	.132	-0	.189	.239	.179	0	.169	.193	.237	.255	.185	.235	.243	.166	.175	.179	3
D03	0	.121	1	-0	-0	.137	-0.08	.182	.119	.185	-.120	.238	.165	.590	0.1	.322	.188	.347	.331	0.1	0.1	0.1	.169	.189	0.1	.128	.133	4
D04	.252	.337	-0	1	.205	.301	-0.1	.297	.200	.251	-0.1	.119	-0.1	0.1	.262	.215	.142	.151	.253	.208	.289	.171	.264	0.1	0.1	.137	.199	2
D05	0.1	0.1	-0	.205	1	.124	-.250	-0	-0	.170	-0.1	0.1	0.1	0.1	0.1	0	0	.168	0.1	0.1	0.1	.243	0.1	0	0.1	.119	.136	0
D06	.231	.367	.137	.301	.124	1	-0.03	.340	.352	.158	-0	0.1	0	.180	.291	.182	0.1	.170	.255	.332	.293	.135	.173	.290	.192	.143	.259	4
D07	0	-0	-0.1	-0.1	-.250	-0	1	-0	-0	-.122	.145	-.129	-.194	-0	0.1	0	0	-0	0	-0.1	0	-.350	-0.1	-0.1	-.247	-.138	0	1
D08	.165	.210	.182	.297	-0	.340	-0.03	1	.336	.166	-0	.159	-0	.231	.294	.275	.172	.203	.290	.214	.250	.120	.235	.186	.149	0.1	.145	3
D09	.303	.367	.119	.200	-0	.352	-0.01	.336	1	.170	0	.120	0	.121	.303	.159	0.1	0.1	.167	.218	.332	.152	.334	.196	.287	.208	.267	7
D10	.186	.245	.185	.251	.170	.158	-.122	.166	.170	1	-.172	.150	0.1	.195	0.1	.200	.197	.124	.278	.205	.183	.221	.205	.264	.306	.270	.187	1
D11	-0.1	0.1	-.120	-0.1	-0.1	-0	.145	-0	0	-.172	1	-0.1	-0	-0.1	0.1	-0.1	-.163	-0	-0.1	0	0	-0.1	0	0.1	0	0	0.1	0
D12	.174	.132	.238	.119	0.1	0.1	-.129	.159	.120	.150	-0.1	1	.315	.475	.175	.211	.139	.318	.348	.142	0.1	.228	.221	.198	.201	.182	.131	3
D13	0	-0	.165	-0.1	0.1	0	-.194	-0	0	0.1	-0	.315	1	.301	.166	.142	.166	.175	.193	.143	.148	.248	0.1	.184	.203	.198	-0	2
D14	0.1	.189	.590	0.1	0.1	.180	-0.03	.231	.121	.195	-0.1	.475	.301	1	.233	.340	.214	.348	.383	.141	.161	.141	.187	.174	.167	.142	0.1	6
D15	0.1	.239	0.1	.262	0.1	.291	0.116	.294	.303	0.1	0.1	.175	.166	.233	1	.394	.318	.383	.353	.365	.374	0.1	.361	.254	.242	.235	.309	9
D16	0.1	.179	.322	.215	0	.182	0.04	.275	.159	.200	-0.1	.211	.142	.340	.394	1	.573	.477	.497	.367	.362	.118	.274	.216	.172	.187	.267	8
D17	0	0	.188	.142	0	0.1	0.044	.172	0.1	.197	-.163	.139	.166	.214	.318	.573	1	.472	.476	.270	.287	0.1	.275	.162	.159	.122	.245	4
D18	0	.169	.347	.151	.168	.170	-0.02	.203	0.1	.124	-0	.318	.175	.348	.383	.477	.472	1	.441	.266	.218	0.1	.275	.198	.177	.216	.228	7
D19	.143	.193	.331	.253	0.1	.255	0.04	.290	.167	.278	-0.1	.348	.193	.383	.353	.497	.476	.441	1	.349	.311	.153	.299	.226	.185	.145	.251	9
D20	.149	.237	0.1	.208	0.1	.332	-0.06	.214	.218	.205	0	.142	.143	.141	.365	.367	.270	.266	.349	1	.452	.161	.292	.282	.293	.289	.403	6
D21	.204	.255	0.1	.289	0.1	.293	0.047	.250	.332	.183	0	0.1	.148	.161	.374	.362	.287	.218	.311	.452	1	.229	.475	.417	.285	.382	.355	9
D22	.274	.185	0.1	.171	.243	.135	-.350	.120	.152	.221	-0.1	.228	.248	.141	0.1	.118	0.1	0.1	.153	.161	.229	1	.286	.284	.320	.306	.133	3
D23	.191	.235	.169	.264	0.1	.173	-0.1	.235	.334	.205	0	.221	0.1	.187	.361	.274	.275	.275	.299	.292	.475	.286	1	.289	.334	.370	.411	6
D24	.159	.243	.189	0.1	0	.290	-0.12	.186	.196	.264	0.1	.198	.184	.174	.254	.216	.162	.198	.226	.282	.417	.284	.289	1	.358	.524	.281	3
D25	.134	.166	0.1	0.1	0.1	.192	-.247	.149	.287	.306	0	.201	.203	.167	.242	.172	.159	.177	.185	.293	.285	.320	.334	.358	1	.476	.163	5
D26	0.1	.175	.128	.137	.119	.143	-.138	0.1	.208	.270	0	.182	.198	.142	.235	.187	.122	.216	.145	.289	.382	.306	.370	.524	.476	1	.397	6
D27	0.1	.179	.133	.199	.136	.259	0.008	.145	.267	.187	0.1	.131	-0	0.1	.309	.267	.245	.228	.251	.403	.355	.133	.411	.281	.163	.397	1	5
Note	1	2	4	2	0	5	1	2	7	1	0	4	2	6	9	8	4	7	9	6	9	3	6	3	5	6	5	

Note: The last row and the last column are the number of inter-item correlation ≥ .300 and ≤ .800

Items number 1, 2, 4, 5, 7, 8, 10, 11 and 13 are deleted because they correlate between ≥ .300 and ≤ .800 with less than three items.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.83
	Approx. Chi-Square	917.68
Bartlett's Test of Sphericity	df	55
	Sig.	.00

Communalities

	Initial	Extraction
I just found the list of SKKNIs from this questionnaire	1.000	.44
I just found that there is/are certification of SKKNI in my course/s	1.000	.47
I can guide my students to take certification relevant to my course/s	1.000	.38
I can explain the role of BNSP, LSP and TUK	1.000	.59
I can explain the certification process of SKKNI to students or colleagues	1.000	.46
I can list the institutions who develop SKKNI	1.000	.53
I read the Ministerial Decree of the SKKNI related to my course/s	1.000	.55
I need to encourage my colleague/s to undergo certification of SKKNI	1.000	.41
I need to encourage my students to undergo certification of SKKNI	1.000	.53
Competency based exam is key to the success of certification of SKKNI	1.000	.45
I do not need to encourage my students to undergo certification of SKKNI	1.000	.44
Teachers' attainment in SKKNI certification has no effect on students' technical competencies	1.000	.37
I do not need to encourage my colleague/s to undergo certification of SKKNI	1.000	.56
Reference to SKKNI should be made in developing syllabus	1.000	.39

Extraction Method: Principal Component Analysis.

Communalities after elimination of three items with extraction below .40.

Communalities

	Initial	Extraction
I just found the list of SKKNIs from this questionnaire	1.000	.49
I just found that there is/are certification of SKKNI in my course/s	1.000	.50
I can explain the role of BNSP, LSP and TUK	1.000	.58
I can explain the certification process of SKKNI to students or colleagues	1.000	.46
I can list the institutions who develop SKKNI	1.000	.52
I read the Ministerial Decree of the SKKNI related to my course/s	1.000	.55
I need to encourage my colleague/s to undergo certification of SKKNI	1.000	.41
I need to encourage my students to undergo certification of SKKNI	1.000	.62
Competency based exam is key to the success of certification of SKKNI	1.000	.45
I do not need to encourage my students to undergo certification of SKKNI	1.000	.50
I do not need to encourage my colleague/s to undergo certification of SKKNI	1.000	.54

Extraction Method: Principal Component Analysis.

