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Place-Based Education: A Program Evaluation

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Place-Based Education: A Program Evaluation

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Abstract

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The researcher designed and conducted a program evaluation on the place-based
education component at Summit Charter School. Specifically, the researcher wanted to
know how the place-based education program at Summit aligned with national standards
of a successful place-based education program, as outlined by the Place-based Education
Evaluation Collaborative. Observations, document analysis, and survey data were
collected by the researcher and analyzed using Horsch's (2008) Logic Model. This
program evaluation revealed that Summit Charter School is emerging as a place-based
education institute. Recommendations include place-based education leadership training
for Summit's administration, ongoing staff development in the area of place-based
education, and intentional focus on the national standards of place-based education that
were not met or found to be emerging by this evaluation. Strengthening components of
the place-based education program would help Summit achieve the school's desire for
more recognition as a place-based education institute.

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Chapter 1: Introduction

Place-based education (PBE) is a relatively new term, though the philosophy describes an experiential approach advocated by progressives since Dewey (1938). PBE promises the freedom to explore and learn from the natural world in a way that enriches the human mind (Gruenewald & Smith, 2008). By engaging students in learning based in their own communities, using the natural surroundings for hands-on learning, students gain a connection and appreciation for the natural and economic context in which they live (Sobel, 2004). PBE schools seek to balance the divide between humans and nonhumans living in a shared-area, "providing a way to foster the sets of understandings and patterns of behavior essential to create a society that is both socially just and ecologically sustainable" (Smith & Sobel, 2010, p. 22).

PBE has been used by schools looking to combat the problem of disinterested and disconnected students (Sobel, 2004). According to Sobel (2004), "place-based education is not just tying curriculum to a certain place, but is "a means of inspiring stewardship and authentic renewal and revitalization of civic life" (Foreward). In an era of high-speed internet, instant answers, and rapidly evolving technology, it is imperative that education seek to reconnect students to their "place," their community, in hopes that they will one day turn into productive, stewards of that community (PEEC Works, 2003; Sobel, 2004).

In the mountains of the southeastern part of the United States, Summit Charter School seeks to combine state standard curricula with outdoor learning, rich community partnerships, and the use of surrounding woods and streams to provide learning that is engaging, student centered, and hands on. It is a unique setting that allows for free public

education to take place out of the classroom, in the woods surrounding campus as well as in the mountain community that surrounds this school. Summit Charter School is found in a small mountain community that draws cultural influences from the Cherokee Indians, the Scottish immigration, and colonial American movement.

Summit Charter School is an economically diverse school. Surrounded by country clubs hidden within the mountain slopes, the school hosts a mix of the economically advantaged and the economically disadvantaged as well as the children of local business owners that are supported by the country club members. Opportunity for PBE is as simple as opening the classroom door and stepping into the woods. One might follow the mock Appalachian Trail that winds through the woods surrounding Summit's campus. Others might take quiet refuge in the campus's many native garden areas. Still others might gather as a whole in the school's outdoor amphitheater. The opportunity for PBE certainly exists at Summit Charter School.

It is this opportunity, coupled with the claims that students at Summit are thriving on state-mandated tests while still maintaining a connected and engaged interest in school, which leads to the purpose of this study. How does the PBE program at Summit Charter School influence the results of their education program as a whole?

Statement of the Problem

Per North Carolina charter legislation, Summit is accountable to the state with reported standardized test scores. According to those results, Summit Charter School is appropriately educating its students within the confines of guidelines provided by its governing state. While Summit seems to exemplify a standard of excellence in education, the question still remains, what impact does PBE have on the teaching and learning at Summit Charter School? Is there a connection between the PBE program at

Summit and the success of the school? The school has been operating as a PBE school since 2007, but an evaluation of this program and its impact on the school, its mission, and its drive toward excellence in education in the state of its origin has never been measured.

Excellence could easily be achieved if one is setting one's own standard of excellence. For Summit Charter School to consider itself to be a PBE school where academic excellence strives, a comprehensive look into the PBE program must be conducted, analyzed, and shared.

Dewey's (1938) experiential education theory provides the theoretical foundation to PBE. In order for students to reach maturation and the fruition of the goal of education which is to be productive citizens, foundations must be laid in educational experiences that can later be connected to as an adult (Dewey, 1938). PBE roots itself in providing educational experiences for a child that will connect that child to their community and their surrounding environment as a productive steward of both (Sobel, 2004).

At Summit Charter School, PBE has been incorporated into the curriculum since 2007. Summit is thriving as a tuition-free charter school with waiting lists for seven of the nine grades. While attitudes towards PBE tend to be favorable in this unique community, accountability and demand for excellence require a comprehensive examination on how PBE connects to Summit Charter School.

Purpose and Research Question

PBE seeks to change the climate and environment in which children are taught. If other schools are to look at Summit Charter School as an example of PBE, Summit must first understand the role and impact PBE has on its teaching and learning.

The specific question driving this program evaluation was, "How well does the

PBE program at Summit Charter School align and meet the national standards as set forth by the Place-Based Education Evaluation Collaborative (PEEC) and to what extend does this impact Summit's overall education program?"

This program evaluation was used to appraise the prevailing research question: To what extent does PBE impact the teaching and learning at Summit Charter School?

To understand what part PBE has in the overall education program at Summit Charter School, a complete understanding of the PBE program as it relates to national standards is necessary. Once benchmark data establish to what extend Summit Charter School aligns with national standards of PBE programs, a deeper look into how that alignment effects the overall education program can be conducted.

This mixed-methods study addressed PBE at Summit Charter School. According to Creswell (2014), "A convergent mixed methods design will be used in this study. It is a type of design in which qualitative and quantitative data are collected in parallel, analyzed separately, and then merged" (p. 133). In this approach, both qualitative and quantitative data are collected and related to explain or interpret the research problem (Creswell, 2014).

In this study, the Horsch (2008) Logic Model was applied to organize data that specifically looked at inputs into the PBE program at Summit as they relate to educational outcomes. Qualitative analysis was used to decode documents from board meetings, survey data, and interview data to assess the overall connections to the national standards of PBE. The interviews, observations, and surveys gathered explored PBE's influence on teaching and learning at Summit Charter School.

The purpose for collecting quantitative and qualitative data is to understand the overlapping reasons behind PBE's impact in the teaching and learning at Summit Charter

School (Creswell, 2014). A comprehensive look at the national standards of PBE in connection with evidence of those standards in place at Summit Charter School allowed for baseline data on Summit's PBE program compared to successful PBE programs across the nation.

Using qualitative and quantitative data allowed the researcher to answer the WHAT and WHY and HOW of PBE and how it relates to the success at Summit Charter School.

Statement of Significance

Summit Charter School operates as a tuition-free public school that must adhere to rigorous state standards to obtain state funds. In a time of turmoil in public education in America, Summit stands out as a desired school for stakeholders to send their children. To operate as a PBE school under the confines of state curricula is unique. Understanding the extent to which PBE plays in Summit's overall education program allows for generalizations that could be applied to other schools with regard to PBE.

Theoretical Foundation for this Study

Dewey's (1938) experiential learning theory states humans learn by doing, or engaging in action activities. Many theorists have expanded upon Dewey's ideas regarding experiential education throughout the years; however, it is Dewey's theory of experiential education that is the foundation for the ideology behind PBE. Realizing that learning by doing is a critical component to PBE requires acknowledgement that roots its beginnings back to Dewey's original theory about experiential learning.

What creates learned experiences? How does an adult connect to learning that he/she experienced as a child? Experiential education theory describes adult learning experiences as they connect to childhood learning experiences. In other words, it is the

experience of the past that guides our learning in the future (Dewey, 1938). How people learn is just as important a concept as what people learn. Providing experiences as part of childhood education that connect the learning to their place, their community, and their environment helps to move educational concepts from abstract understanding in childhood to concrete understanding in adulthood (Dewey, 1938).

PBE's foundation rests on the assumption that by connecting students to their environment as children, they will grow up to be stewards of the environment as adults (Sobel, 2004). PBE's foundation rests on the assumption that by connecting students to their communities as children, they will grow up to be productive, invested members of society as adults (Sobel, 2004). The very essence of Dewey's (1938) theory on experiential education is learning by doing, creating future learning with present experiences. PBE strives to do just that.

Deficiencies in Evidence

The evaluation of a PBE program is not a new practice. PEEC has set forth standards in evaluation of PBE programs along with guidelines of what makes a successful program. In the review of literature and research conducted prior to this specific evaluation, there is little to delineate between state-funded programs and private PBE programs. While the objectives of PBE programs are the same across the board, the resources and timeframe in educational approaches vary greatly between the private school sector and the publicly funded institutions.

To date, the program evaluations of PBE programs that were reviewed by PEEC were partial programs or private programs. Partial programs are defined as a school or educational institution that offers a PBE class or component but does not operate with all subjects designed as place-based. Private schools charge tuition to run as a PBE

institution. Summit Charter School is unique in that it operates as a completely tuition-free public school and a PBE school. While there are several program evaluations that released data on the PEEC website for constituent review, there are none that can compare completely with the type of education that is occurring at Summit Charter School. The guidelines and goals from PEEC were used in this program evaluation, as they were used in other program evaluations by PEEC; however, the outcomes vary due to the distinctive nature of Summit Charter School.

Definitions

PBE. According to Sobel (2004), PBE is "the process of using the local community and environment as a starting point to teach concepts in language arts, mathematics, social studies, science, and other subjects across the curriculum" (p. 7).

Experiential learning theory. According to Dewey (1938), experiential learning theory is based on the principles that life is composed of experiences that exist as interaction between an individual and nature, community, and people. It is the interactions and experiences of a person that shape their ability to learn.

Place. According Coughlin and Kirch (2010), place is defined as people, location, and time interacting in unique ways.

Chapter 2: A Review of Literature

Introduction to PBE

Bickman (2003) described the current state of affairs of education as a battleground. There is controversy between the traditionalist and the self-expressionist on how to proceed in education (Bickman, 2003). More standardized testing? More freedom in thinking? Funding is low, test scores are dismissal, and students no longer care if they succeed. There is so much quarrelling in the education sector about how to fix the problems, no one is actually focusing on the problems that need to be fixed (Wagner, 2006). These are the headlines, but there is something more going on in education. The need to explore ways of engaging students beyond the classroom walls, creating an environment that fosters the curious nature of kids, and connecting kids to their surrounding area and communities has become an increasingly popular concept (Sobel, 2004). At PBE schools, the concept becomes reality.

What exactly is PBE? What does it offer in way of curricula that promises engagement, while traditional classrooms continue to decline? Sobel (2004) described PBE as the process of connecting classrooms to their communities. When traditional education fails time and time again, it is time to look beyond the classroom walls for answers in education. PBE unlocks the mystery of the world and community that is right outside the classroom. Using the natural environment and local community, PBE introduces traditional content topics such as language arts, mathematics, history, science, art, and technology (Sobel, 2004). By engaging students in their natural surroundings and the town/community in which they live, learning becomes real and students become invested in their community (Sobel, 2004).

Martin Luther King, Jr. (1947) wrote that the goal of education was to produce

not only intelligence but character as well. Character education has fallen out of traditional classrooms, as the aspiration to increase academic rigor has left little room for the moral lessons that used to guide curriculum. PBE adds morals and character back into the process of education. Focusing on human interactions and the consequences of those interactions requires character lessons in human nature; therefore, it is education for the purpose of becoming stewards of the community (Sobel, 2004).

PBE Defined

PBE connects kids to nature by simply putting them in the nature that surrounds them. PBE connects kids to their communities by simply putting them in the community. This helps kids succeed, where before they failed. It helps kids to feel a part of something that is bigger than themselves or their school. PBE helps kids become active members of their communities (Sobel, 2004).

PBE fills a purpose in the community by finding the balance between humans and their interactions (Smith & Sobel, 2010). If the goal of education is to produce productive members of society, it is important that we teach children the necessity of striking a balance between nature and progress. "Our society is teaching children to avoid nature" (Louv, 2006, p. 2). Not only does the avoidance of nature destroy children's abilities to explore their natural curiosity about the world around them, it also destroys one of the greatest learning tools teachers have. Children who are not exposed to opportunities to connect with their natural surroundings often become disengaged adults who do not care about the environment (Louv, 2006).

According to Sobel (2004),

Emphasizing hands-on, real world experiences, this approach helps students develop stronger ties to their community, enhances student appreciation for the

natural world, and creates a heightened commitment to serving as active,

contributing citizens. Community vitality and environmental quality are

improved through the active engagement of local citizens, community

organization, and environmental resources in the life of the school. (p. 7)

The diversity of the community brings enriched learning to the classroom. By bringing

the community into the classroom and conversely taking the classroom into the

community, students benefit from multiple perspectives within the educational

framework (Coughlin & Kirch, 2010).

Components of PBE

The exploitation of the environment which surrounds the learning institute is

crucial to the development of a quality PBE program. In the blending of environmental

education with community action, PBE programs strive to not only exist in harmony with

the surrounding environment but become an essential part of it (Elder, 1998).

The idea of place translates differently from person to person, from setting to

setting. To effectively implement a PBE program, a deeper look into the meaning of

place is necessary. A person's view of their natural world depends on their view of the

world as a whole (Coughlin & Kirch, 2010). Lefebvre (1991) described the need to

differentiate between natural space and social space in order to define one's place.

Lefebvre defined one's space as a relationship that occurs between things, not just the

things themselves. He argued that space must include a social component as well as the

natural components in order to fulfill the relationship requirements of one's space

(Lefebvre, 1991). Lefebvre's work can be used to define place in PBE.

Another perspective on place translates it as not just a physical location where

there are interactions among all things, but place is what shapes and can be shaped by

those occupying that space (Coughlin & Kirch, 2010). This definition of place makes the importance of place very specific to time, making it unique to any given time. This is a chronotype view of place, meaning that people, location, and time interact in unique ways that create place. According to Coughlin and Kirch (2010), if chronotype is not given specific consideration in PBE, educators not only fail to connect teachers, students, and community, but they also could be causing harm on the education spectrum by providing meaningless actions.

It is important when investigating the application of PBE that a firm understanding of one's surrounding place is defined and understood. If the environment that surrounds the learner is unknown, the educator risks filling the place with assumptions. These assumptions could be about the nature of the environment or the community within that environment (Bonnet, 2004). In PBE, the environment is the setting for which all education commences. A thorough understanding of the nature of that environment and the peoples within that space is essential not only for learning to occur but for connections to the community to survive (Zandvliet, 2012). The combination of the understanding of the environment and dedication to the community produces industrious, cognizant citizens, as is the goal of PBE.

In describing and defining place, a confusion or discourse can arise between what is best for the economic growth of the community and the environmental protection of the community (Gruenewald & Smith, 2008). PBE seeks to merge the two seemingly contrasting mindsets into one fluid learning goal. Advocates for place-based learning argue that in its truest nature, PBE must simultaneously be about and for the community for which it is linked (Zandvliet, 2012).

Theoretical Framework

John Dewey emerged as a radical reformist in the education community in the early 1900s. His ideas, so bold for that time period, have helped to shape and pave the way for progressive learning methods such as PBE. Dewey (1938) published his theory of experience and education in 1938 as part of a lecture series titled "Experience and Education." Dewey made bold claims on the students' emotional and cognitive abilities in relation to their developmental age, as inappropriately matched in traditional educational settings. Dewey further suggested that the gap in cognitive development and educational expectations is so wide, young pupils are not able to interact with their learning. Dewey postulated this to be a concern in education as he viewed all learning principles to be abstract and only able to become concrete to the pupil through experience.

Dewey (1938) stated, "I take it that the fundamental unity of the newer philosophy is founded in the idea that there is an intimate and necessary relationship between the process of actual experience and education" (p. 20). While Dewey stood firm in his theory of experience as learning, he cautioned against the removal of the old education. He stated his philosophy of education not as a case of *either/or* but rather as a delicate unity where traditional education methods marry with the progressive theory of experience to transcend education into an attainable form for the immature learners; that is to say the pupils (Dewey, 1938). Dewey further described experience as a bridge in the relationship between the mature teacher and the immature learner.

In his theory of experience and education, Dewey (1938) maintained as grounds for as well as evidence for defense of his philosophy and motivation for further investigation that there be an "organic connection between personal experience and

education" (p. 27). Dewey again cautioned that education and experience are not synonymous, and to be treated as such belittles both the education and the experience.

Experience is in every aspect of education. Dewey (1938) did not dispute this fact; instead, he expanded upon this in his theory of experience and education. The traditional classroom was laden with experiences. It is the ability of one experience to connect to future experiences that promotes concrete learning (Dewey, 1938). To connect education and experience, the mature educator must provide specific experiences that foster both growth and direction (Dewey, 1938). Growth with direction promotes education. Furthermore, Dewey propositioned it is the continuity between growth and direction that provides for meaningful learning that constitutes as experience.

Dewey (1938) stated, "Every experience is a moving force" (p. 38). It is the duty of the educator to keep learning experiences connected to the learner's past while promoting future experiences. The educator cannot adequately draw upon the learner's experience if that educator does not know from what background the pupil draws experiences (Dewey, 1938).

Dewey's (1938) experiential education theory tapped into the social and moral compass within the classroom. Interaction among the students with their surroundings has been laid out as an important aspect of PBE. It was suggested by Sobel (2004) that social and moral character could be developed through PBE due to the interactions of students with their community and the push for students to become stewards of their environment. Dewey's theory of experiential education could have shaped these early thoughts of character education. Dewey focused on the social development and interactions of the pupil and the role that the educator played in the classroom. Dewey stated that most children are social by nature. The educator, being mature in

development, is responsible for creating social interactions that engage the student with continuity of experiences (Dewey, 1938). In planning for experience, the educator must allow for enough freedom for the student to make discoveries on their own within the realm of the desired experience that will connect to future learning (Dewey, 1938).

Freedom to explore is an important part of PBE. Dewey (1938) advocated for freedom in the classroom, not only as an avenue to discovery but as an important part of human and social nature leading to development in these areas. It is unnatural for the young, immature learner to sit in silence for great periods of time. It goes against their cognitive, social, and physical development which demands freedom to move. Now couple that freedom of movement with human desire to have freedom of thought and expression and the progressive classroom is born (Dewey, 1938). To fight against the nature of the students one is trying to educate is to prevent education for the sake of education. Dewey recognized the importance of freedom in education, to drive education, as a vehicle that is simpatico with the immature learners' natural dispositions.

Dewey's (1938) experiential education theory set specific guidelines for adding meaningful experiences to the classroom. The experience, to be educative, had to connect the past with the future in the present. Dewey stated, "Anything that can be called a study… must be derived from materials which at the onset fall within the scope of ordinary life-experiences" (p. 73). A true educational experience must not stop at the life experience but must go further to connect what has already been experienced into richer, fuller, more organized details of experience (Dewey, 1938). In PBE programs, the connections of the past shape the future through connections with the heritage and history of the community and the land (Sobel, 2004).

PBE sets goals in the connection of the learner to experiences of the nature

surrounding the learning institute as well as the human and nonhuman aspects of the local community (Sobel, 2004). Dewey (1938) directly connected to this idea in his theory by stating, "Above all, they should know how to utilize the surroundings, physical and social, that exist so as to extract from them all that they have to contribute to building up experiences that are worthwhile" (p. 40). Dewey laid the framework and defining characteristics of PBE with his experimental learning theory. Learning is doing, connecting to previous experiences, and guiding towards future connections in education. This radical theory of Dewey's shook the foundations of traditional educational theorists, while providing evidence towards a learning style that has been adopted by many learning communities today.

History of PBE

Environmental education has been around and gaining in popularity over the last 40 years (Basile, 2000). It is out of this awareness of the importance of utilizing the environment in education that PBE emerged. PBE seeks to enrich the education experience by expanding on environmental education to also include the social, cultural, and economic community that surrounds the place of learning (The Foundations of Place-based Learning, 2010). With the focus on environment and community growing over the last decade, it became completely natural to emerge the two into a new education system.

Children have an incomplete understanding of their natural environment due to emerging technologies that are driving the education system (Zandvliet, 2012). Technology has been a dynamic force in the direction of our education and has implications in the future of our social system. The benefits of technology in the classroom are immense and will not be disputed in this paper; however, a balance between the technology and the natural environment is at a critical state. With more

focus on technology and less focus on nature, children are being denied what Louv

(2006) called the gift of nature. The gift of nature is the ability of the wilderness, the

woods, the plains, the oceans; the natural landscape to calm and focus the soul, yet

heighten every sense of curiosity (Louv, 2006).

Benefits

One of the major benefits to PBE is its ability to use the connections to the

community and the natural environment to increase the level of positivity children feel

towards their place (Zandvliet, 2012). This positivity towards place in turn makes them

more invested in their place as an adult; creating productive, innovative citizens endowed

in stewardship towards their environment (Sobel, 2004).

PBE focuses on inquiry of the natural landscape and real problems of the

community (Smith & Sobel, 2010). In this inclusive educational setting of nature and

community, students forge an understanding of what makes up their community and the

importance of the balance between community and nature (Sobel, 2008).

Benefits for children within a place-based setting include gaining a greater

appreciation and understanding for the natural processes of their environment (Basile,

2000). PBE has the ability to engage a diverse group of learners, regardless of their

ability levels (Basile, 2000). Studies have shown that students who are struggling in

traditional classrooms become more engaged when introduced to environmental

programs in the curriculum (Zandvliet, 2012). Studies have also shown that connections

with the environment in student curriculum contribute to higher level cognitive skills and

critical thinking processes in students (Corral-Verdugo & Frais-Armenta, 1996). Lower

achieving students have more opportunities to emerge as leaders among their peers in a

natural setting (Zandvliet, 2012). PBE benefits student social development, with

particular strengths in collaboration with peers and adults (Zandvliet, 2012).

Children are naturally curious about the world around them. PBE allows students to explore their surrounding nature. This leads to more motivated learning by students and potentially allows for a deeper knowledge about the natural world, the encompassed community, and the students long-term role in both (Zandvliet, 2012). PBE can modify attitudes and understanding about nature and real-life problems that exist within the confines of their place (Zandvliet, 2012).

In a political and educational climate where success is measured by standardized testing and growth is measured by the results of such tests, it becomes necessary to include such data in current research about school programs. Standardized testing does not promise answers to educational issues but is rather used as a platform to initiate changes in educational systems.

While there is much debate currently as to whether or not standardized testing is the best way to measure student achievement, PBE has shown a positive correlation between its education programs and student achievement. Leiberman and Hoody (1998) conducted a study that showed how environmental education was closing the achievement gap between diverse student groups. Students in the study were shown to have increased their problem-solving skills and decision-making skills. The report also showed gains in standardized testing scores and grade point averages (Leiberman & Hoody, 1998).

Connecting Children to Nature

Technology and the digital age have made for some incredible advancement in our society, but with these advancements comes a price. Many children do not know what it is to "play" outside just for fun. Exploration of your own backyard might consist

of a walk around 12 x 12 grassland smothered with plastic toys. Louv (2006 pointed out that children are now suffering emotionally, socially, and physically because they lack time spent in nature. It is not merely the lack of opportunity; Louv believed that society is actually teaching children to avoid nature. Human beings are now standing in opposition to nature; a dichotomy that divides the self from nature and nurture (Coughlin & Kirch, 2010).

People are in constant, active relationships with their surroundings, the living and nonliving (Coughlin & Kirch, 2010). In human existence, there is the constant of acting within the environment and the environment acting upon self. This process is dynamic and crucial to provide meaningful educational experiences with place. What one teaches and what one learns is essentially only meaningful if embedded in organic experiences within the natural, human, and nonhuman components of the environment. Teaching needs to focus on the preference of the interactions within the given environment to meaningful experiences. Teaching needs to be explicitly dynamic to adapt to evolving needs of the place in which the learners are to learn (Coughlin & Kirch, 2010).

There needs to be a reconnection between school and nature and community as opposed to treating the three as competing entities. School can be about learning more knowledge, making the community a better place, and taking care of nature (Sobel, 2008). If PBE strives to make partnerships between teachers, students, and the members of their community as a means to learn about the world through local context (Sobel, 2004), there needs to be a conclusive process to decide which community relationships will provide the greatest education and which experiences will lead to the improvement of the community (Coughlin & Kirch, 2010). According to Coughlin and Kirch (2010), any actions of education need to be considered with common goals, purposes, and the

interests of the community.

Place-based educators need to engage students with the history of their place. Students need to understand the people telling the history and what their purpose might be in conveying historical relevance as it fits in the community (Coughlin & Kirch, 2010). To create a meaningful learning exercise, the curriculum must come naturally out of issues that are real and important to the students and people in a given area (Theobald & Nachtigal, 1995). The environment becomes crucial to a quality education if teachers seek to incite local problems as part of the curriculum to engage students (Kemp, 2006). This concept is central to the pedagogy of PBE. Place-based curriculum needs to tie in the elements of the natural surroundings to create a meaningful, cohesive unit of study (Sobel, 2004). The natural surroundings provide real-life problems for students to work through in a blended content study.

In most place-based programs, there are not separate content classes but rather a blended problem-based inquiry approach to learning. This type of curriculum allows for many local issues to be looked at in the confines of the classroom, community, and ecological environment, while meeting multiple learning objectives.

Indications: Differentiation

The literature reviewed here uncovered PBE's potential to reach students of all academic levels. If connections can be made for low achievers through PBE, students with special learning needs such as autism could create their own unique connections through PBE. The community and nature, not only as a learning tool but a learning place, could have strong implications for the special needs learning community.

There have been very little connections made between PBE and special needs students. This is important research to validate PBE as a viable learning source for all

students but also could be used to discover what connections are made between PBE and special needs students.

More research into how PBE connects to special needs students is required to make implications for this specific learning group. While premier research indicates that positive correlations exist with low-level learners, there is very little specific research to make a concrete statement that PBE connects students with special learning needs in a positive, cooperative education method.

PEEC

PEEC was founded in 2002 and was charged with the purpose of evaluating their own PBE programs as well as laying the foundation for the research and evaluation of other PBE programs (PEEC Works, 2003). PEEC was established with three main objectives that guided research and evaluation of PBE programs. Those objectives are

To serve as a learning organization for program developers, fueling internal growth and program development for individual organizations;

To develop, identify and disseminate evaluation techniques, tools and approaches that can be applied elsewhere; and

To contribute to the research base underlying the field of place-based education and school change. (PEEC Works, 2003, p. 1)

PEEC outlines research that has been completed in the area of PBE and provides many tools for researchers to use while evaluating PBE programs. Using research and evaluation of PBE programs, PEEC developed the seven keys to successful PBE (PEEC Works, 2003). These seven keys, which are identified and outlined in Chapter 3, provide the basis for comparison between the PEEC keys and the PBE program at Summit Charter School.

In their first year of research, PEEC evaluated four PBE programs. These program evaluations were used to lay the foundation for PBE research. The four PBE programs that were evaluated by PEEC in 2003 were CO-SEED, A Forest for Every Classroom, The Community Mapping Program, and the Sustainable Schools Project (PEEC Works, 2003). The research completed by PEEC in their inaugural season provided data-driven processes that allowed educators to reflect on each other's process of evaluation, program theories, strategies, and outcomes to create best practices for PBE (PEEC Works, 2003).

Through collaboration and research of evaluation, PEEC adopted Horsch's Logic Model as an evaluation tool. Karen Horsch is an evaluation consultant. Her work in creating and using logic models has helped organizations to better understand how the inputs into a program directly impact the overall outcomes of that program.

PEEC Works (2003) has conducted several program evaluations of PBE as it occurs in private sectors. In 2003, PEEC conducted a program evaluation of four place-based programs. The programs were CO-SEED, Forest for every Classroom, Community Mapping Program, and Sustainable Schools Project (PEEC Works, 2003). These programs were funded by PEEC in efforts to increase the PBE in New England. In order to know how to grow, program evaluations of each of these PBE programs were conducted by PEEC for 3 consecutive years (PEEC Works, 2003).

Overall findings of the program evaluations indicated that participation in the PEEC programs made positive contributions in the following areas:

- Teacher practice (especially teacher engagement/growth)
- Use of local places for teaching

- Student engagement in learning

- Student civic engagement

- Student time spent outdoors

- Student stewardship behavior

- Community civic engagement

- Community planning/decision making processes. (PEEC, 2004, p. 3)

While the findings in this report bode well for the PBE community at large, the most interesting findings in relation to the program evaluation being conducted by this researcher are the indications for further studies to show the effects on a whole school place-based approach. The programs evaluated are private programs that work with the schools. Research conducted by PEEC suggests that the impacts of a whole school PBE program could integrate PBE into the school cultures, norms, and daily practices, thus making the PBE stronger, the community connections greater, and the PBE practices more effective (PEEC, 2004). At the time of this study, there were no public schools operating under a PBE umbrella. Summit Charter School has now been operating as a PBE school for since 2007. It is time to investigate the program for alignment into the PEEC standards that were created as a result of their evaluation efforts in the early 2000s.

Summary

PBE has emerged onto the education scene full of promises of engaged students and connections with nature and real-world problems. With the promise of increased student engagement, increased student achievement, and an answer to parent questions of why schools are failing their kids, PBE could hold the key that theorists, education experts, and researchers have been hoping to find. If PBE is all that it promises to be, a

study into how PBE is reaching students and connecting them to their environment and community while still meeting state-mandated standards is not only relevant but also essential in light of the current climate surrounding public education.

The review of literature for this study justifies the need for a closer look into PBE as a program evaluation for a specific school. PBE is becoming an increasingly popular framework from which education has potential to connect students to real-life learning. If a specific school is to boast that PBE is a means to the success the school has endured, a comprehensive evaluation of the PBE program at that school is necessary. Uncovering clues to success at a specific school with explicit correlations that can be made to PBE could have widespread implications for the place-based community as well as the American school system.

Chapter 3: Methodology

The evidence supported by the literature review postulates that PBE may help schools motivate their students through connections to the natural surroundings and the community. PEEC has laid the framework for investigating PBE as a component of successful schools. Their research indicated potential connections of successful schools with a whole-school PBE approach. To validate the claims made by PEEC and to understand connections at Summit Charter School and PBE, a thorough program evaluation was needed. The researcher intended to take the foundations laid out by PEEC and evaluate the PBE at Summit Charter School for correlations between the two. In short, the researcher wanted to know how does PBE connect to Summit Charter School's success?

PEEC was established in 2002 for the purpose of gathering data and research on PBE to lay the groundwork for further investigation into this emerging field of education (PEEC Works, 2003). The collaborative agreed upon seven standards that were indicative of successful PBE programs.

PEEC (2012) has set forth national standards that define successful PBE programs. Figure 1 lists the seven keys to a successful PBE program. These seven national standards were used as a comparison reference in this research to gauge the success of the PBE program at Summit Charter School.