259

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation[b]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4.00	36.37	36.37	4.00	36.37	36.37	3.46
2	1.61	14.63	50.99	1.61	14.63	50.99	3.15
3	1.17	10.65	61.64				
4	.74	6.74	68.38				
5	.72	6.53	74.92				
6	.59	5.33	80.24				
7	.52	4.75	84.99				
8	.46	4.20	89.19				
9	.44	4.03	93.23				
10	.39	3.56	96.79				
11	.35	3.21	100.00				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

b. Sums of Squared Loadings
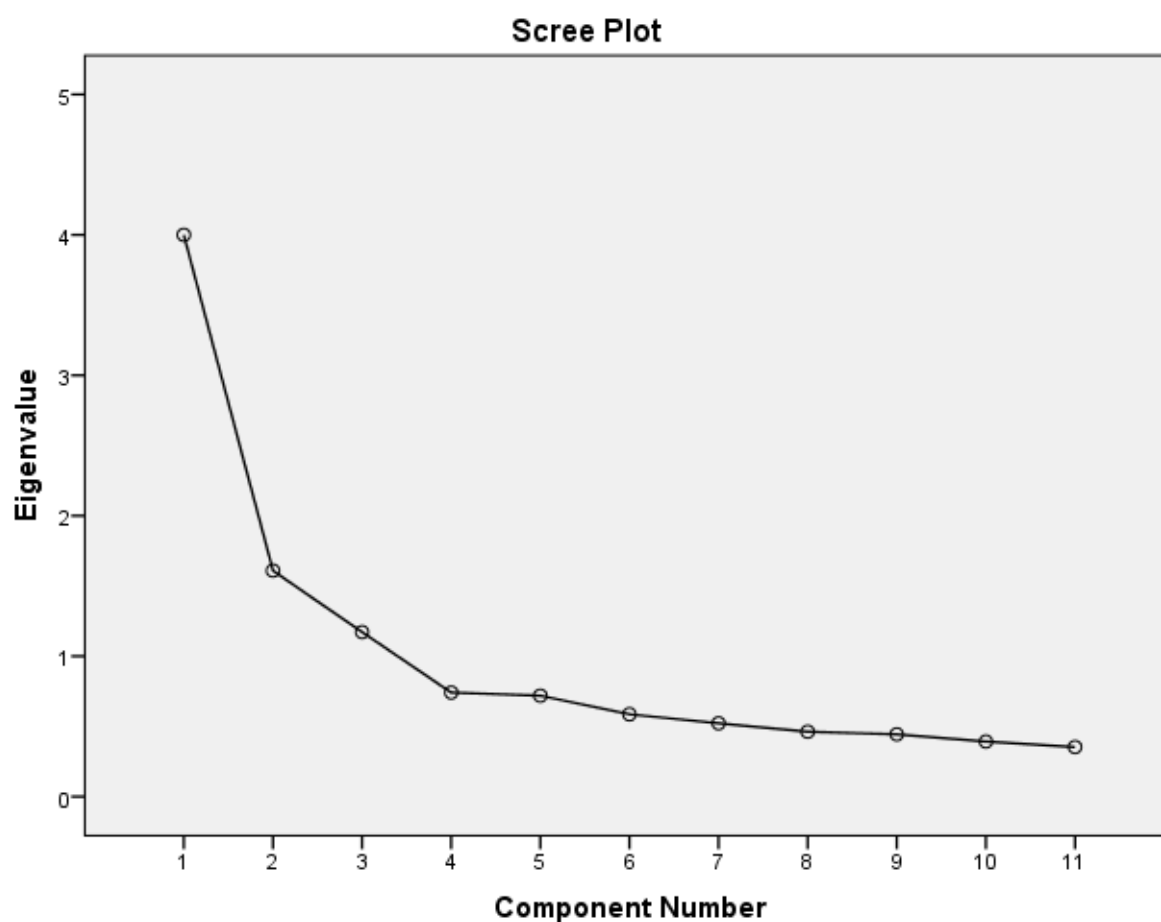
Factor to extract is limited into two factors:

Structure Matrix

	Component	
	1	2
I just found the list of SKKNIs from this questionnaire	.67	
I just found that there is/are certification of SKKNI in my course/s	.69	
I can explain the role of BNSP, LSP and TUK	.75	
I can explain the certification process of SKKNI to students or colleagues	.67	
I can list the institutions who develop SKKNI	.72	
I read the Ministerial Decree of the SKKNI related to my course/s	.74	
I need to encourage my colleague/s to undergo certification of SKKNI		.63
I need to encourage my students to undergo certification of SKKNI		.79
Competency based exam is key to the success of certification of SKKNI		.66
I do not need to encourage my students to undergo certification of SKKNI		.70
I do not need to encourage my colleague/s to undergo certification of SKKNI		.72

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

Factor 1: Teacher comprehension about the policy of SKNNI

Item	Factor Loading
I just found the list of SKKNIs from this questionnaire	.67
I just found that there is/are certification of SKKNI in my course/s	.69
I can explain the role of BNSP, LSP and TUK	.75
I can explain the certification process of SKKNI to students or colleagues	.67
I can list the institutions who develop SKKNI	.72
I read the Ministerial Decree of the SKKNI related to my course/s	.74

Reliability Statistics

Cronbach's Alpha	N of Items
.79	6

Factor 2: Teachers' intensity of support to the policy SKNNI

| Item	Factor Loading
I need to encourage my colleague/s to undergo certification of SKKNI	.63
I need to encourage my students to undergo certification of SKKNI	.79
Competency based exam is key to the success of certification of SKKNI	.66
I do not need to encourage my students to undergo certification of SKKNI	.70
I do not need to encourage my colleague/s to undergo certification of SKKNI	.72

Reliability Statistics

Cronbach's Alpha	N of Items
.75	5

Descriptives

		Statistic	Std. Error
Comprehension	Mean	2.80	.02893
	95% Confidence Interval for Mean — Lower Bound	2.74	
	95% Confidence Interval for Mean — Upper Bound	2.86	
	5% Trimmed Mean	2.80	
	Median	2.83	
	Variance	.23	
	Std. Deviation	.48	
	Minimum	1.33	
	Maximum	4.00	
	Range	2.67	
	Interquartile Range	.50	
	Skewness	-.02	.15
	Kurtosis	.43	.29
Intensity of support	Mean	3.11	.02332
	95% Confidence Interval for Mean — Lower Bound	3.07	
	95% Confidence Interval for Mean — Upper Bound	3.16	
	5% Trimmed Mean	3.10	
	Median	3.00	
	Variance	.15	
	Std. Deviation	.39	
	Minimum	2.00	
	Maximum	4.00	
	Range	2.00	
	Interquartile Range	.20	
	Skewness	.63	.15
	Kurtosis	.34	.29

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Comprehension	.139	279	.000	.969	279	.000
Intensity of support	.260	279	.000	.902	279	.000

a. Lilliefors Significance Correction

Comprehension

Mean = 2.80
Std. Dev. = .483
N = 279

Degree of support

Mean = 3.11
Std. Dev. = .39
N = 279
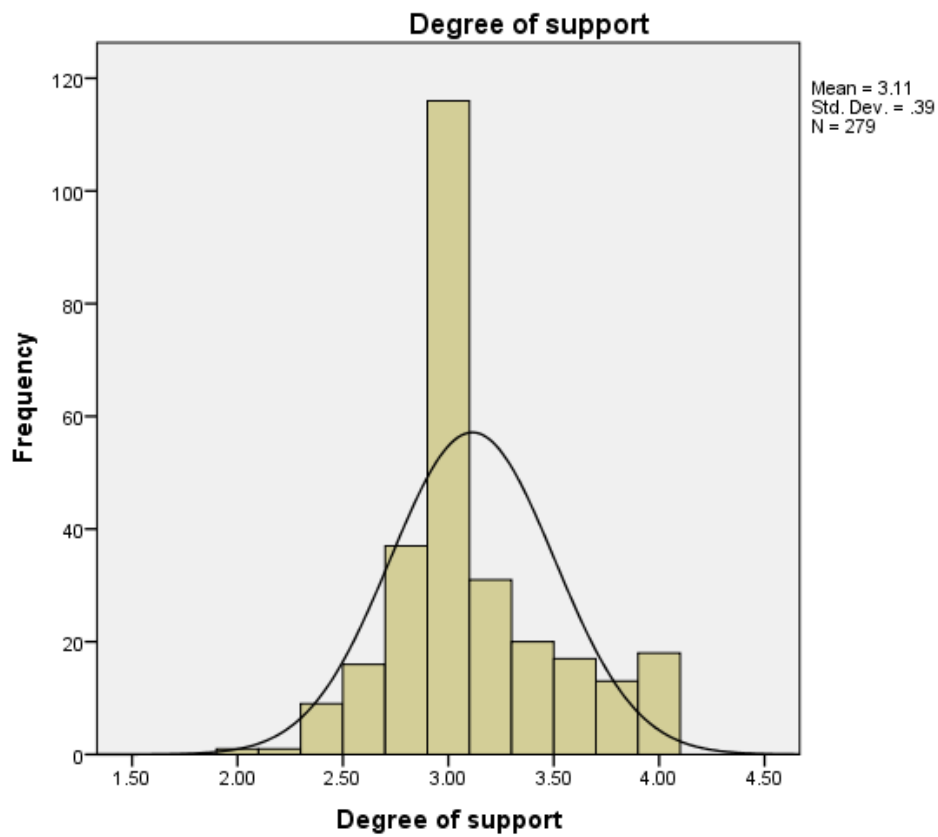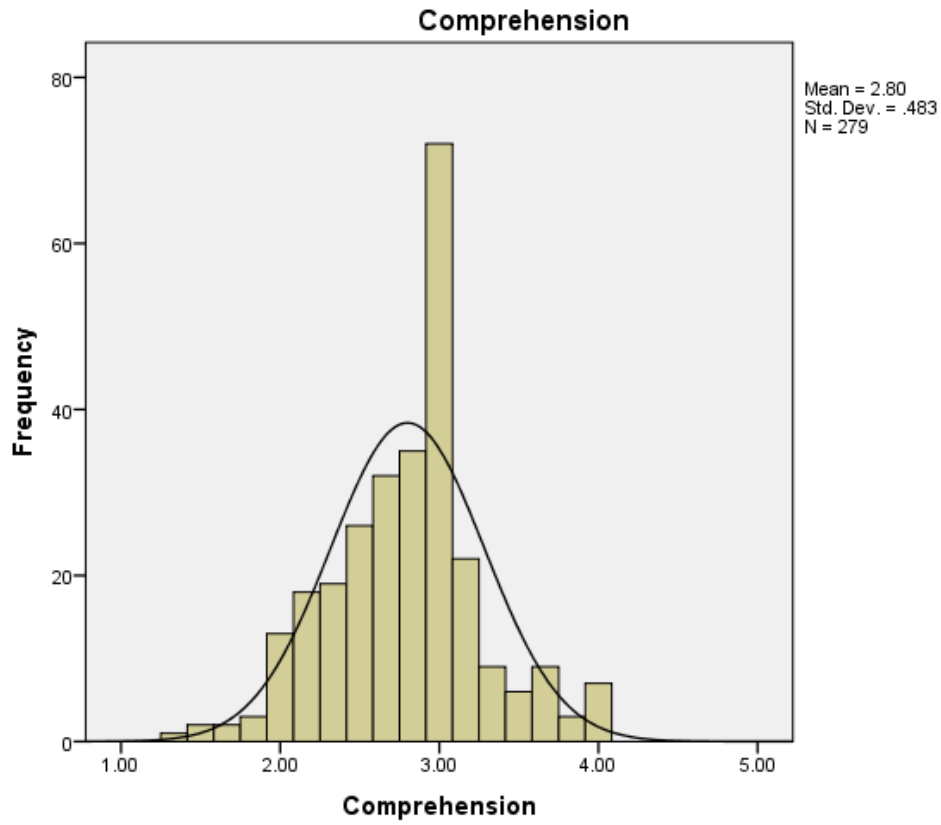
Teachers' Performance

1. Correlation Matrix

	Perf1	Perf2	Perf3	Perf4	Perf5	Perf6	Perf7	Perf8	Perf9	Perf10	Perf11	Perf12	Perf13	Perf14	Perf15
Perf1	1	0.82	0.58	0.64	0.39	0.36	0.59	0.40	0.48	0.70	0.31	0.39	0.69	0.57	0.23
Perf2	0.82	1	0.67	0.71	0.50	0.46	0.67	0.46	0.55	0.78	0.33	0.39	0.73	0.55	0.25
Perf3	0.58	0.67	1	0.59	0.50	0.47	0.59	0.49	0.50	0.63	0.28	0.37	0.57	0.55	0.33
Perf4	0.64	0.71	0.59	1	0.47	0.46	0.62	0.42	0.44	0.66	0.40	0.46	0.70	0.57	0.34
Perf5	0.39	0.50	0.50	0.47	1	0.69	0.55	0.54	0.60	0.55	0.53	0.53	0.57	0.61	0.48
Perf6	0.36	0.46	0.47	0.46	0.69	1	0.54	0.58	0.54	0.52	0.44	0.44	0.49	0.56	0.44
Perf7	0.59	0.67	0.59	0.62	0.55	0.54	1	0.52	0.59	0.71	0.31	0.40	0.65	0.55	0.38
Perf8	0.40	0.46	0.49	0.42	0.54	0.58	0.52	1	0.76	0.60	0.45	0.39	0.47	0.57	0.53
Perf9	0.48	0.55	0.50	0.44	0.60	0.54	0.59	0.76	1	0.63	0.49	0.50	0.52	0.62	0.44
Perf10	0.70	0.78	0.63	0.66	0.55	0.52	0.71	0.60	0.63	1	0.45	0.50	0.80	0.72	0.44
Perf11	0.31	0.33	0.28	0.40	0.53	0.44	0.31	0.45	0.49	0.45	1	0.61	0.49	0.58	0.48
Perf12	0.39	0.39	0.37	0.46	0.53	0.44	0.40	0.39	0.50	0.50	0.61	1	0.57	0.60	0.47
Perf13	0.69	0.73	0.57	0.70	0.57	0.49	0.65	0.47	0.52	0.80	0.49	0.57	1	0.68	0.46
Perf14	0.57	0.55	0.55	0.57	0.61	0.56	0.55	0.57	0.62	0.72	0.58	0.60	0.68	1	0.59
Perf15	0.23	0.25	0.33	0.34	0.48	0.44	0.38	0.53	0.44	0.44	0.48	0.47	0.46	0.59	1

Item number 1, 2 and 15 are removed because the inter items correlation < .03 or > .08

2. Normality test

Descriptives

		Statistic	Std. Error
Mean		2.58	.05
95% Confidence Interval for Mean	Lower Bound	2.49	
	Upper Bound	2.66	
5% Trimmed Mean		2.60	
Median		2.58	
Variance		.35	
Std. Deviation		.60	
Minimum		.92	
Maximum		3.67	
Range		2.75	
Interquartile Range		.85	
Skewness		-.44	.18
Kurtosis		.28	.35

Tests of Normality

Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Statistic	df	Sig.	Statistic	df	Sig.
.07	190	.02	.97	190	.00

a. Lilliefors Significance Correction

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.93	.93	12

3. Factor analysis
   a. KMO

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.92
Bartlett's Test of Sphericity	Approx. Chi-Square	1559.04
	df	66
	Sig.	.00

   b. Total variance explained

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**7.00**	**58.32**	**58.32**	7.00	58.32	58.32	4.19	34.89	34.89
2	**1.05**	**8.72**	**67.05**	1.05	8.72	67.05	3.86	32.16	67.05
3	.89	7.39	74.43						
4	.60	5.03	79.46						
5	.44	3.70	83.16						
6	.40	3.36	86.52						
7	.37	3.12	89.64						
8	.34	2.80	92.44						
9	.29	2.38	94.82						
10	.26	2.20	97.02						
11	.20	1.64	98.65						
12	.16	1.35	100.00						

Extraction Method: Principal Component Analysis.