Success, in the terms of this evaluation, was measured by how well the PBE program at Summit connected to the seven national standards of PBE as set forth by PEEC and stakeholder perceptions regarding the PBE program at Summit. Stakeholders identified in this investigation are staff, parents, and students at Summit Charter School.

1. Learning takes place on site in the schoolyard and in the local community and environment, focusing on local themes, systems and content.

2. Project-based learning experiences contribute to the community's vitality and environmental quality and to supporting the role the community plays in fostering global environmental quality.

3. Learning is supported by strong and varied partnerships with local associations, organizations, agencies and businesses.

4. Learning is interdisciplinary and custom tailored to local opportunities.

5. Local learning serves as the foundation for understanding and participating appropriately in regional and global issues.

6. Place-based education programs are integral to achieving other educational and institutional goals.

7. Learning is grounded in and supports the development of a strong and personally relevant connection to one's place.

(PEEC, 2012).

Figure 1. Seven Keys to Successful PBE.

Seven Keys to Successful PBE Defined

The seven keys to successful PBE provided a framework for which comparisons are made in this program evaluation. It was therefore necessary to clarify the seven keys as to how they will be interpreted for the purposes of this research.

Key 1. Learning takes place on site in the schoolyard and in the local community and environment, focusing on local themes, systems, and content. The school site was Summit Charter School. The local community was defined as the town of Cashiers, North Carolina, as well as other towns and mountain communities that make up the southwest mountain region of North Carolina. Local themes, systems, and content are

subject matter that pertains to the economy, natural landscape, and social structures of the communities in southwest mountain region of North Carolina.

Key 2. Project-based learning experiences contribute to the community's vitality and environmental quality and to supporting the role the community plays in fostering global environmental quality. The term vitality, for the purpose of this research, referred to the economic growth as well as the physical growth of the Cashiers community.

Key 3. Learning is supported by strong and varied partnerships with local associations, organizations, agencies, and businesses. Partnerships were defined by direct student interactions, financial support of Summit Charter School, donation of materials or goods, and/or time spent by the organization on the campus of Summit Charter School.

Key 4. Learning is interdisciplinary and custom tailored to local opportunities. Interdisciplinary curriculum is that which combines subject matter including but not limited to reading, writing, mathematics, science, history, technology, and art. The program evaluation set forth to uncover if, and if so to what extent, learning focuses on issues that are relevant and prevalent in Cashiers, North Carolina, as well as the surrounding mountain communities of the southwest mountain region of North Carolina.

Key 5. Local learning serves as the foundation for understanding and participating appropriately in regional and global issues. Local learning was defined as learning that will connect students to the southwest mountain region of North Carolina. Local learning was further defined as the teaching of core disciplinary content through the communities and natural surroundings of the area described above.

Key 6. PBE programs are integral to achieving other educational and institutional goals. Key 6, interpreted as the educational goals set forth by the state of North Carolina through common core as well as academic standards set by Summit Charter School, will

be achieved by PBE curriculum.

Key 7. Learning is grounded in and supports the development of a strong and personally relevant connection to one's place. The purpose of PBE is to create students who understand and respect the area from which they come. Furthermore, the students grow to become productive citizens in that area and the communities beyond. Summit Charter School uses PBE as way to help students understand the area in which they live.

In a small, rural mountain town in the eastern United States, a public charter school, with just over 200 students, is operating as a PBE school. Summit Charter School boasts of successful student data and happy stakeholders. To validate claims by the school that PBE indeed plays a part in the success of its students and the investment level of its stakeholders, an in-depth program evaluation was necessary. The question that was addressed in this program evaluation was, "How well does the PBE program at Summit Charter School align and meet the national standards as set forth by PEEC and to what extend does this impact Summit's overall education program?"

This program evaluation was used to appraise the prevailing research question, "To what extent does PBE impact the teaching and learning at Summit Charter School?"

Research Design and Rationale

This research utilized a mixed-method approach to conduct a program evaluation of the PBE component of Summit Charter School. A mixed-methods approach combines elements of qualitative and quantitative research to answer research questions (Creswell, 2014). By using a mixed-methods approach, the researcher hoped to achieve a more complete understanding of how PBE connects to the educational goals at Summit Charter School. Mixed- methods research allowed for qualitative analysis of documents, observations, and anecdotal evidences while quantitative descriptive statistics allowed for

perceptions to be viewed empirically for a better comparison of stakeholder views

(Creswell, 2014). Both the qualitative and quantitative data collected in this research

design were used together to provide a comprehensive response to the program

evaluation question.

The world is facing an immense amount of problems. To solve the problems of

local communities and global communities, programs designed to address a target issue

are created (Fitzpatrick, Sanders, & Worthen, 2012). To determine which programs are

effective and efficient, program evaluations became a necessary component of program

research (Fitzpatrick et al., 2012). Program evaluations can be used in several ways.

Some program evaluations determine a program's overall effectiveness. Others

determine which programs are saving policymakers the most money. Still other program

evaluations determine how resources can be used effectively in existing programs

(Fitzpatrick et al., 2012).

The purpose of this program evaluation was to determine the effectiveness of the

PBE component of Summit Charter School as it relates to their educational program as a

whole; specifically, to what extent does PBE impact the teaching and learning at Summit

Charter School? If connections could be made between the two, to what extent do the

correlations play in Summit's overall educational program?

To evaluate the PBE program at Summit, the researcher delved into two areas of

interest as identified in the program evaluation question: PBE at Summit compared to

that of national standards of excellence of PBE schools and the extent PBE plays in the

overall educational program at Summit.

Summit is unique in that it operates as a free charter school within the confines of

state-mandated standards of education and curriculum. While other PBE schools exist,

they are either private schools or run a PBE class that is separate from the traditional core curriculum classes. To operate under the umbrella of PBE is distinctive of Summit Charter School. Summit Charter School seeks to educate the core curriculum concepts as well as enrichment classes by connecting students to their natural surroundings and the community in which they live. It is this distinguishing combination of public education and PBE that provides a unique opportunity program evaluation to understand the associations between PBE and Summit Charter School.

Logic models have been used as a tool to measure program effectiveness for over 20 years (McCawley, 2002). Logic models have the ability to show cause and effect relationships through a systematic approach outlining the path from inputs of a program to outcomes of a program (McCawley, 2002). Horsch's (2008) Logic Model is the specific logic model that was utilized in this research to determine program effectiveness of the PBE component at Summit Charter School.

Overview of Methodology

The researcher focused on the research question in two stages. During the first stage of research, data collection took place that addressed the program evaluation question, "How well does the PBE component at Summit Charter School align with national standards of PBE as set forth by PEEC?"

Before the research for this program evaluation began, permission to conduct the evaluation was granted by the director of Summit Charter School. The letter granting permission for this program evaluation can be found in Appendix A. Data collection to answer this question included observations using protocol forms designed by the researcher to see PEEC goals for PBE in action at Summit. Document analysis consisted of the analyzation of board meeting minutes from the past 3 years for indications of

PEEC standards addressed by board members. Document analysis also involved coding

and analysis of Summit's strategic plan covering the current planning period. The final

data collection in the first stage of research involved surveys summited to stakeholders.

Stakeholders, for the purpose of this research, were identified as parents, guardians, and

board members at Summit Charter School. Letters explaining the purpose of this

program evaluation were sent to all of Summit stakeholders. The letter that was sent out

can be found in Appendix B. The surveys used in this program evaluation can be found

in Appendix C. All qualitative data collected in this stage were hand coded by the

researcher.

Stage two of this research looked at all the data collected to determine to what

extent PBE impacts Summit's overall education program. The researcher used the data

collected and coded, then placed it in Horsch's (2008) Logic Model. The design of this

research was proposed so that both parts of the research question would be answered

thoroughly and completely.

Participants

Summit Charter School is a kindergarten through eighth grade tuition-free charter

school. Being a public charter school, Summit must adhere to state standards of student

achievement as measured by the state issued end-of-grade standardized testing. Summit

is a small school with a student body of approximately 200 pupils. Each grade level

hosts one class. The community surrounding Summit is a rural town that relies on

seasonal revenue from tourists as the basis for economic growth and sustainability. The

student population at Summit comes from a broad range of socioeconomic backgrounds.

Summit has operated as a PBE school since 2007 and avows successful student

achievement data and invested stakeholders. To validate the claims that PBE plays a role

in the school's success, a program evaluation was conducted. For the purposes of this research, the participants included the student body of Summit Charter School, the faculty and staff, board members, and community members identified as stakeholders.

With a small student population, a purposive sample of the student body was used based on the needs of observational data to answer the research question. Males and females were not distinguished in this study nor was the ethnicity or socioeconomic status evaluated. Program evaluations focus on a particular component of an overall organization (Fitzpatrick et al., 2012). While the participants were important to the overall data collection process, the specific characteristics of the participants were not indicated to maintain focus on the program in this study.

The participants identified in this study were used to investigate the program evaluation question for the potential connections of the PBE program at Summit to the overall educational program as well as alignment with national PBE standards.

The uniqueness of Summit Charter School justified the need for this program evaluation. A clear understanding of how PBE connects to this school could have implications that reach beyond Summit's campus.

Instruments

The instruments used in this program evaluation were designed to connect the research question to all possible outcomes in order to thoroughly investigate PBE at Summit Charter School. An overview of the instruments that were used follows: Horsch's (2008) Logic Model is found is Figure 2. Classroom observation forms can be found in Appendix D. The PEEC standards are found in Figure 1 and will served as benchmark descriptors of effective PBE programs. Stakeholder surveys were used and can be found in Appendix C.

PEEC has researched several PBE programs in order to come up with PBE norms of exemplar programs. PEEC has created seven standards of successful PBE programs (Figure 1). The seven standards set forth by PEEC as a model for successful PBE schools were used as comparison of the PBE program at Summit Charter School to successful components of a PBE program.

According to Fitzpatrick et al. (2012), program evaluations that utilize the logic model approach help the evaluator understand the rationale behind a program's intended effects. PEEC (2012) stated that Karen Horsch is an "experienced evaluator with expertise in process and outcome evaluation and their use in organizational development and change" (para 2). Her logic model has been used by PEEC in program planning and evaluation. Horsch's (2008) Logic Model was used in the program evaluation to provide a visual data tool of Summit's PBE program with specific references to the inputs of the program and the outputs (short-term effects) and outcomes (long-term effects) of the PBE program at Summit. This model was used in an effort to describe rationale links concerning program resources, action or activities, outputs, and outcomes.

Horsch's (2008) Logic Model has been classified by the researcher as a tool to examine data derived from this program evaluation. While the Horsch model is just that, a model, the researcher has included it as a tool for qualitative analysis. While the researcher's analysis of collected data is an integral component of this research design, the Horsch Logic Model assisted the researcher in organization and analyzation of data and has therefore been included in the list of research instruments for this program evaluation. Figure 2 shows Horsch's Logic Model as it depicts the relationship of resources input into a program and the activities, outputs, and outcomes.
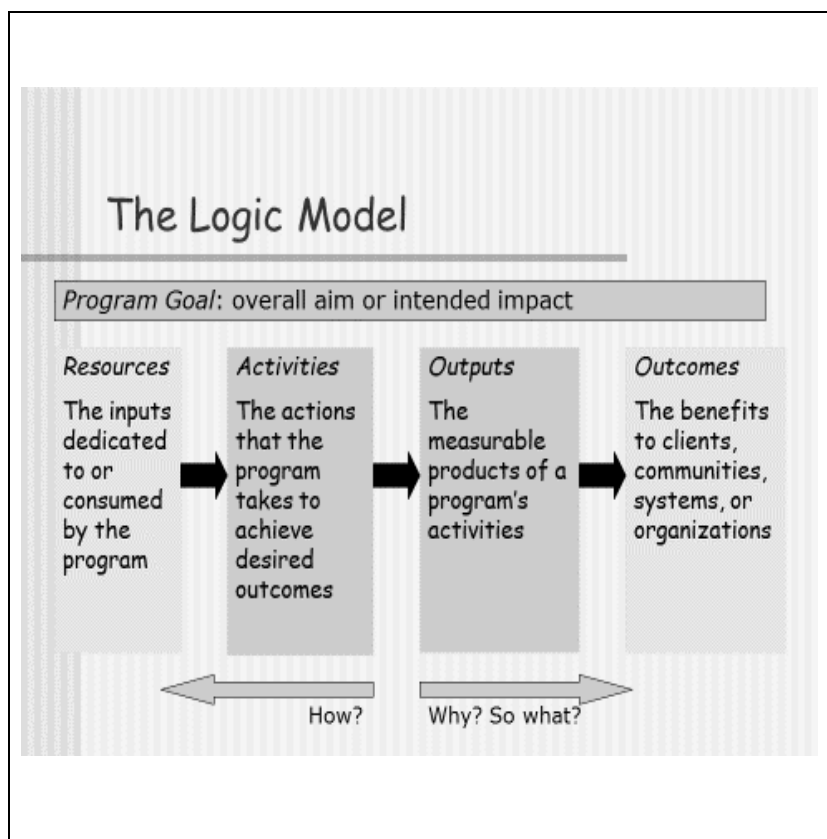
Figure 2. Horsch's (2008) Logic Model.

Classroom observation forms that are aligned with the PEEC standards were

created by the researcher for purposes in program observations. Using an observation

protocol form helped the researcher organize the setting as well as the purpose of the

observation (Creswell, 2014). The observation protocol form allowed the researcher to

align data with program evaluation questions as well as provide opportunity for

unintended but pertinent data to emerge (Creswell, 2014). Classroom observation forms

can be found in Appendix D.

Stakeholder surveys were created by the researcher using the seven keys to a

successful PBE program (Appendix C). Surveys were reviewed by supervising

professors and peers for validation and reliability purposes. Surveys provided the researcher with a quantifiable description of trends or attitudes (Creswell, 2014). In this research the Likert-style surveys were used to collect stakeholder perspectives on the PBE program at Summit.

The Likert style surveys consisted of 15 items with space under each item for stakeholders to write in feedback. The first seven items addressed the direct connection of the PBE program at Summit to the seven keys to successful place-based programs as outlined by PEEC. The remaining items addressed place-based understanding, implementation, and goals at Summit from the stakeholder perspective. Table 1 is a summary of the research instruments used in this program evaluation.

Table 1

Summary of Research Instruments

Research Instrument	Purpose
Horsch (2008) Logic Model	Visual tool to understand inputs as relate to overall educational outcomes at Summit
Seven Standards of Successful PBE Programs Model	Comparison of Summit to PEEC national standards
Surveys	To understand stakeholder perceptions on how PEEC standards are aligned at Summit
Classroom Observation Form	To organize and guide observations for PEEC goal alignment

Procedure

Program evaluation question: How well does the PBE program at Summit Charter School align and meet the national standards as set forth by PEEC and to what extend does this impact Summit's overall education program? This program evaluation was used to appraise the prevailing research question, "To what extent does

PBE impact the teaching and learning at Summit Charter School?" The program evaluation was conducted in two stages.

Stage 1.

Observations. Observations were conducted around the Summit campus using the observation protocol form (Appendix D) to determine how the PBE program at Summit is designed and implemented, specifically looking for connections that align with PEEC.

Each Summit teacher was observed for one 45-minute period. A follow-up interview was conducted with each teacher no more than 48 hours after the initial observation. The purpose of the follow-up interview was to clear up ambiguous or unclear observation points. Observation protocol forms were analyzed by the researcher using hand coding, looking for specific points of the observation that could align the PBE program at Summit Charter School with the PEEC national standards.

In order to improve reliability in observational data, the researcher applied a member-check procedure. The member-check procedure consisted of the observed teacher reviewing all observed data on the observational forms during the postobservation interview (Williams, 2011). The observed teacher checked all the points of the observation that he/she agreed with as being observed in the classroom that day. The researcher strived for an 80% or higher agreement from the observed teacher. If the observed data were less than 80% agreement, the researcher would observe the class a second time.

Document analysis. Document analysis of Summit board meeting minutes from the last 3 years as well as strategic planning notes and initiatives were conducted by the researcher in order to obtain information about specific resources going into the PBE

program at Summit. The document analysis allowed the researcher to investigate data that pertain to the research question from the perspective of the participants in the meetings who are stakeholders at Summit (Creswell, 2014). Qualitative data from document analysis were hand coded for trends and patterns. The researcher analyzed the results from the coded report to determine if, and if so to what degree, Summit aligns to the PEEC national standards.

Surveys. Parents and board members are an important vested party to Summit. Their input and perceptions were important to the researcher for evaluative purposes regarding the perceived effectiveness and purpose of PBE at Summit. Stakeholder surveys can be found in Appendix C.

Surveys were sent home in student green folders which are Summit's weekly form of parent/school communication. A letter accompanying the surveys explained the purpose of the survey, the outline for procedures to assure confidentiality, and an invitation to be a part of this study. The stakeholder invitation to participate in this research can be found in Appendix B. Paper surveys were chosen for this research, as opposed to online surveys, to ensure that all Summit families would have the invitation and opportunity to participate, regardless of whether or not they had a home computer or internet access.

Descriptive statistics allowed the researcher to analyze the data from the surveys using quantitative measures to uncover basic trends in stakeholder perceptions. The Likert-style items were grouped and responses combined so a percentage of responses were available for the researcher to review. The responses included the following range: 1–strongly agree, 2–agree, 3–neutral, 4–disagree, 5–strongly disagree. This allowed for a five-degree separation from the strongly agree to the strongly disagree. Each Likert item

on the survey was analyzed to determine central tendencies among each survey item. The researcher evaluated each item to determine the number of responses that corresponded with each level on the Likert scale. Means were translated into percentages to present the data on each item.

To improve reliability to the surveys, a split-half analytic procedure was applied to the survey results. A split-half adds reliability to the research process during the research, as opposed to the trying to create reliability at the end (Churchill, 1984). This method allowed the researcher to see how consistently the surveys met the intended purpose of the surveys. The split-half reliability was applied to this research in the following way: Surveys were collected and placed into two groups randomly; Group A and Group B. The survey groups were analyzed separately and then compared to see how Group A responses compared with those of Group B. If randomized grouping produced similar survey statistics, a higher level of reliability has been achieved (Churchill, 1984).

The researcher set a baseline for reliability purposes before the surveys were passed out. If the degree variance on any part of the surveys items was greater than 15%, the item was determined to not be reliable. The blind split-half reliability method helped to determine reliability.

Stakeholders had the opportunity to write in responses under the Likert survey item. These responses were analyzed by the researcher and hand coded for patterns and trends. The responses were categorized as trends if data allowed. Descriptive percentage statistics allowed the researcher to take trends of data to understand stakeholder perspectives on specific Likert items. Survey data allowed the researcher to see if, and if so to what extent, Summit's PBE aligns with PEEC national standards.

The purpose of collecting data from three sources (observations, document analysis, and survey data) allowed the researcher to triangulate data for a more comprehensive investigation of the program evaluation question, "How well does the PBE program at Summit Charter School align and meet the national standards as set forth by PEEC and to what extend does this impact Summit's overall education program?" The triangulation of data collection was an effort to validate the research procedure employed to explore the research question (Creswell, 2014).

Qualitative data collection allowed the researcher to interpret meanings of data, investigate correlations in data, and identify themes and descriptions (Creswell, 2014). The collection of observation data, document analysis, and survey data, again, allowed the research to triangulate the sources of input to validate the qualitative results.

Stage 2. Research regarding validation of the PBE program at Summit based on PEEC national standards was answered using observations, document analysis, and surveys. The researcher took all data from Stage 1 and placed trends and patterns into the Horsch (2008) Logic Model. Through careful analysis of data collected and input into Horsch's Logic Model, the researcher hoped to obtain a clear concept as to what specific resources are dedicated to the PBE program at Summit, what are the actions of the PBE program that the resources support, and how are these actions measured in terms of program success? Finally, the researcher intended to be able to identify the specific benefits, if any, of the PBE program with the overall education outcomes at Summit Charter School.

To understand how the PBE program at Summit Charter School connects to the overall education program at Summit, an investigation into the inputs, activities, outputs, and outcomes of PBE was needed. The Horsch (2008) Logic Model helped the

researcher understand how inputs into the PBE program lead to specific outcomes in Summit's overall education program.

The researcher used data collected to determine if one of the seven keys of successful PBE programs had been met at Summit. If 10 or more evidences supported each of the seven keys, the key was considered a success at Summit. If five to nine evidences presented themselves, the key was considered emerging. If zero to four evidences presented themselves in that key, it would be considered not met at Summit.

Summit Charter School would be considered a successful PBE institute with PBE playing a significant role in the success of the school if all seven of the keys of a successful PBE program were met by the baselines described above. If two or more keys are found to be met, one key not met, and the rest found to be emerging, the school would be considered to be an emerging PBE institute and further research would be needed to determine how to shift the school into a successful PBE institute. If two keys were found to not be met and the rest were emerging or successful, the school would be considered at risk of being a PBE institute. Further, research would be needed to determine how best to address the keys that were not currently being met at Summit Charter School. If all of the keys were found to be not met, the school would be considered to not be a successful PBE institute. Recommendations are included for the applicable scenario in the concluding chapter of this research.

Summary of Methodology

All data were collected, compiled, analyzed, and thoroughly investigated in an attempt to accurately and objectively answer the program evaluation question. Specifically, the researcher investigated the question, "How well does the PBE program at Summit Charter School align and meet the national standards as set forth by PEEC and

to what extend does this impact Summit's overall education program?" This program

evaluation was used to appraise the prevailing research question, "To what extent does

PBE impact the teaching and learning at Summit Charter School?"

Summit Charter School was selected for the purposes of a thorough program

evaluation of the PBE program at that school. The school director was notified and

permission was granted to conduct research on the campus of Summit Charter School in

the form of a program evaluation. The letter from the director of the school granting

permission to conduct research on the campus of Summit Charter School can be found in

Appendix A.

Upon the approval from the supporting university to conduct this designed

program evaluation research, a letter was sent out in early 2016 to all families at Summit

Charter School describing the intended research, outlining procedures in place for

comprehensive confidentiality, and a preview of opportunities for feedback. This initial

research letter can be found in Appendix B.

Limitations

The researcher is in close geographical proximity to Summit Charter School and

is part of that community. The researcher is a teacher at Summit Charter School, with a

child attending that same school. The researcher believes in the value of PBE. Natural

biases could have occurred based on connections the researcher has with Summit Charter

School. Research code of ethics, along with careful supervisions from professors at the

supervising university, limited the bias and held the researcher accountable for presenting

the findings as they occurred. The researcher made conclusions and recommendations

based on evidences supported by the findings of this program evaluation.

Observations were limited to one focused 45-minute lesson. It is true that the

teacher being observed could have taught to the observation. Triangulation of data collected for the program evaluation question helped to balance the observational data to present a true picture of the place-based program at Summit Charter School. Classroom observation forms, while seen as an asset to the researcher to focus observations, could have limited what was actually seen based on what could actually be recorded on the form.

Survey data allowed for perceptions exclusively from stakeholders with children who attended Summit Charter School or from board members who were currently serving on the school board at Summit Charter School. The survey layout helped to eliminate biases from stakeholders.

Delimitations

This program evaluation specifically focused on one charter school that claims to operate as a PBE school. Criteria for a successful PBE program was incorporated from national standards set for by PEEC.

Statement of Subjectivity

Peshkin (1988) stated that a subjective component of research is unavoidable. He further explained that it is the researcher's duty to identify one's own subjectivity and include it as part of the research process (Peshkin, 1988). To fully disclose the researcher's proximity and subjectivity in this research, the following statement has been constructed.

The researcher's educational philosophy, which shapes the mindset going into this study, includes the active pedagogy of environmental contact for students in order to satisfy the natural curiosity of the surrounding world within the educational framework. Environmental education is more than just the exposure of a child to the environment in

which they live; it is the purposeful teaching of respect, stewardship, and importance of interactions between nature and humans.

The researcher disclosed previously that the school setting in which the research was conducted was the school in which the researcher currently teaches. The researcher is in involved in varying aspects of school growth and public relations within the community where the school resides. Furthermore, the researcher is an active member of the community surrounding the school. It is an undeniable fact that the researcher feels a strong admiration for Summit Charter School and the mountain community which surrounds it.

E. Pluribus Unum. Out of Many. Peshkin (1988) described this form of subjectivity as our preconceived ideas into the situation we observe. Looking at the campus of Summit Charter School (the students, parents, community members, and each detail that goes into making this school), the researcher is one of many who has put in countless hours for its success. In being a part of seeking excellence in education, it cannot be denied that the researcher also seeks acknowledgement for a unique educational program.

It is with full disclosure that the researcher acknowledges the hopes that the research conducted on the campus of Summit Charter School could be used in the bigger education arena to spread PBE as a positive means of connecting academics and state educational goals with the nature and community that surround each school.

Review of Purpose

The purpose of this program evaluation was to examine the PBE component of a small, charter school in the eastern United States to reveal if connections could be made between the PBE program at Summit Charter School and the success the school has

experienced. Recommendations for the PBE program at Summit were provided to school

directors and board members based upon the findings of this research.

Chapter 4: Results

Summit Charter School has been operating as a PBE school since 2007. It is

unique in that the school is a tuition-free charter school and, as such, must adhere to

North Carolina curriculum standards. Since making the curriculum shift from the BASIC

school model to a PBE school model, a comprehensive evaluation of the PBE component

of Summit Charter School's curriculum had not been previously conducted. Summit

Charter School has boasted of academic success and pleased stakeholders over the years.

To validate and understand the connection that PBE has played in the success of Summit

Charter School, it became necessary to conduct a program evaluation of the PBE

component at Summit Charter School.

The researcher specifically wanted to know how does the PBE program at

Summit Charter School influence the results of their education program as a whole? To

understand the part PBE has in the overall education program at Summit, a complete

understanding of the PBE program as it relates to national standards was necessary. In

order to investigate the PBE component of Summit Charter School's curriculum, a

program evaluation was conducted on the school's campus beginning in the fall of 2015

and finishing in the spring of 2016.

During that school year, the researcher collected data from archived board

meeting minutes and the current strategic plan, completed school-wide observations, and

surveyed Summit stockholders. The data were analyzed during the summer and fall of

2016. Results from the research are discussed in detail in this chapter.

In alignment with the convergent mixed-method approach in this research design,

surveys were sent home while the researcher collected data from school records including

board meetings and strategic plans. Stakeholder surveys were sent home in student green

folders in the early spring of 2016. The Summit green folder is a weekly communication tool between parents and the school.

A letter addressing the stakeholders and explaining the purpose of the survey was sent out with the survey. Surveys were sent to each Summit family inviting them to participate in the research through the completion of the surveys. In the 2015-2016 school year, at the time surveys were sent home, Summit had a total of 206 students, representing 142 different families. Of the 142 surveys that were sent home, 85 were returned, indicating a 59.86% participation rate from Summit stakeholders. There was also a 93% participation rate among Summit's staff members.

In order to promote reliability in the survey, a blind split-half strategy was applied during survey collection. Surveys were placed into two groups at random in order to compare the results of one group to another to determine survey reliability. The survey groups were labeled Group A and Group B respectfully. Results are given as Group A and Group B data for easy comparison of the two groups, then as a whole to create a complete picture of survey results.

The split-half reliability allowed for the researcher to compare the survey responses to assure that the survey results were similar with each group. This allowed for survey data to be deemed reliable. Understanding the survey results in relation to the program evaluation required that the survey data be examined separately, initially, and also as a whole to understand stakeholder perspectives of PBE at Summit Charter School.

The results of the surveys are charted below. Results are shown by item, separated by Group A and Group B results first and then combined results are reported directly below. The first seven survey items were related to the seven keys of successful PBE programs as set forth by PEEC (2003). The remaining survey items related to

stakeholder understandings of PBE as they pertain to Summit's overall educational goals.

Figures 3 through 13 break down the results of the stakeholder surveys.

Item 1: Learning takes place, at Summit, on and around the campus and in the local community and environment, focusing on local themes, systems, and content.

Group A	Group B

Combined Data

Figure 3. Learning Takes Place in Community and Environment.

Results from both Group A and Group B provide evidence that Summit stakeholders believe that learning takes place around the campus and in the community, focusing on local themes, systems, and content. Group A had 77% of stakeholders who strongly supported this item, and 23% agreed with this statement. Group B had 63% of stakeholders who strongly agreed with Item 1, while 33% of those surveyed agreed with this statement.

Looking at the results combined, 69% of the stakeholders surveyed strongly agreed and 28% agreed with Item 1, which indicates that 97% of stakeholders believe that learning takes place on and around the campus of Summit, while focusing on local themes, systems, and content.

Item 2: Project-based learning experiences contribute to the community's vitality and environmental quality and to supporting the role the community plays in fostering global environmental quality.

Group A	Group B

Combined Data

Figure 4. Learning Contributes to Community.

In the survey responses for Item 2, Group A answered with 88% of those

surveyed either strongly agreeing or agreeing and 95% of Group B either strongly

agreeing or agreeing respectfully. There was a combined neutral response rate of 17% in both Groups A and B. No other responses were recorded for Item 2.