Scree Plot
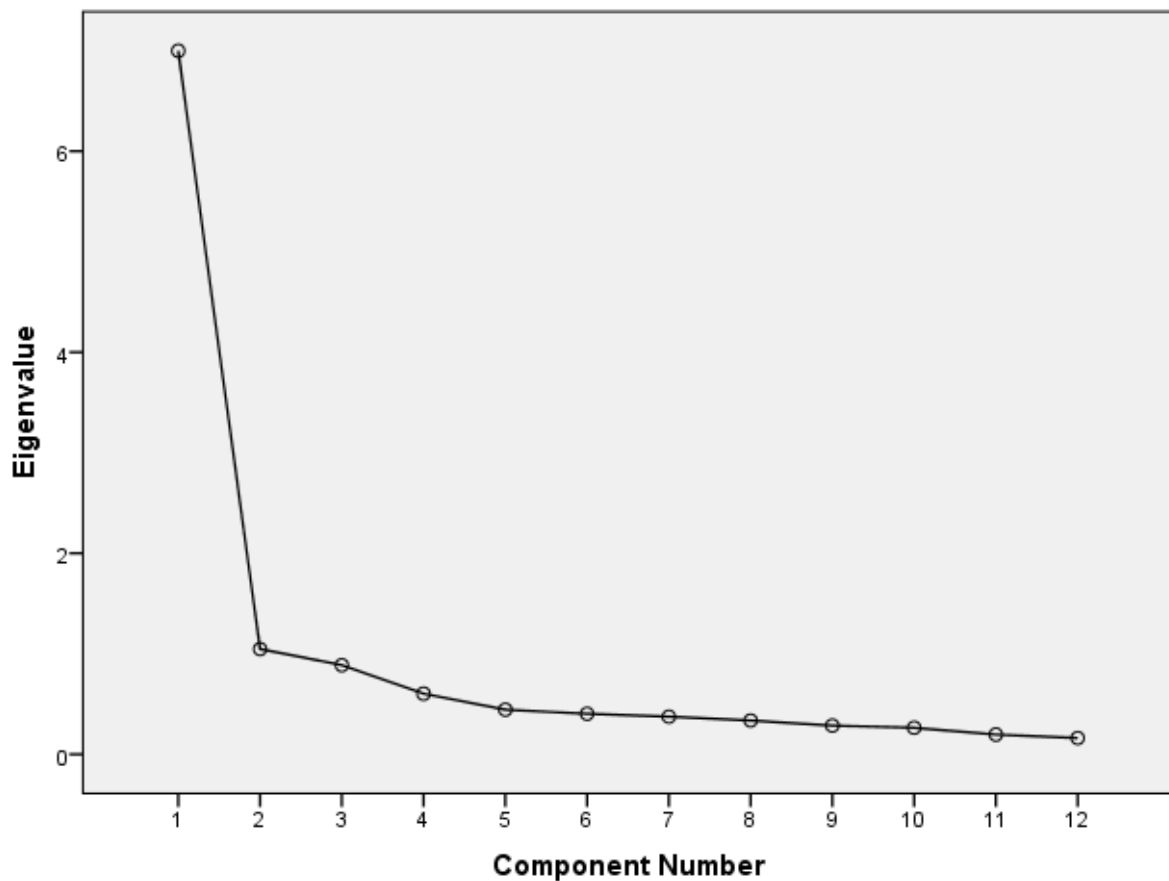
Communalities

	Initial	Extraction
In developing syllabuses, I refer to SKKNI as learning resource	1.000	.662
I refer to SKKNI aspects to develop exam material	1.000	.671
I discuss with my colleagues how to increase teachers' participation in certification	1.000	.653
I discuss with my colleagues why some teachers may be reluctant to SKKNI certification	1.000	.559
I modify the existing teaching method to relate to competencies in SKKNI	1.000	.727
I encourage my colleagues to undergo certification of SKKNI	1.000	.569
I encourage my students to undergo certification	1.000	.647
I link my teaching methods to the competencies in SKKNI	1.000	.791
I direct my students to the certification office/s	1.000	.721
I direct my students to the right person to be contacted for certification	1.000	.612
I use SKKNI criteria to develop exam material	1.000	.725
I explain to my students the certification procedures	1.000	.707

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component	
	1	2
In developing syllabuses, I refer to SKKNI as learning resource	.79	
I refer to SKKNI aspects to develop exam material	.79	
I Discuss with my colleagues how to increase teachers' participation in certification		.69
I Discuss with my colleagues why some teachers may be reluctant to SKKNI certification		.61
I modify the existing teaching method to relate to competencies in SKKNI	.81	
I encourage my colleagues to undergo certification of SKKNI		.60
I encourage my students to undergo certification		.65
I link my teaching methods to the competencies in SKKNI	.79	
I direct my students to the certification office/s		.84
I direct my students to the right person to be contacted for certification		.74
I use SKKNI criteria to develop exam material	.74	
I explain to my students the certification procedures	.54	.64

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.
  c. New scales/factors

	Component	
	1	2
In developing syllabuses, I refer to SKKNI as learning resource	.79	
I refer to SKKNI aspects to develop exam material	.79	
I modify the existing teaching method to relate to competencies in SKKNI	.81	
I link my teaching methods to the competencies in SKKNI	.79	
I use SKKNI criteria to develop exam material	.74	
I Discuss with my colleagues how to increase teachers' participation in certification		.69
I Discuss with my colleagues why some teachers may be reluctant to SKKNI certification		.61
I encourage my colleagues to undergo certification of SKKNI		.60
I encourage my students to undergo certification		.65
I direct my students to the certification office/s		.84
I direct my students to the right person to be contacted for certification		.74
I explain to my students the certification procedures		.64
Variance explained (%)	**58.32%**	**8.72%**

New name of the Factor1:

Teachers' performance in implementing the curricular aspect of SKKNI

Items	Loading Factor
In developing syllabuses, I refer to SKKNI as learning resource	.79
I refer to SKKNI aspects to develop exam material	.79
I modify the existing teaching method to relate to competencies in SKKNI	.81
I link my teaching methods to the competencies in SKKNI	.79
I use SKKNI criteria to develop exam material	.74

	N	Mean	SD
In developing syllabuses, I refer to SKKNI as learning resource	190	2.73	.99
I refer to SKKNI aspects to develop exam material	190	2.99	.88
I modify the existing teaching method to relate to competencies in SKKNI	190	2.88	.78
I link my teaching methods to the competencies in SKKNI	190	3.11	.77
I use SKKNI criteria to develop exam material	190	2.99	.84

Reliability of the questionnaire

Case Processing Summary

		N	%
Cases	Valid	190	100.0
	Excluded[a]	0	.0
	Total	190	100.0

a. Listwise deletion based on all variables in the

procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.898	5

New name of the Factor 2:

Teachers' performance in implementing the certification aspect of SKKNI

Items	Loading Factor
I Discuss with my colleagues how to increase teachers' participation in certification	.69
I Discuss with my colleagues why some teachers may be reluctant to SKKNI certification	.61
I encourage my colleagues to undergo certification of SKKNI	.60
I encourage my students to undergo certification	.65
I direct my students to the certification office/s	.84

I direct my students to the right person to be contacted for certification	.74
I explain to my students the certification procedures	.64

	N	Mean	SD
I discuss with my colleagues how to increase teachers' participation in certification	190	2.74	.84
I discuss with my colleagues why some teachers may be reluctant to SKKNI certification	190	2.46	.79
I encourage my colleagues to undergo certification of SKKNI	190	2.69	.89
I encourage my students to undergo certification	190	2.88	.84
I direct my students to the certification office/s	190	2.78	.95
I direct my students to the right person to be contacted for certification	190	2.71	.86
I explain to my students the certification procedures	190	2.72	.89

Reliability of the questionnaire

Case Processing Summary

		N	%
Cases	Valid	190	100.0
	Excluded[a]	0	.0
	Total	190	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.896	7

Appendix 9: Regression analysis

Regression analysis between two factors of teachers' disposition and two factors of teachers' performance

The standard multiple regression analysis is conducted to examine the influences of the independent variables on the dependent variables. The dependent variables are teachers' performance in implementing the curricular aspects of SKKNI and teachers' performance in implementing the certification aspects of SKKNI and the two independent variables are teachers' comprehension about the policy of SKKNI and the teachers' intensity of support to the policy of SKKNI. The result of correlation analysis and regression analysis by SPSS are presented here.

Correlations

		Comprehension	Intensity of support	Curriculum	Certification
Comprehension	Pearson Correlation	1	.53**	.44**	.46**
	Sig. (2-tailed)		.00	.00	.00
	N	190	190	190	190
Intensity of support	Pearson Correlation	.53**	1	.36**	.47**
	Sig. (2-tailed)	.00		.00	.00
	N	190	190	190	190
Curricular	Pearson Correlation	.44**	.36**	1	.75**
	Sig. (2-tailed)	.00	.00		.00
	N	190	190	190	190
Certification	Pearson Correlation	.46**	.47**	.75**	1
	Sig. (2-tailed)	.00	.00	.00	
	N	190	190	190	190

**. Correlation is significant at the 0.01 level (2-tailed).

Standard Linear Regression

1. Teachers' performance in implementing the certification aspects of SKKNI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.215	.356		-.604	.547
	Comprehension	.400	.100	.292	3.987	.000
	Intensity of support	.572	.132	.318	4.340	.000

a. Dependent Variable: CertificationImplementation

Y= .400 Comprehension + .572 Direction - .215

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.534[a]	.285	.277	.57746

a. Predictors: (Constant), Intensity of support, Comprehension

b. Dependent Variable: CertificationImplementation

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.865	2	12.432	37.283	.000[b]
	Residual	62.358	187	.333		
	Total	87.223	189			

a. Dependent Variable: CertificationImplementation

b. Predictors: (Constant), Intensity of support, Comprehension

Normal P-P Plot of Regression Standardized Residual
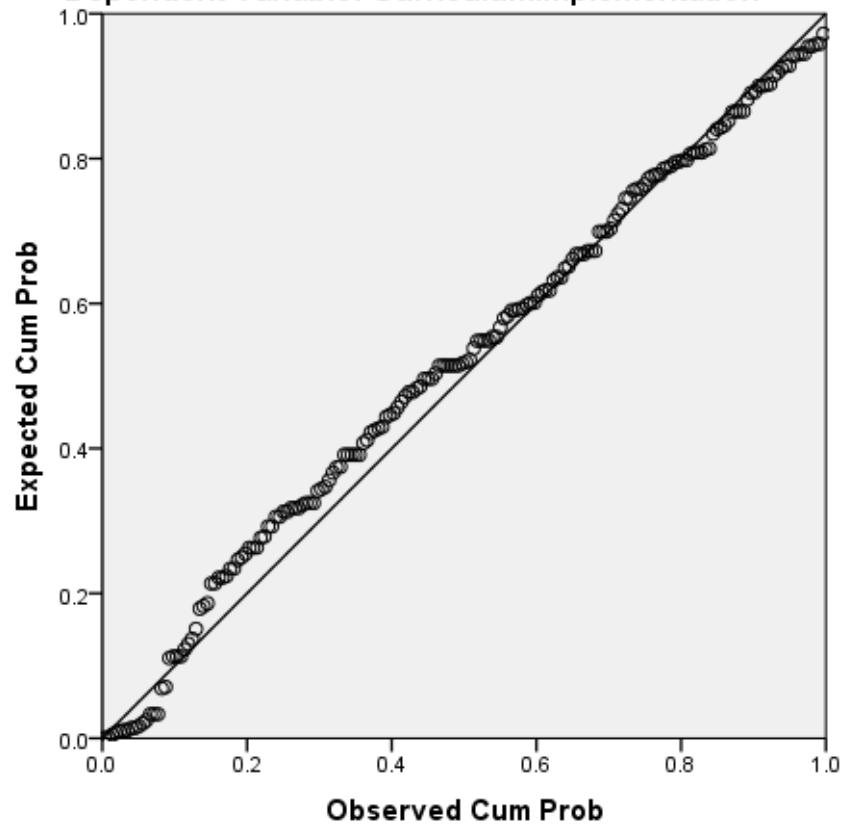
Dependent Variable: CertificationImplementation