Combined results from Item 2 indicate that 92% of the stakeholders surveyed strongly agree or agree with the statement that project-based experiences contribute to community vitality and environmental quality and to supporting the role th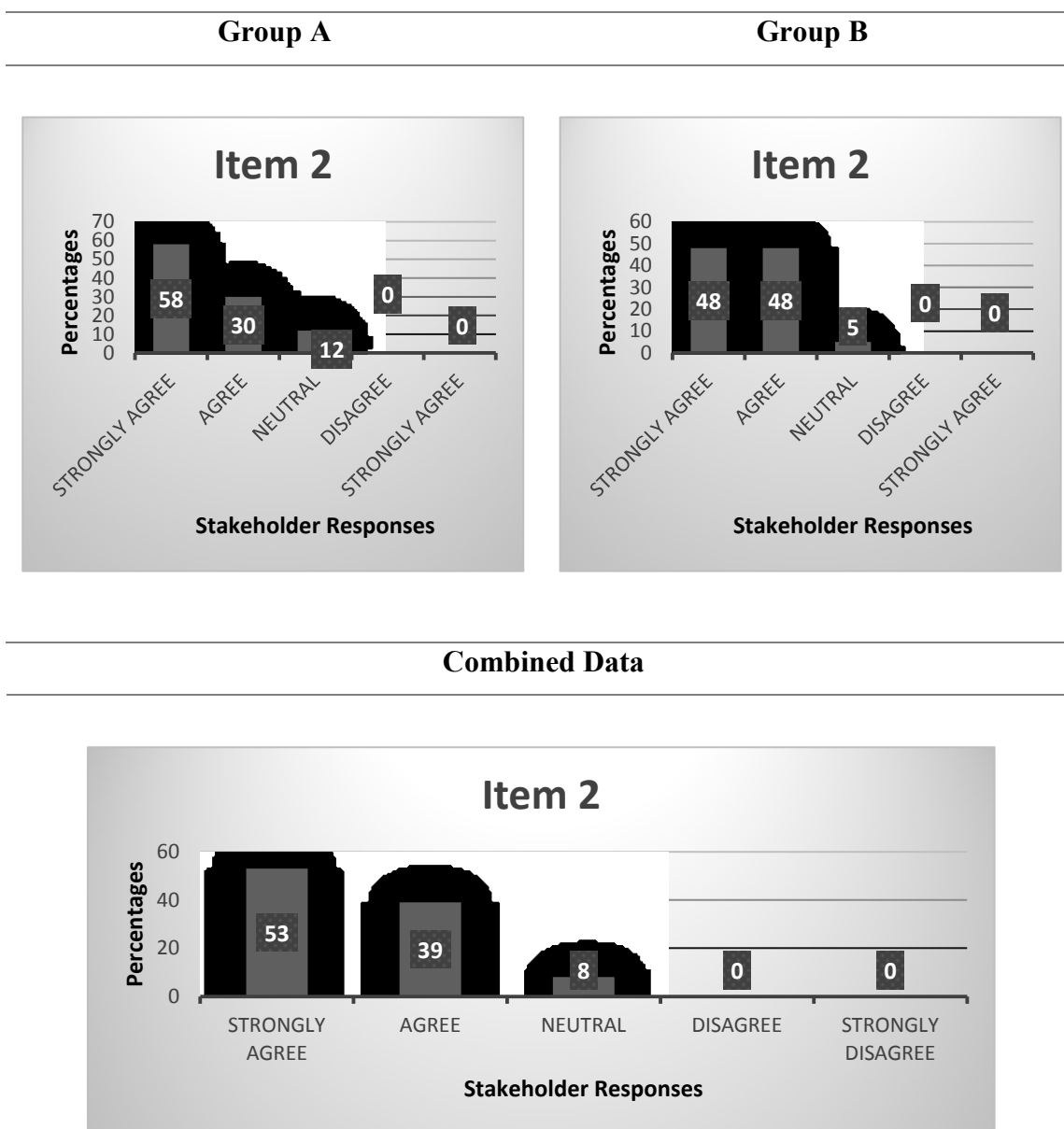e community plays in fostering global environmental quality. This is strong evidence that the stakeholders agree that PBE is happening at Summit Charter School.

Item 3: Learning is supported by strong and varied partnerships with local associations, organizations, agencies, and businesses.

Group A	Group B
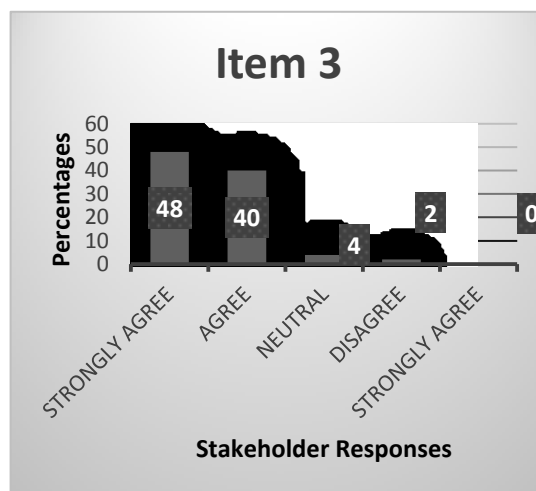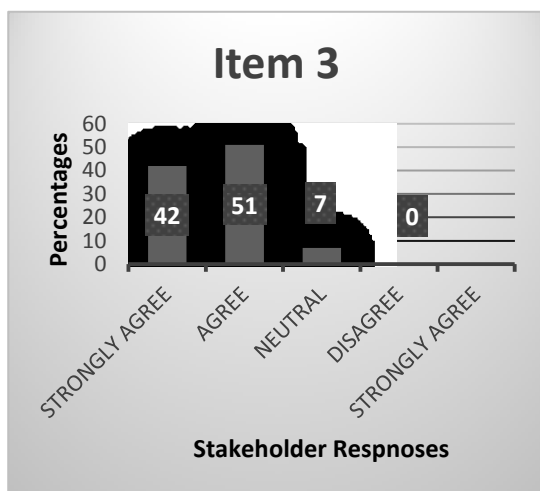
Combined Data
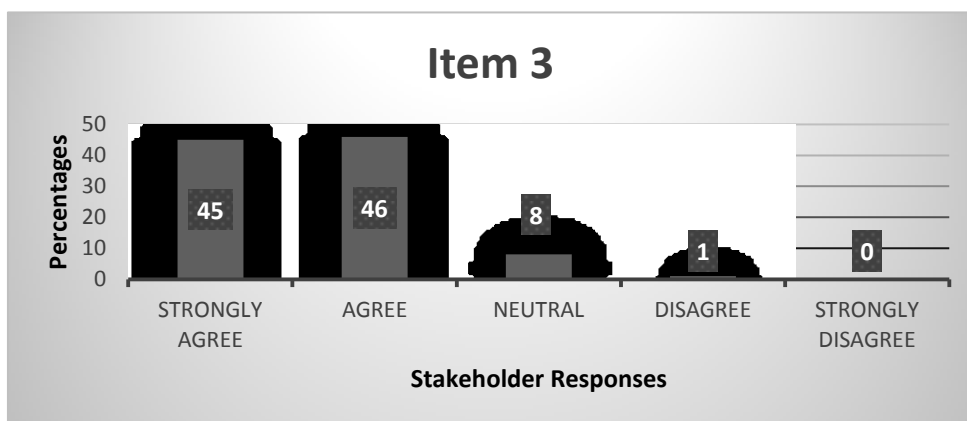
Figure 5. Learning is Supported by Partnerships.

Item 3 provided further data of stakeholder alignment with the seven keys of a successful PBE program. In Group A, 42% strongly agreed, while 51% agreed with this statement, for a total of 93% of those surveyed responded positively to the statement. In

Group B, 48% of those surveyed answered strongly agree, while 40% answered agreed, providing an 88% affirmation. A combined response of 9% neutral was recorded for Groups A and B. It is noted that 2% of Group B responded disagree to this statement.

With a positive response rate (strongly agree or agree responses) of 88%, it can be concluded that stakeholders support the notion that learning is supported by strong and varied partnerships with local associations, organizations, agencies, and businesses.

Item 4: Leaning is interdisciplinary and custom-tailored to local opportunities.

Group A	Group B
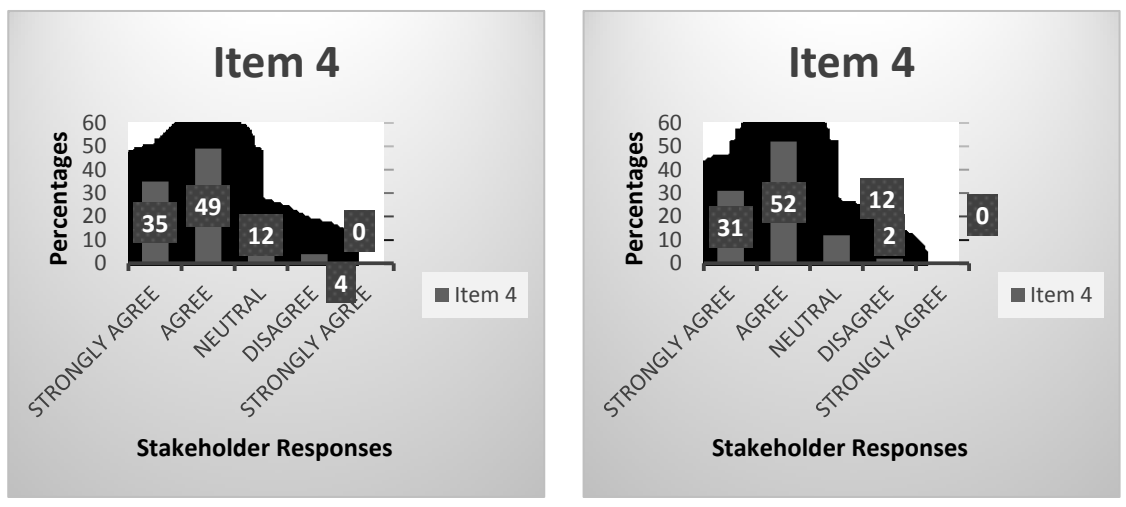
Combined Data

Figure 6. Interdisciplinary Learning.

Results from Item 4 indicate a majority of strong agreement or agreement, with 84% of responses from Group A and 86% from Group B. Both Group A and Group B reported 12% neutral responses. Group A also had findings of 4% of those surveyed

disagreed with the statement, while Group B yielded 2% of responses disagreed with the statement.

Overall findings indicate that the majority of Summit stakeholders support this statement, with 84% reporting strongly agree or agree. This finding indicates that the majority of stakeholders agree with the statement learning is interdisciplinary and custom tailored to local opportunities; however, it should be noted that 12% of those stakeholders surveyed felt neutral about this statement, and another 4% disagreed with this statement. That is a combined 16% of those surveyed did not agree with this statement. Future indications of this are discussed in Chapter 5.

Item 5: Local learning serves as the foundation for understanding and participating appropriately in regional and global issues.

Group A	Group B
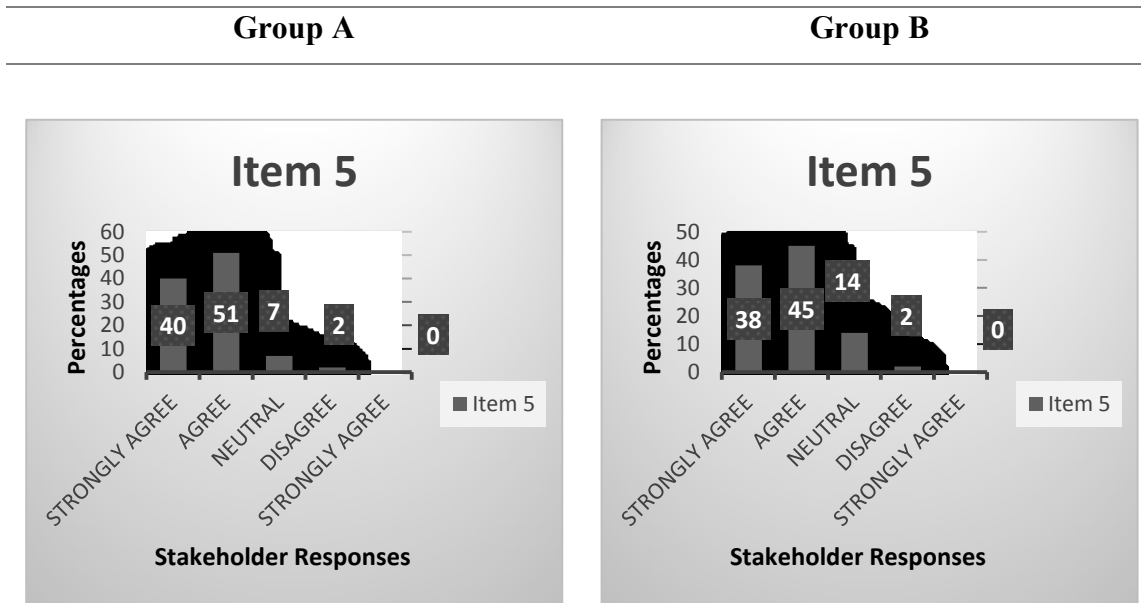
Combined Data
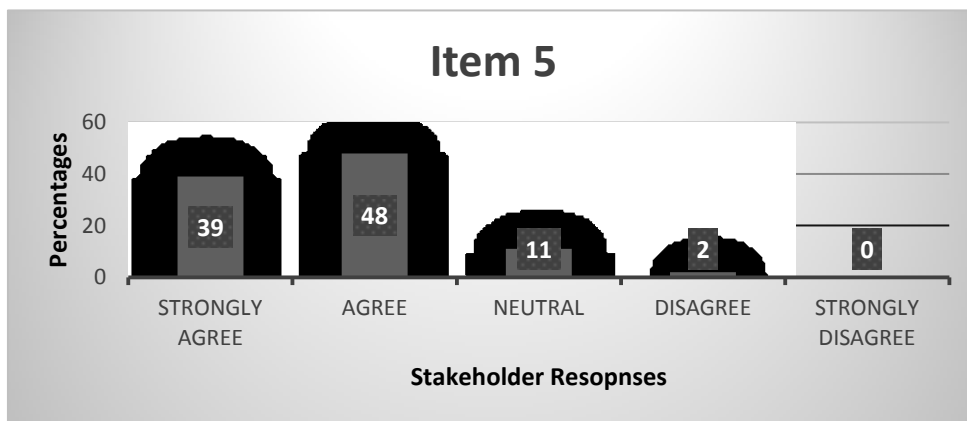
Figure 7. Local Learning Leads to Global Understanding.

In response to Item 5, 40% of stakeholders from group A strongly agreed, while 40% of Group A agreed that local learning serves as the foundation for understanding and

participating in regional and global issues. Group B results also support local learning as the foundation for regional and global issues with 38% strongly agreeing with this statement and 46% agreeing, providing 84% of stakeholders surveyed showed positive correlation to this item. Neutral responses accounted for 7% of the responses from Group A and 14% of the responses from Group B.

With a combined positive response of 87%, the majority of stakeholders agree with the statement that local learning serves as the foundation for understanding and participating appropriately in regional and global issues. At 87% agreement, this item is one of the lower agreement levels of the stakeholders surveyed. Possible explanation of a lower agreement on Item 5 could be supported by observational data that concluded while there is strong evidence to support learning deals with local issues, there was little observational data to support learning deals with global issues.

Item 6: PBE is institutional to achieving educational and character-building goals at Summit.