Histogram

Dependent Variable: CertificationImplementation

Mean = -1.06E-16
Std. Dev. = 0.995
N = 190
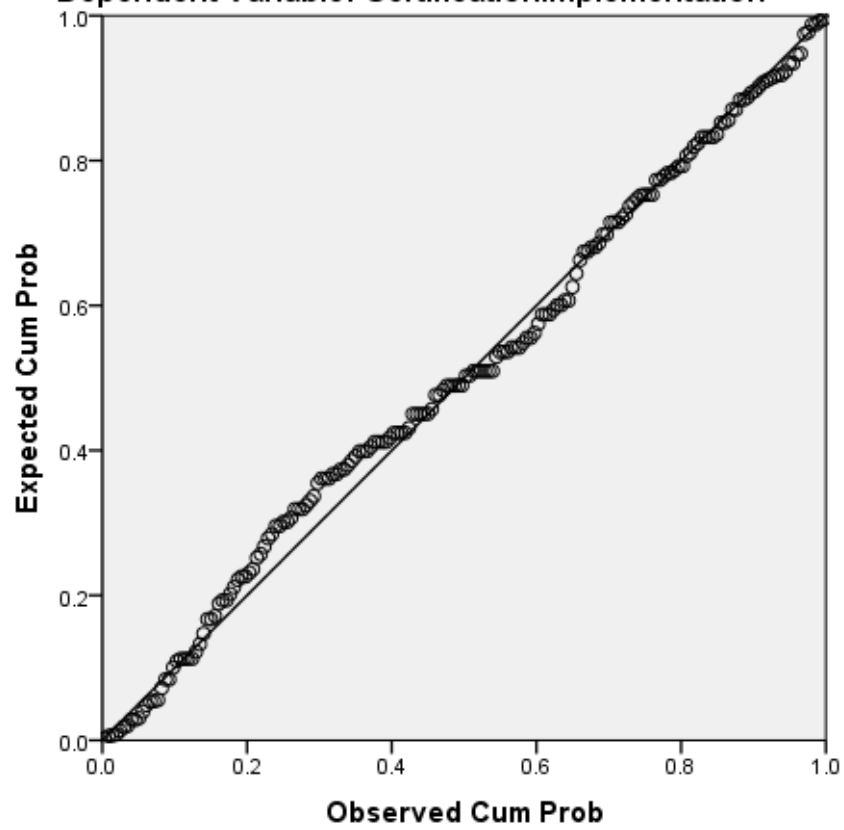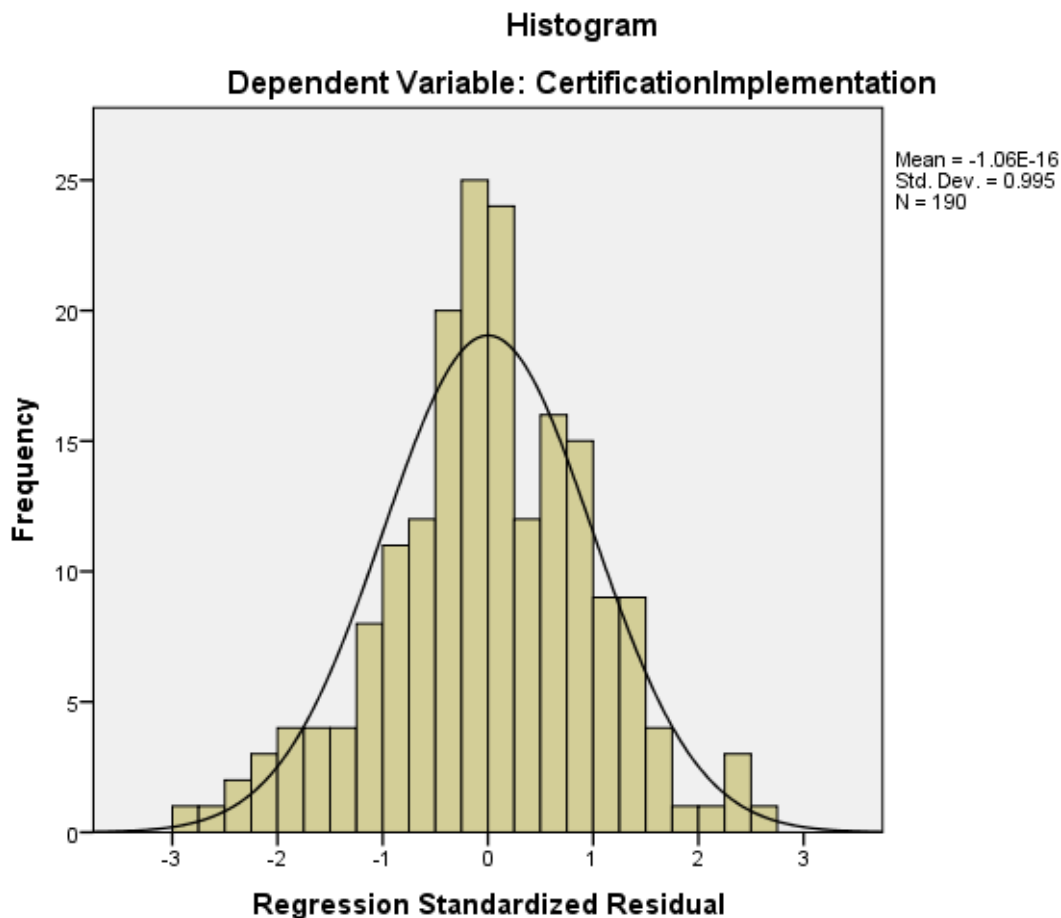
2. Teachers' performance in implementing the curricular aspects of SKKNI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.49	.40		1.23	.220
	Comprehension	.51	.11	.35	4.60	.000
	Intensity of support	.32	.15	.17	2.17	.031

a. Dependent Variable: CurriculumImplementation

Y= .487 + .512 Comprehension + .318 Intensity of support

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: CurriculumImplementation

Histogram

Dependent Variable: CurriculumImplementation

Mean = -5.49E-15
Std. Dev. = 0.995
N = 190
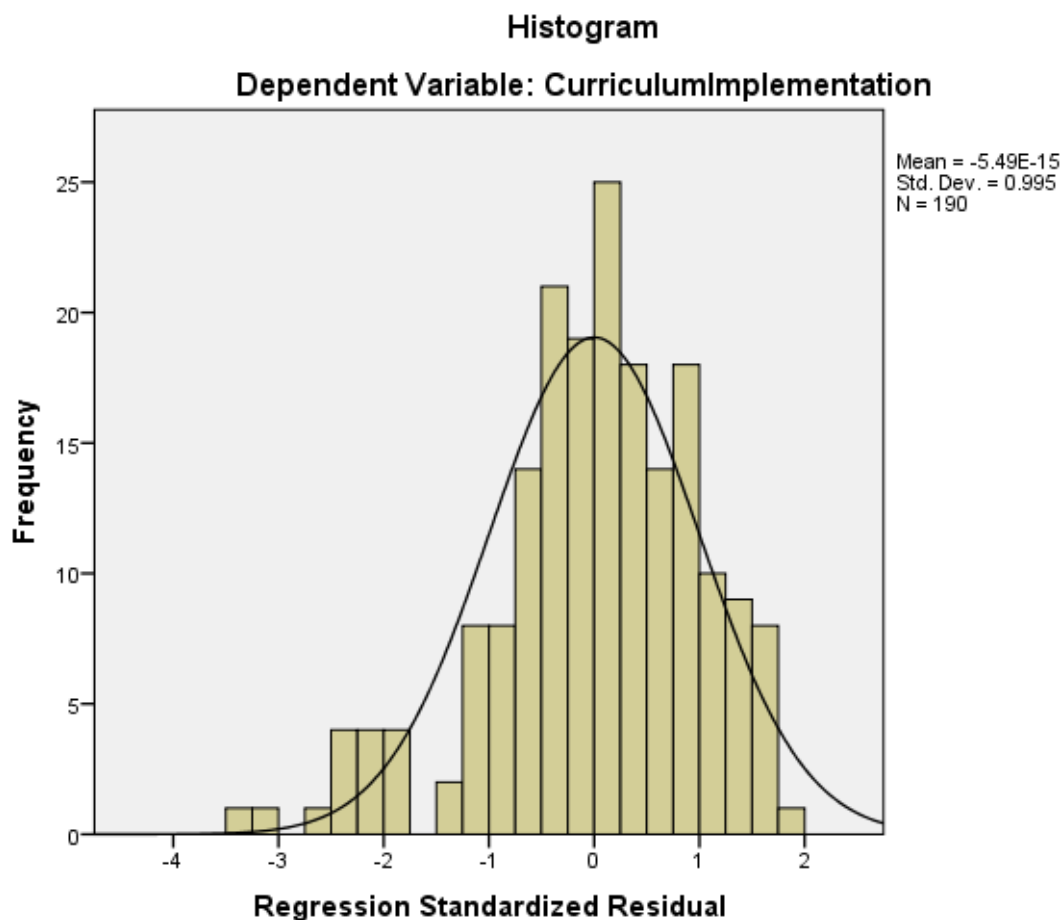
Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.464[a]	.215	.207	.64136

a. Predictors: (Constant), Intensity of support, Comprehension

b. Dependent Variable: CurriculumImplementation

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.060	2	10.530	25.599	.000[b]
	Residual	76.920	187	.411		
	Total	97.980	189			

a. Dependent Variable: CurriculumImplementation

b. Predictors: (Constant), Intensity of support, Comprehension
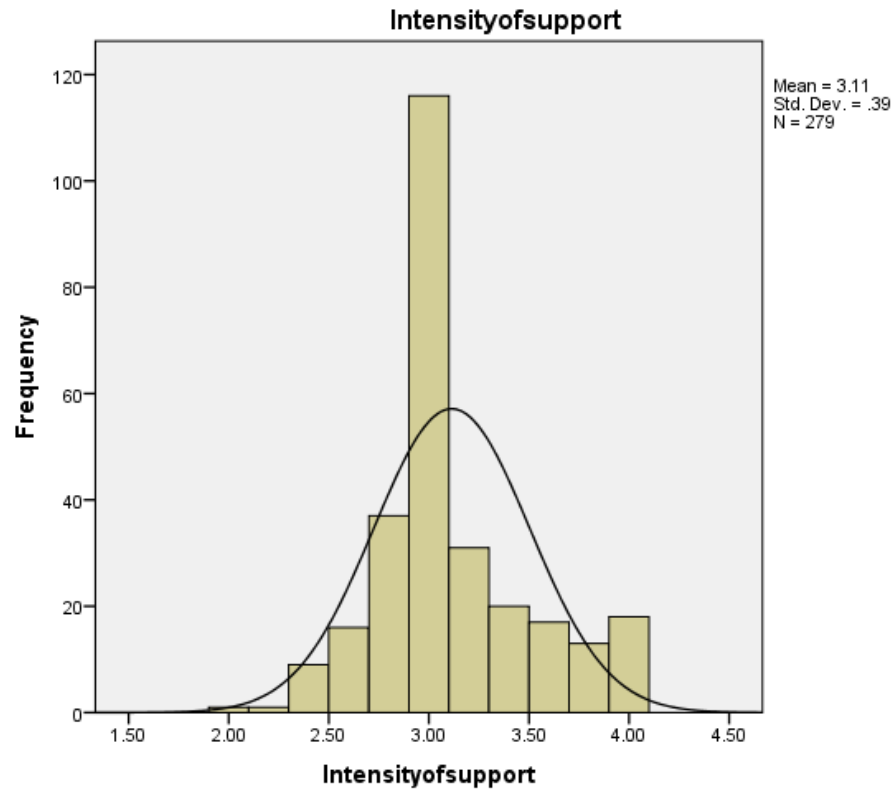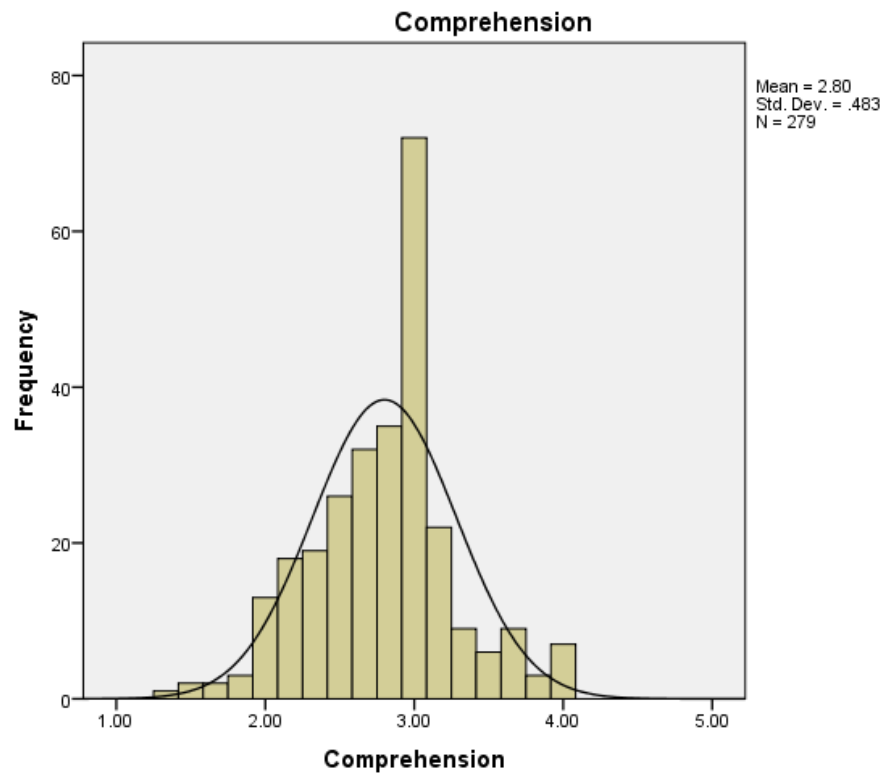
Appendix 10: Skewness and Kurtosis

Variable 1: Teachers' disposition of SKKNI

Factor 1: Teachers' comprehension of the policy

Factor 2: Teachers' intensity of support

Descriptives

			Statistic	Std. Error
Comprehension	Mean		2.7999	.02893
	95% Confidence Interval for Mean	Lower Bound	2.7429	
		Upper Bound	2.8568	
	5% Trimmed Mean		2.7962	
	Median		2.8333	
	Variance		.233	
	Std. Deviation		.48321	
	Minimum		1.33	
	Maximum		4.00	
	Range		2.67	
	Interquartile Range		.50	
	Skewness		-.024	.146
	Kurtosis		.426	.291
Intensityofsupport	Mean		3.1140	.02332
	95% Confidence Interval for Mean	Lower Bound	3.0681	
		Upper Bound	3.1599	
	5% Trimmed Mean		3.1045	
	Median		3.0000	
	Variance		.152	
	Std. Deviation		.38950	
	Minimum		2.00	
	Maximum		4.00	
	Range		2.00	
	Interquartile Range		.20	
	Skewness		.628	.146
	Kurtosis		.342	.291

Histogram and normal probability plot

Comprehension

Mean = 2.80
Std. Dev. = .483
N = 279

Intensityofsupport

Mean = 3.11
Std. Dev. = .39
N = 279

Reliability ALPHA Factor1: Teachers' comprehension

Case Processing Summary

		N	%
Cases	Valid	279	100.0
	Excluded[a]	0	.0
	Total	279	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.791	6

Reliability ALPHA Factor2: Teachers' intensity of support

Case Processing Summary

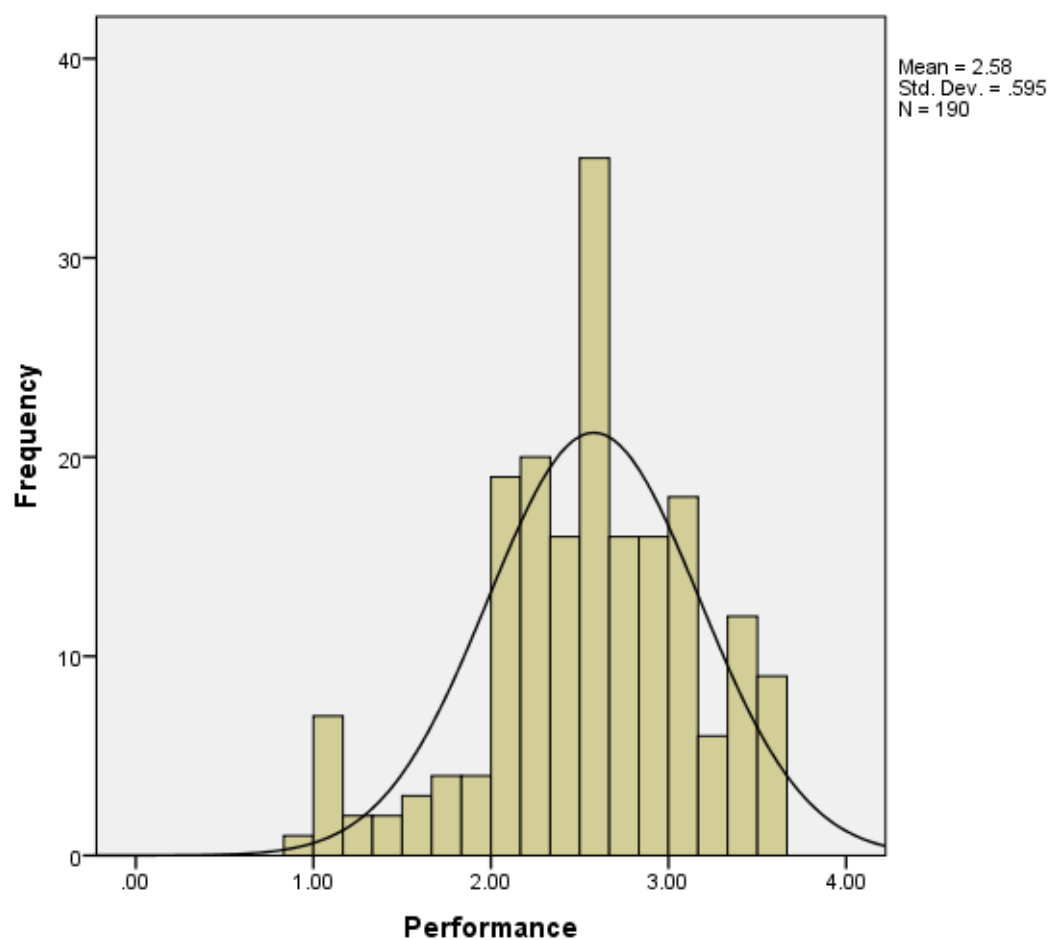|		N	%
Cases	Valid	279	100.0
	Excluded[a]	0	.0
	Total	279	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.747	5