Group A	Group B

Item 6

Percentages

46 51 3 0 0

STRONGLY AGREE / AGREE / NEUTRAL / DISAGREE / STRONGLY AGREE

Item 2

Stakeholder Responses

Item 6

Percentages

53 31 16 0 0

STRONGLY AGREE / AGREE / NEUTRAL / DISAGREE / STRONGLY AGREE

Item 6

Stakeholder Responses

Combined Data

Item 6

Percentages

49 42 9 0 0

STRONGLY AGREE / AGREE / NEUTRAL / DISAGREE / STRONGLY DISAGREE
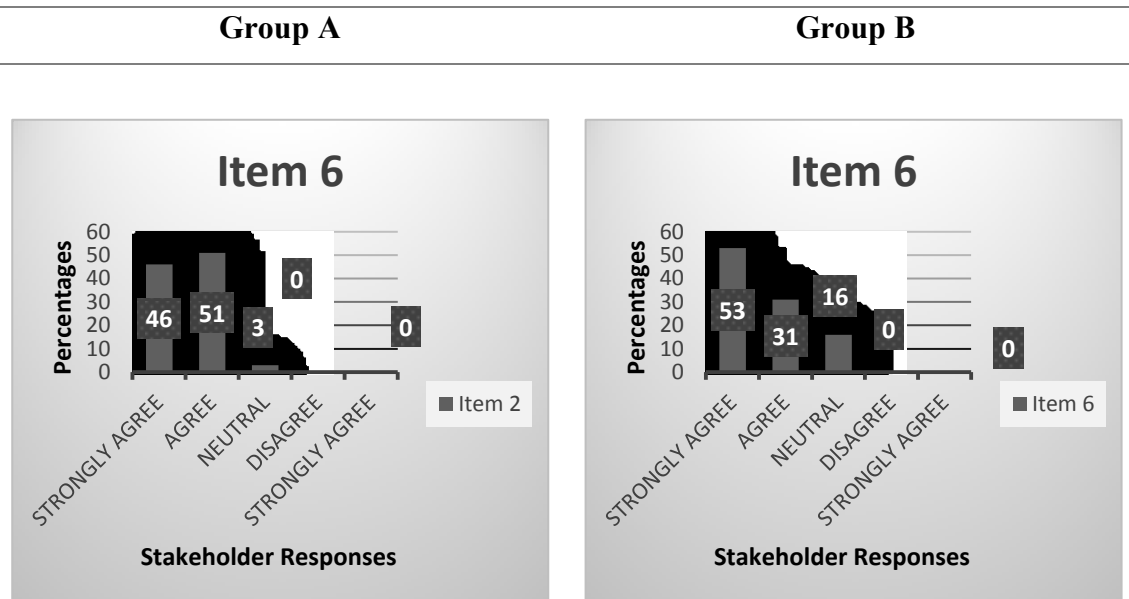
Stakeholder Responses
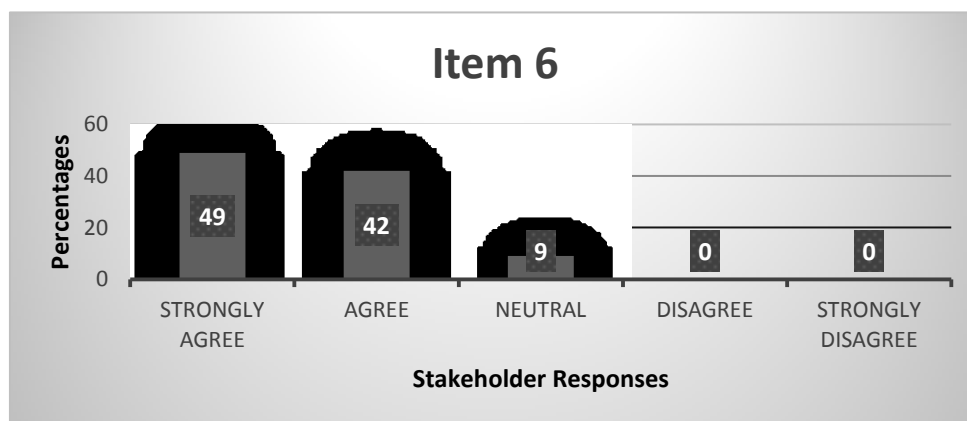
Figure 8. PBE Leads to Institutional Goals.

Item 6 relates to educational and character-building goals at Summit. Summit stakeholders supported this statement with positive responses from 97% of Group A and

84% of Group B. An interesting finding in Item 6 is the 16% neutral responses in Group B compared to that of 3% neutral in Group A. The 13% differential between the two groups is the largest differential shown in the survey responses. The researcher does not have an answer for the discrepancy between Group A and Group B in this response.

With a combined 91% strongly agree or agree with this statement, it can be stated that the stakeholders believe that PBE is important to help achieve other learning goals at Summit.

Item 7: Learning is grounded in and supports the development of a strong and personally relevant connection to one's place.

Group A	Group B
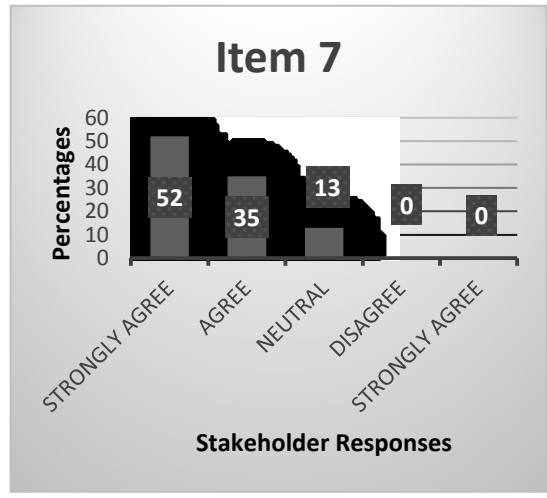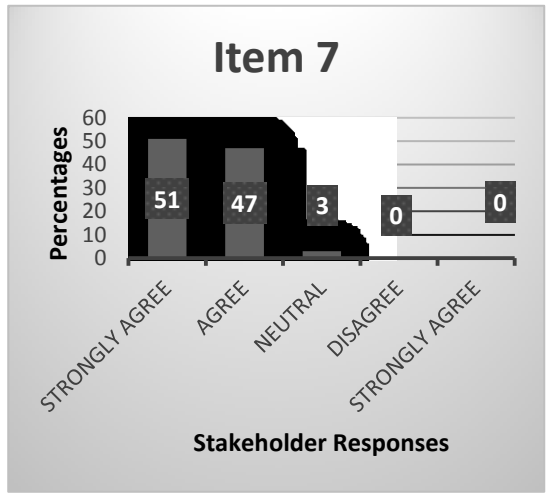
Combined Data

Figure 9. Learning Develops One's Place.

Item 7 relates to the understanding of place as it pertains to PBE. Group A responded with 97% either agreeing or strongly agreeing with this statement, while

Group B responded with 87% either strongly agreeing or agreeing with this statement.

Group A presented 3% with a neutral response, while Group B presented 13% neutral to

this statement respectfully.

The combined results of Item 7 revealed that 93% of stakeholders are in

agreement with the concept that learning helps students feel connected to their place. A

combined 7% of responses were neutral, and there were no disagree responses to this

item.

Item 8: As an invested stakeholder at Summit Charter School I can explain the term "place-based education."

Group A	Group B
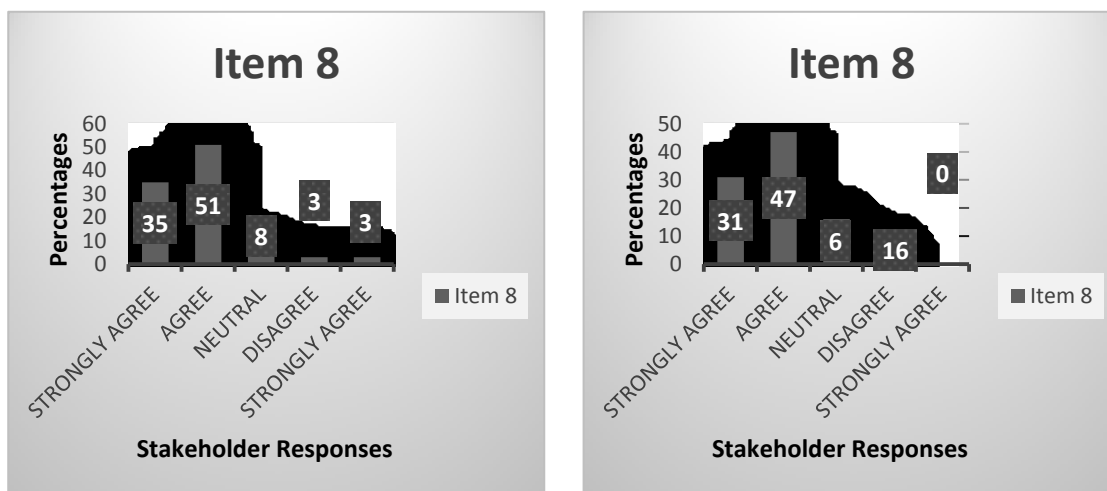
Combined Data
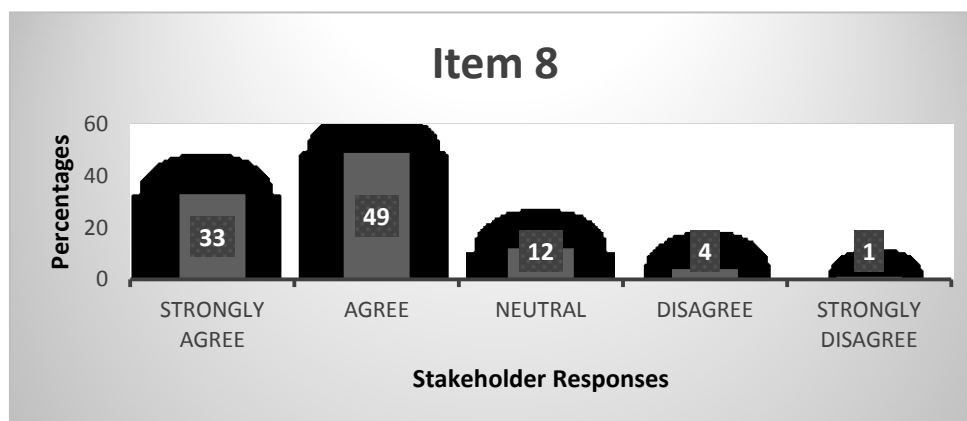
Figure 10. Stakeholders Can Explain PBE.

Item 8 refers to stakeholders' ability to explain the term "place-based education." Summit stakeholders, at a combined response rate of 86% for Group A and 76% for Group B, agreed or strongly agreed that PBE is an important part of the school culture.

This statement yielded the most combined neutral responses with 8% of Group A

reporting neutral and 16% of Group B reporting neutral. This statement also yielded the

most disagree responses with 3% of Group A and 6% of Group B. An additional 3% of

Group A reported strongly disagreeing with this statement.

A combined affirmation of 82% was the response for Item 8, with 12% neutral.

There was a 5% disagreement with this item. With 17% of stakeholders unable to

confidentially describe PBE, parent education on PBE, specifically a description of PBE,

would be recommended for the school.

Item 9: PBE is an important part of the culture of Summit Charter School.
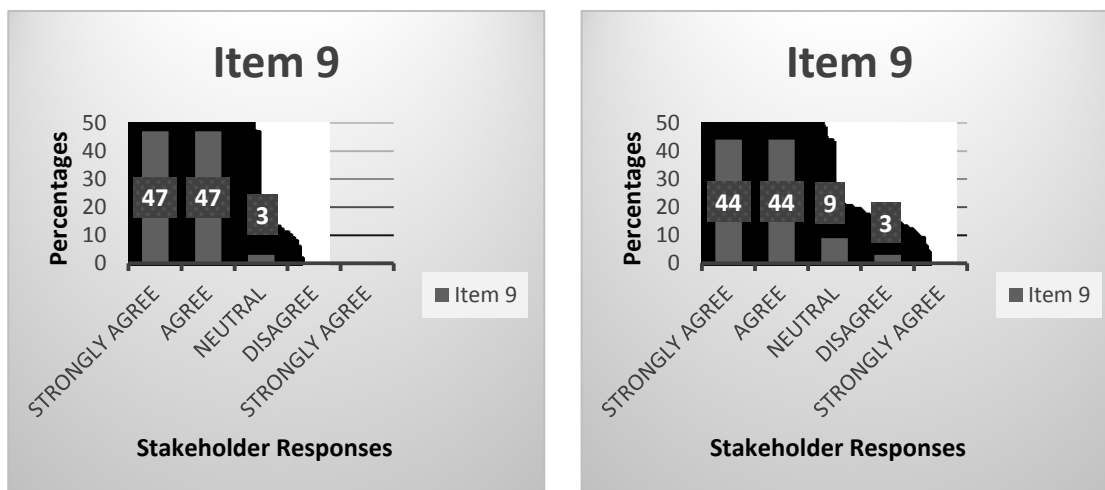
Group A	Group B

Combined Data
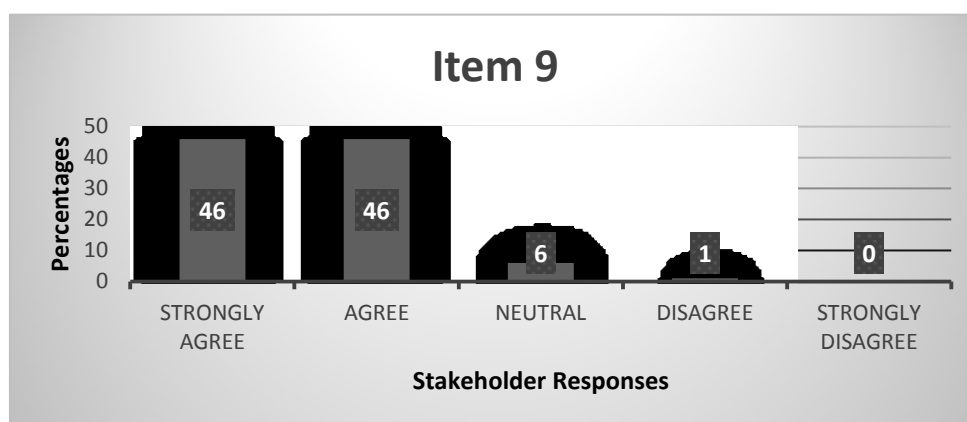
Figure 11. PBE is an Important Part of School Culture.

Summit stakeholders strongly agreed or agreed with the statement that PBE is an important part of Summit's culture with 97% from Group A and 88% from Group B. Each group had 3% who reported neutral to this item.

A combined agreement of 92%, with 6% neutral, indicates a strong agreement

that PBE is an important part of Summit's school culture.

Item 10: I understand how Summit Charter School implements its PBE program.

Group A	**Group B**
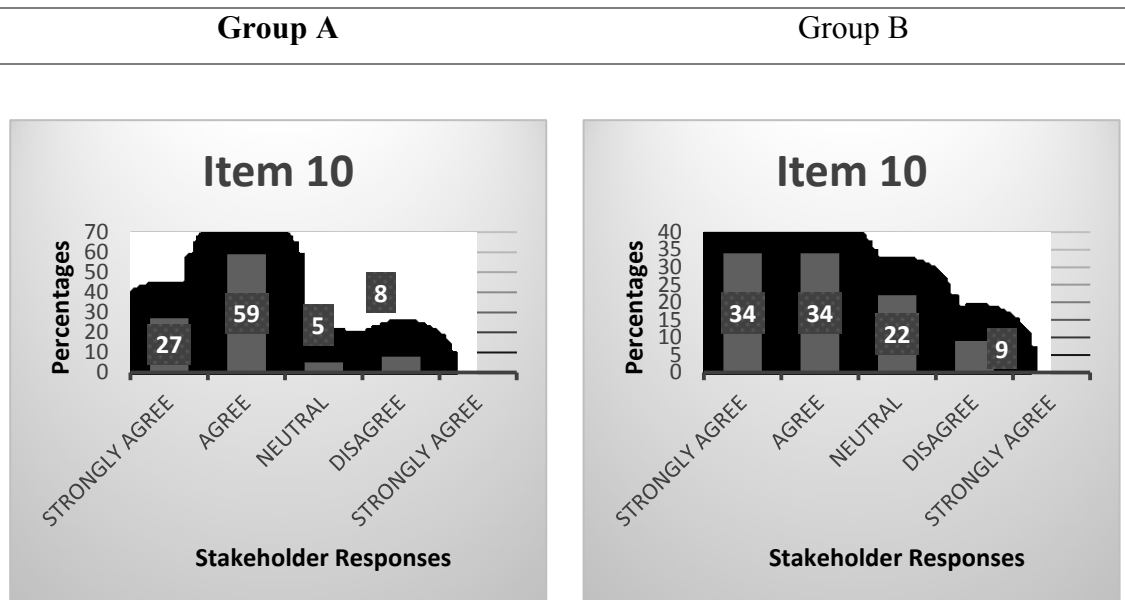
Combined Data
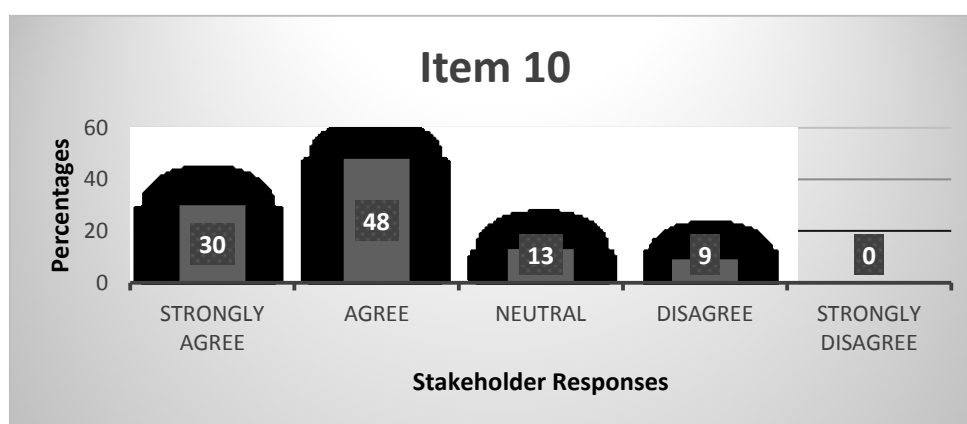
Figure 12. Stakeholders Understand PBE at Summit.