Variable 2: Teachers' Performance

Descriptives

		Statistic	Std. Error
Mean		2.58	.05
95% Confidence Interval for Mean	Lower Bound	2.49	
	Upper Bound	2.66	
5% Trimmed Mean		2.60	
Median		2.58	
Variance		.35	
Std. Deviation		.60	
Minimum		.92	
Maximum		3.67	
Range		2.75	
Interquartile Range		.85	
Skewness		-.44	.18
Kurtosis		.28	.35


Mean = 2.58
Std. Dev. = .595
N = 190

Skewness and Kurtosis Factor 1 and Factor 2

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Curricular aspect	190	1.00	4.00	2.9411	.72001	-.707	.176	.458	.351
Certification aspect	190	.86	4.00	2.7113	.67934	-.285	.176	.059	.351
Valid N (listwise)	190								

CertificationImplementation

Mean = 2.71
Std. Dev. = .679
N = 190
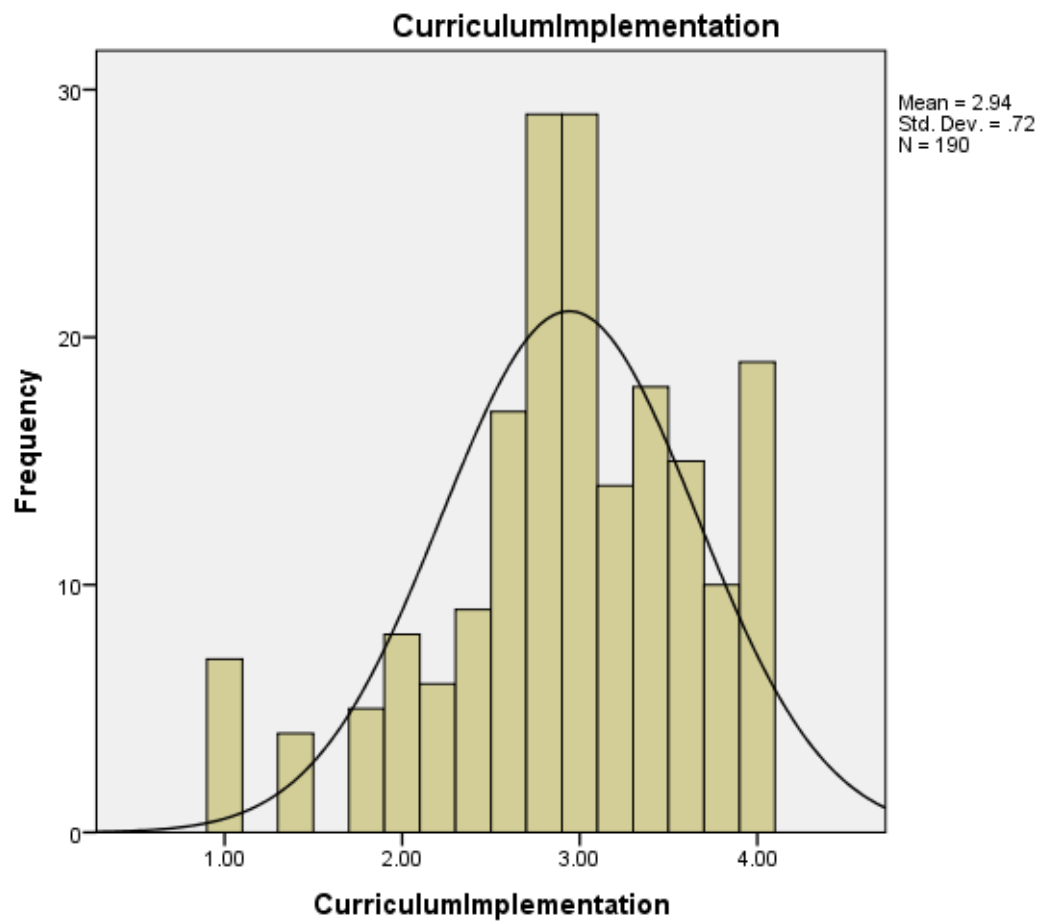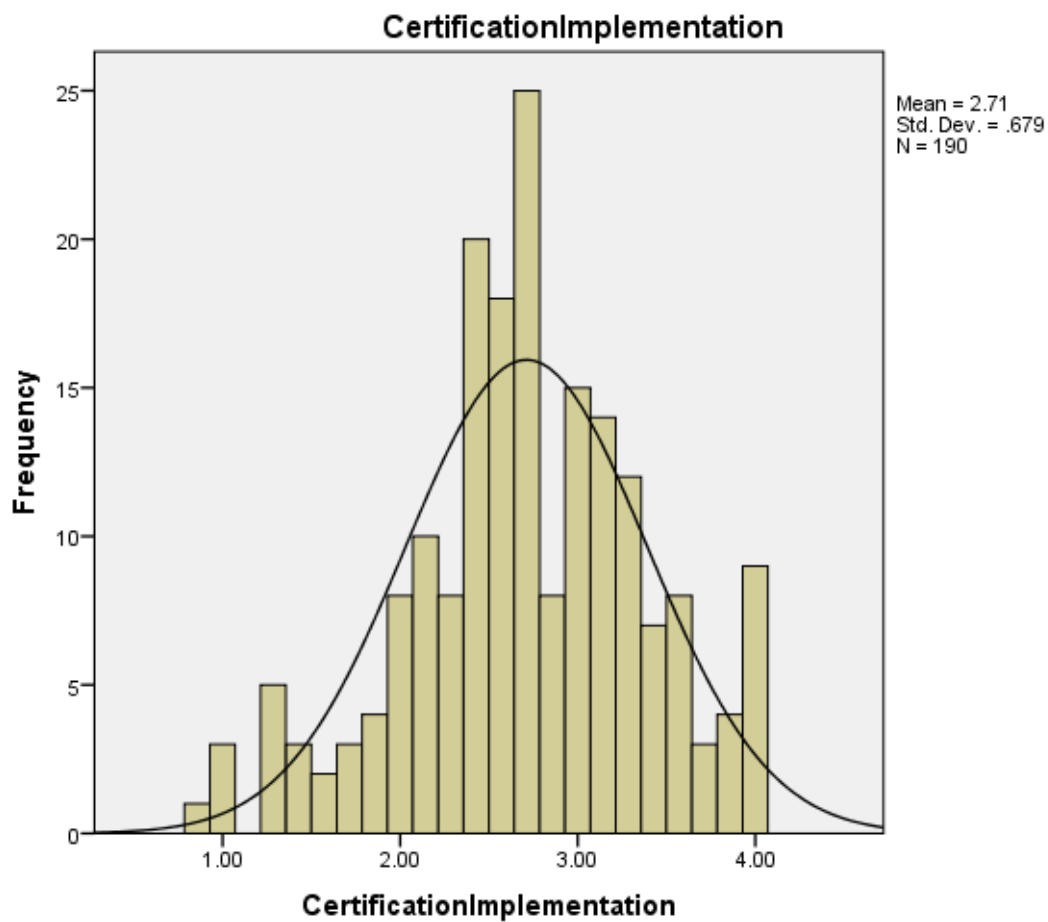
Reliability Alpha Factor 1: Performance in curricular aspects

Case Processing Summary

		N	%
Cases	Valid	190	100.0
	Excluded[a]	0	.0
	Total	190	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.898	5

Reliability ALPHA Factor 2: Performance in certification aspects

Case Processing Summary

		N	%
Cases	Valid	190	100.0
	Excluded[a]	0	.0
	Total	190	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.896	7