Item 10 on the stakeholder survey refers to stakeholder understanding of how

PBE is implemented at Summit Charter School. Group A responded with 27% strongly

agreeing and 60% agreeing for a total of 87% of those surveyed understand how PBE is

implemented at Summit Charter School. Group A also reported 5% as neutral, and 8% of

those surveyed disagreed with this statement. Group B reported 69% strongly agreeing

or agreeing with this statement; while 22% reported neutral responses, and 9% of those

surveyed disagreed with this statement.

Combined results from Item 10 indicate that 78% of those surveyed understand

how Summit implements PBE within its curriculum, and 13% were neutral. This is

opportunity for growth by educating Summit stakeholders how PBE influences the

overall education at Summit Charter School.

Item 11: I understand the goal of PBE at Summit Charter School.

Group A   **Group B**
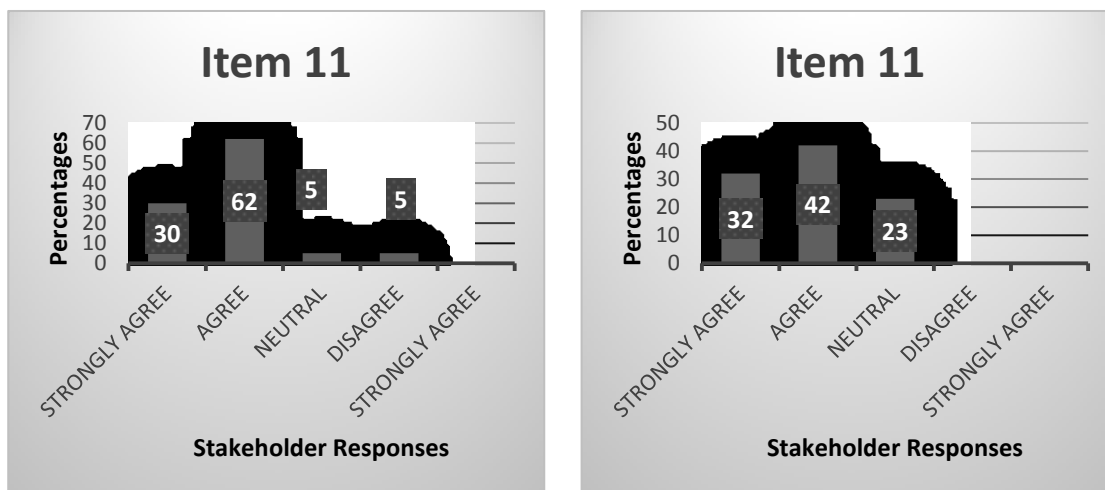
Combined Data
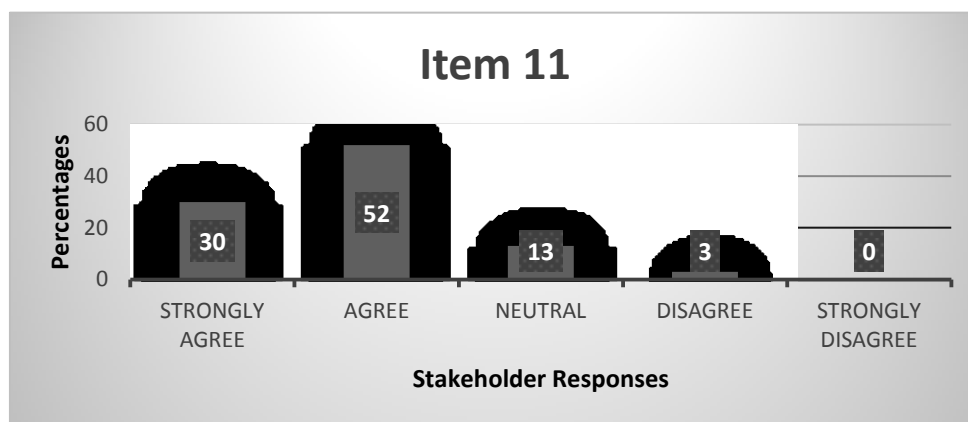
Figure 13. Stakeholders Understand the PBE Goal at Summit.

Item 11 refers to stakeholder understanding of the goal of PBE at Summit School. Group A reported 90% strongly agreeing or agreeing with this statement. Neutral and disagree responses each accounted for 5% of the total responses. Group B reported 76% of the responses as strongly agree or agree, and 24% of the responses were neutral.

A combined 82% of those surveyed understood the goal of PBE at Summit Charter School. With 17% of those surveyed being neutral or in disagreement with this statement, it presents an opportunity for growth.

Summary of Surveys

With regard to the seven keys of successful PBE programs, or the first seven items on the survey, stakeholder responses suggest that according to the "keys" set by PEEC (2003), Summit Charter School is modeling a successful PBE program.

Some of the survey items did present an opportunity for growth. The researcher set a response rate of 90% as the baseline for growth opportunities. In items that had 90% or above responses in strong agreement or agreement, the statement was considered a success among stakeholders. In items that had below 90% in strong agreement or agreement among stakeholders, it was considered an opportunity of growth. Based on that threshold, items 3, 4, 5, 8, 10, and 11 present themselves as opportunities for growth. Recommendations to address these areas of growth opportunities are discussed further in Chapter 5.

The variance in responses of the survey items helped to determine the reliability of the survey. The researcher set a baseline for reliability purposes before the surveys were passed out. If the degree variance on any part of the surveys items was greater than 15%, the item was determined to not be reliable. The blind split-half reliability method helped to determine reliability. Items 1, 2, 3, 4, 5, 7, 8, and 9 were found to be reliable. Items 6, 10, and 11 were not found reliable; however, the researcher found information still relevant to the study in those items, therefore their results were included in this program evaluation.

Observations

Observation protocol sheets were used to determine which of each of the seven keys of a successful PBE program, if any, were met during the period the researcher was observing. A member-check procedure was conducted in a follow-up meeting with the teacher being observed. The observed teacher read the observation forms to see if she/he agreed with the events that were observed.

The kindergarten teacher agreed with 100% of the researcher's observations. The first-grade teacher agreed with 90% of the researcher's observations. The second-grade teacher agreed with 100% of the researcher's observations. The third-grade teacher agreed with 100% of the researcher's observations. The fourth-grade teacher agreed with 100% of the researcher's observations. The fifth-grade teacher agreed with 95% of the researcher's observations. The middle school language arts teacher agreed with 100% of the researcher's observations. The middle school math teacher agreed with 90% of the researcher's observations. The middle school social studies teacher agreed with 100% of the researcher's observations. The middle school science teacher agreed with 100% of the researcher's observations.

Based on guidelines the researcher implemented during the creation of the methodology, the observations were validated by 90% agreement or more from each of the teachers being observed. This is known as a member-check and is often used to validate observations in research.

Table 2 outlines the data collected from the observation forms as they relate to the seven keys of a successful PBE program. A general overview of the observational data collected, as it relates to each grade level at Summit Charter School, is presented in the following table with an explanation in the following paragraph. A detailed breakdown of

the observational data, as they relate directly to the seven keys of successful PBE

programs, follows sequentially.

Table 2

Observations by Key

Summary of Observation Data										
	K	1st	2nd	3rd	4th	5th	MS LA	MS Math	MS SS	MS Science
Key 1	✓	✓	✓	✓	✓	✓	✓		✓	✓
Key 2	✓			✓					✓	✓
Key 3	✓			✓	✓			✓	✓	✓
Key 4	✓	✓	✓	✓	✓		✓	✓	✓	✓
Key 5				✓	✓	✓				✓
Key 6	✓	✓		✓	✓	✓	✓	✓	✓	✓
Key 7	✓	✓				✓	✓		✓	
Total	6	4	2	6	5	4	4	3	6	6

Note. Summary of keys observed during 45-minute classroom observation.

In the lesson that was observed for kindergarten, six of the seven keys were

identified in the lesson. In the first-grade lesson, four of the seven keys were observed.

In the second-grade lesson, two of the seven keys were observed. The third-grade lesson

revealed six of the seven keys. In fourth grade, five of the seven keys were observed. In

fifth grade, four of the seven keys were observed. In the middle school social studies

class that was observed, six of the seven keys were identified. In the middle school math

lesson, three of the seven keys were observed. In the middle school science lesson, six of

the seven keys were observed. In the middle school language arts lesson, four of the

seven keys were observed.

Further analysis determined the amount of each key that was present in the lessons that were observed at grade level.

Key 1: Learning takes place on site in the school-yard and in the local community and environment, focusing on local themes, systems, and content. In the 10 lessons that were observed for this program evaluation, Key 1 was directly observed in nine of the 10 lessons. Therefore, 90% of the lessons that were observed met the first key of national standards for successful PBE as outlined by PEEC (2003).

Kindergarten met this key with their interactive tadpole/frog unit. Live tadpoles were in a tank in the classroom. Students had been observing changes in the tadpoles for the last week. The teacher reported that they keep the tadpoles until the tails are almost gone and then release them in the stream on the Quiet Coyote trail on the campus of Summit Charter School. The students sat on "lily pads" as the teacher discussed with the children that a lot of lakes, streams, and ponds in Cashiers had tadpoles this time of year. Children connected this information with stories of tadpoles and frogs they had observed around Cashiers.

The first-grade students were learning –ER and –EST endings of words. The teacher used local examples to help students learn to use these endings to compare distance and sizes and also to provide students with information about their place. "Buck's Coffee Shop is closER to Summit than the Starbucks in Ingles." "The mountains of Boulder, Colorado are biggER than the mountains in Cashiers, North Carolina." "Western North Carolina has one of the biggest salamander populations in the world." This lesson met Key 1 standards.

The second-grade classroom was sitting in the courtyard with the students partnered sharing their "How to Blow Up a Balloon" paragraphs. Each partner had a

balloon and had to do exactly what the other student read in the step-by-step instructions. The teacher and assistant teacher walked around making statements and asking questions related to the activity. "I did not hear your partner say to put the balloon to your month. She just said hold the balloon and blow." This lesson met Key 1.

The third-grade observation was conducted during their annual Atlanta Zoo and Atlanta Aquarium overnight trip. Students have night vision goggles and are walking around the zoo at night in small groups with a guide. Students learn about nocturnal animals at the zoo and observe animal behaviors at night. The guide asks students questions about which animals are local to the south, specifically to western North Carolina. Students and guides discuss animal habitats and their importance to the ecosystem. Each time an animal is observed that is found in North Carolina, students share experiences with that animal. Students shared about snakes, turtles, black bears, bobcats, and coyotes. All of these animals are common in the mountains of western North Carolina. This lesson met Key 1 criteria.

The fourth-grade was doing math outside on the sidewalk with chalk. They were practicing reducing fractions with a partner using sidewalk chalk. The teacher would call out a word problem using local businesses and places. Students would write the fraction with chalk and then reduce it. The teacher and assistant would walk around and check student work. "Tom Sawyer's tree farm had 250 trees. 1/3 of those trees were cut this past Christmas season. How many trees are left on Tom Sawyer's tree farm?" Tom Sawyer's Tree Farm is a big Christmas tree farm in the Cashiers community.

The second part of the observation led students back inside where they were building rockets. This lesson met Key 1 criteria.

The fifth-grade lesson that was observed involved an egg drop. Students had

previously planned their egg drop container, including scale drawings. They then built the egg drop container. The lesson observed was egg drop day. The teacher was on the roof of the school outside of the fifth-grade classroom. Students were gathered around cheering for their egg to survive the drop. After all eggs were dropped, the students sat on the ground outside as the teacher led a discussion of what worked and why as well as what did not work and why not. The students shared ideas about what worked and what did not work. The class discussed materials used and what usages outside of this project would be good for the egg drop containers. This lesson met Key 1 criteria.

Middle school social studies met Key 1 criteria with their "Then and Now Cashiers" projects. Students researched Cashiers in 1900 and compared that with the present-day town. Students were working on their presentations which included iPad presentations as well as physical items they created that represent Cashiers then and now.

Middle school math did not meet Key 1 of the seven keys of a successful PBE program. Students were working on scale models of buildings and landmarks from all over the world. Some of the scale models included the Golden Gate Bridge, Stonehenge, and the Eiffel Tower. While the students were engaged and enjoying this project, it did not meet Key 1 because the learning did not focus on local themes, systems, or content. Recommendation to meet this key in middle school math is discussed in Chapter 5.

Middle school science met Key 1 in the lesson observed. The eighth-grade students were on the annual Barrier Island trip to learn about the hydrosphere. Students were examining local sea life by skimming the water with large nets in small groups. The huge nets were brought ashore and laid out. Students observed various shrimp, small squids, fish, and other aquatic animals. The teacher explained what each creature was and its role in the local ecosystem.

Middle school language arts met this key. The students were in the woods writing poetry based on the environment around them. The teacher first had the students pick one thing: a branch, a leaf, an ant, an acorn. The students had to use adjectives in phrases to describe the object of nature, then put the phrases together to create nature poems.

Key 2: Project-based learning experiences contribute to the community's vitality and environmental quality and to supporting the role the community plays in fostering global environmental quality. Five of the 10 lessons that were observed showed evidence of meeting this key. Therefore, 50% of the lessons observed met the second key of successful PBE programs based on the standards set forth by PEEC (2003).

Kindergarten met Key 2 during the lesson that was observed. Students had planted flowers and herbs in pots in the classroom. There were charts by the herb and flower garden where students had been recording the growth of the plants. The teacher indicated that the plants would be transferred to the outside garden beds the following week.

First grade did not meet this key in the lesson that was observed. The grammar lesson involving –ER and –EST endings did provide some comparison of local geography and references to local shops; however, the researcher did not conclusively observe how this lesson supported the vitality of the community as a connection to global environment.

Second grade did not meet Key 2 in the lesson that was observed. The how-to lesson utilized the outdoor campus, but direct connections between local community and global environment were not observed.

Third grade met this key during their overnight quest to the Atlanta Zoo and Atlanta Aquarium. Students learned about animal habitats and how they affect their

natural ecosystems. Students were able to compare animals they had observed in their local habitats of western North Carolina to other types of habitats all over the world. Students used night-vision goggles to go on a scavenger hunt at the zoo, witnessing animal behaviors at night.

Fourth grade did not meet Key 2 in the lesson that was observed. The sidewalk math lesson and rocket building were project based, but no direct connections on how this lesson connected students to the community vitality and the global environment were observed.

Fifth grade did not meet Key 2 in the lesson that was observed. Students were using math and science to design a solution to a problem. While this lesson was project based and the students were engaged, a direct connection to the community's vitality and the overall global environmental quality was not observed in this lesson.

Middle school social studies met Key 2 during the lesson that was observed. The community vitality was explored and understood by the social studies class through their look at Cashiers then and now. Student projects showcased the changes in the land, the addition of the country clubs, and the business community that makes up Cashiers.

Middle school math scale projects do touch on the global environment; however, direct connections to Cashiers community vitality to the overall global environment were not observed.

Middle school science met Key 2 in the lesson observed on the barrier island quest. Students caught ocean species and learned about their connection to the ecosystem at the beach and back home in the mountains and how these creatures connect to global environment. Students got to study these sea creatures and their habitats up close before letting them go.

Middle school language arts did not meet Key 2 in the lesson that was observed. Students were learning outdoors on campus, but a direct relation to community vitality could not be established in this lesson. Students did learn about local plants, flowers, and trees; but a connection to global environment was not observed in this lesson.

Key 3: Learning is supported by strong partnerships with local associations, organizations, agencies, and businesses. In five of the 10 lessons that were observed, evidence supported strong relationships with local businesses and/or organizations. Therefore, 50% of the lessons that were observed met the third key of successful PBE programs as set forth by PEEC (2003).

Kindergarten met Key 3 with their connection to The Scotland Yard, the business that donated all of the seeds and plants for the students to study.

First grade did not meet Key 3 in the lesson that was observed. Recommendations on how to implement Key 3 into this lesson are explored further in Chapter 5.

Second grade did not meet this key in the lesson that was observed. Recommendations on how to implement Key 3 into this lesson are explored in Chapter 5.

Third grade met Key 3 in the lesson that was observed. Third grade partnered with the Atlanta Zoo and the Atlanta Aquarium to explore local and global animal species and their habitats.

Fourth grade met Key 3 in the lesson that was observed. The fourth-grade teachers partnered with the U.S. Air Force to obtain a grant for the rocket kits the students built.

Fifth grade did not meet this key. Further exploration as to how Key 3 could have been implemented into this lesson is discussed in Chapter 5.

Middle school social studies met this key by inviting a local historian to come in and talk to the students about Cashiers then and now.

Middle school math did not meet this key. Examples of how this key could have been met in this lesson are discussed in Chapter 5.

Middle school science met this key with their partnership with Camp St. Christopher. Summit Charter School has been sending their eighth graders to Camp St. Christopher since 2008.

Middle school language arts did not meet Key 3. Exploration on how to incorporate local business and agency partnerships is discussed in Chapter 5.

Key 4: Learning is interdisciplinary and custom tailored to local opportunities. Nine of the 10 lessons that were observed showed evidence of custom-tailored learning connected to local opportunities. Therefore, 90% of the lessons observed met the fourth key of the national standards for successful PBE programs as set forth by PEEC (2003).

Kindergarten met Key 4 with their interdisciplinary frog unit. The unit covered North Carolina science, math, reading, and writing goals for kindergarten, while focusing on local themes.

First grade met Key 4 in the lesson observed. Social studies, geography, math, language arts, and art were incorporated into this grammar lesson. Local mapping of geography and businesses gave students an idea about farther and farthest, closer and closest, bigger and biggest.

Second grade met Key 4 in the lesson that was observed. North Carolina writing, reading, science, and art goals were covered in this lesson.

Third grade met Key 4 in the lesson that was observed. Science, language arts,

social studies, and math were integrated into the Atlanta Zoo and Atlanta Aquarium quest.

Fourth grade met Key 4 in the lesson that was observed. Rocket building incorporated science, math, technology, language arts, and social studies. Students learned about astronauts, the space program, the Air Force, and the purpose of rockets in this unit.

Fifth grade met this goal during their STEAM lesson. This lesson covered North Carolina standards in science, math, engineering, and language arts.

Middle school social studies met Key 4 during the lesson that was observed. Local history, writing, social studies, and economics were incorporated into this unit of Cashiers then and now.

Middle school math met Key 4 with integrated math, technology, and engineering goals.

Middle school science met Key 4 with integrated science, writing, social studies, and critical thinking skills.

Middle school language arts met Key 4 by integrating language arts and science.

Key 5: Local learning serves as the foundation for understanding and participating appropriately in regional and global issues. Four of the 10 lessons that were observed showed evidence of students participating in studies that will help them understand local and global issues. Therefore, 40% of the lessons that were observed met Key 5 of the national standards of successful PBE programs as set forth by PEEC (2003).

Kindergarten did not meet Key 5 in the lesson that was observed. Recommendations for integrating Key 5 in the observed lesson are discussed in Chapter 5.

First grade did not meet Key 5 in the lesson that was observed. Recommendations for integrating Key 5 in this lesson are discussed in Chapter 5.

Second grade did not meet Key 5 in the lesson that was observed. Recommendations for implementing Key 5 in this lesson are discussed in Chapter 5.

Third grade met Key 5 during their Atlanta Zoo quest. Students learned about many animals, locally and globally, and how these animals are connected by different ecosystems. Students learn the economics of the zoo as well. For example, students learned that the only country in the world to own pandas is China. All pandas that are seen at zoos all over this country and others are leased from China. Students also learned that scientists from all over the world often collaborate on zoo species and their care.

Fourth grade met Key 5 during their rocket unit. Model rockets were compared to real rockets. Flight paths and patterns were analyzed and compared to those of real rocket travel paths. Rocket usage and global potential benefits were discussed.

Fifth grade met Key 5 during their extension time of the egg drop. After students completed their egg drop, the teacher had them research and explore potential applications for their design beyond the Summit classroom.

Middle school social studies did not meet Key 5. An exploration for ways to incorporate Key 5 into this lesson is discussed in Chapter 5.

Middle school math did not meet Key 5. In Chapter 5, recommendations for Key 5 integration into this math unit are discussed.

Middle school science met Key 5 in the observed lesson. Naturalists explain to students how each sea animal is important to the survival of the ecosystem and how that ecosystem is connected to other ecosystems around the world.

Middle school language arts did not meet Key 5 in the lesson that was observed.

Implications and recommendations are discussed in Chapter 5.

Key 6: PBE programs are integral to achieving other educational goals.

Eight of 10 lessons that were observed showed evidence that PBE is integral to achieving other academic goals at Summit Charter School. Therefore, 80% of lessons that were observed met the sixth standard of successful PBE programs as set forth by PEEC (2003).

Kindergarten met Key 6 in the observed lesson by using a local frog study to meet North Carolina kindergarten standards in the content areas of math, science, reading, and art.

First grade met Key 6 in the observed grammar lesson. A connection to North Carolina standards in social studies was observed with the use of mapping skills to support the language arts lesson.

Second grade did not meet Key 6 in the lesson that was observed. Recommendations for implementation of Key 6 into this lesson are discussed in Chapter 5.

Third grade met Key 6 in preparation for their zoo trip. The third-grade teacher shared student research projects that were completed about different zoo animals. Research projects met science, technology, and language arts standards of North Carolina.

Fourth grade met Key 6 during the observed lesson. Science goals of North Carolina curriculum were met along with language arts and social studies standards.

Fifth grade met Key 6 during the observed lesson. STEAM goals of Summit overlapped with North Carolina standards in science, math, technology, and language arts in the observed lesson. Critical thinking and problem solving, 21st century goals that Summit incorporates, were also supported by this lesson.

Middle school social studies met Key 6 during the observed lesson. North Carolina standard course of study includes a history of North Carolina that was covered in this lesson.

Middle school math met Key 6 by incorporating 21st century skills of critical thinking and collaboration. Communication and creativity were also evident in this lesson. Summit strives to meet 21st century goals within its PBE curriculum.

Middle school science met Key 6 in their barrier island quest. North Carolina standard course of study includes an in-depth study of Earth's hydrosphere. The connectivity of the hydrosphere and the surrounding ecosystems was covered in multiple lessons on this trip.

Middle school language arts met Key 6 by incorporating North Carolina writing standards as part of the common core curriculum. This lesson also touched on science essential standards that are part of the state of North Carolina's curriculum for middle school.

Key 7: Learning is grounded in and supports the development of a strong and personally relevant connection to one's place. Five of the 10 lessons that were observed showed evidence that the learning was connecting the students to their local place. Therefore, 50% of the lessons that were observed met Key 7 of the national standards of successful PBE programs as set forth by PEEC (2003).

Kindergarten met Key 7 of a successful PBE program during the observed lesson. The frog unit connected students to their own homes, streams, and local ponds. Students told stories of frogs they had seen in their own places.

First grade met Key 7 during the observed lesson. The teacher used local examples that students were familiar with to connect the grammar lesson to the students'

place. The teacher used well known landmarks in the town of Cashiers and surrounding areas such as Lake Glenville, Fairfield Lake, Ingles, Buck's Coffee Shop, and The Corner Store.

Second grade did not meet Key 7 in the lesson that was observed. Recommendations for inclusion of key 7 in a how-to lesson are explored in Chapter 5.

Third grade did not meet Key 7 in the observed lesson. The Atlanta Zoo trip connected students to global ecosystems, but a direct connection to their place in Cashiers, North Carolina was not observed. Recommendations for implementing Key 7 in the zoo quest are explored in Chapter 5.

Fourth grade did not meet Key 7 in the lesson that was observed. While students were engaged, a direct connection to one's place could not be identified in the observed lesson.

Fifth grade met Key 7 of a successful PBE program in the observed lesson. Students shared how their egg drop containers could be useful to their community of Cashiers and to the global community beyond the Appalachian Mountains.

Middle school social studies met Key 7 in the observed lesson. Learning directly connected students to the history of their place and also to the present in their place of Cashiers, North Carolina.

Middle school math did not meet Key 7 of a successful PBE program. Further exploration and recommendations for Key 7 are discussed in Chapter 5.

Middle school science did not meet Key 7 with their barrier island quest. While students were engaged and North Carolina standards were addressed, direct evidence connecting students to one's place was not observed. Recommendations for implementation are discussed in Chapter 5.

Middle school language arts met Key 7 in the observed lesson. Students were in their place; writing about their place in an effort to understand their place a little more.

Based on the observations, using the observation protocol sheets, the overall most successful components of the place-based program at Summit Charter School were Keys 1, 4, and 6. Keys 1 and 4 were met with a 90% observation rate, while Key 6 was met with an 80% observation rate. Keys 1 and 4 related directly to local themes and local opportunities for learning; Key 6 connected PBE into other educational goals.

Keys 2, 3, and 7 were met with a 50% observation rate, while Key 5 was met with a 40% observation rate. Keys 3 and 5 allude to the responsibility of PBE to connect students to global issues. Key 3 is directly related to connecting the learning with local partnerships with businesses and organizations in the surrounding community. Key 7 is fostering a strong connection to one's place through the place-based learning.

Based on the observations, generalizations can be made that while learning at Summit Charter School is strong when applied to local places, concepts, and themes, there is not strong evidence that local learning is applied to global situations.

Document Analysis Using Horsch's (2008) Logic Model

In a continued effort to understand the specific role that PBE plays at Summit Charter School, the remaining qualitative data were placed into Horsch's (2008) Logic Model based on trends and themes that arose during analysis. Documents were hand coded for emerging patterns and themes. The themes that emerged were broken into the following categories: financial, partnerships, PBE and academics, and school culture. The researcher re-read documents and placed color codes on items as they related to financial, partnerships, academics, and school culture inputs into the PBE program at Summit Charter School.

Program Evaluation Question

How well does the PBE program at Summit Charter School align with and meet the national standards as set forth by PEEC and to what extent does this impact Summit's overall education program? Research was collected and coded during phase one of the methodology for trends and themes. The following patterns of information emerged: financial, partnerships, academics, and school culture. Coded data from school board minutes, observations, and write-in responses on the stakeholder survey were organized by each of the seven keys of successful PBE programs as set forth by PEEC (2003) and further organized by each of the emerging categories as stated above.

Tables 3-10 represent the coded data as they coincide with the national standards of a successful PBE program.

Table 3

Inputs into PEEC Key 1

PEEC Key 1:	Learning takes place on site in the school yard and in the local community and environment, focusing on local themes, systems, and content.			
Input Categories	Financial	Partnerships	Academics	School Culture
Data	SFA raises $6000 for local quests	Trail to Every Classroom staff development on campus to learn how to use campus as a PBE resource	Creation of PBE STEAM program in grades 3 to 5	Campus Expansion to include high school
	Summit purchases an additional 11.5 acres contiguous to current campus	Heritage Clubs explore history of cashiers on the campus of Camp Merri-Woode	Curriculum coordinator position created to help combine PBE with common core state standards	Yearly overnight trips to Earthshine, Pisgah Forest for rock climbing, Barrier Islands
	$21,000 received from local organizations for Quest program		Heritage Clubs to study history of Cashiers	Over 50 quests planned a year in and around Cashiers and beyond for the past 3 years.
				Intentional PBE initiative to connect to history of Cashiers.

Table 4

Inputs into PEEC Key 2

PEEC Key 2:	Project-based learning experiences contribute to the community's vitality and environmental quality and to supporting the role the community plays in fostering global environmental quality.			
Input Categories	Financial	Partnerships	Academics	School Culture
Data	Taste of the Plateau- fundraiser for Summit that showcases local chefs and restaurants	Atlanta Zoo- provides project-based experience for 3rd graders that connects to global ecosystem	Educational gardens on campus	Martin Luther King Service Day- Summit students participate in community service on campus and around Cashiers on MLK day each year.
		Cashiers Valley Preschool- students can walk to preschool, read to young children, study growth and development, and provide community service to the preschool	Overnight learning excursions each year: Earthshine, camping in Pisgah Forest, barrier islands, and zoo Atlanta	

Table 5

Inputs into PEEC Key 3

PEEC Key 3:	Learning is supported by strong and varied partnerships with local associations, organizations, agencies, and businesses.			
Input Categories	Financial	Partnerships	Academics	School Culture
Data	Bridge the Gap campaign- Goal is to get 100 organizations to pledge $3000 for 3 years.	Cashiers Valley Preschool	Highlands-Cashiers land trust to lead heritage clubs on hikes to discover local herbs and plants and their usages.	
	Wade Hampton donates funds for 30 iPads	Local Country Clubs: Mountain Top, High Hampton, Wade Hampton, Country Club of Sapphire Valley, Trillium	Highlands Biological Station- Provides on campus, hands-on learning on many biological aspects. Examples: Insect quest for kindergarten, birds of prey for 3rd and 4th grade, plant dissection and DNA extraction for middle school.	
		Tour de Cashiers- Summit helps the chamber of commerce by providing volunteers for this bicycle race through the plateau each summer		
		Cashiers Rotary Club donates 25 tickets to Summit for the Greenville Symphony each year.		

Table 6

Inputs into PEEC Key 4

PEEC Key 4:	Learning is interdisciplinary and costumed tailored to local opportunities.			
Input Categories	Financial	Partnerships	Academics	School Culture
Data		Camp Merri-Woode lets Summit use the camp for local learning and history of Cashiers	Pisgah Forest climbing expedition	Overnight learning quests in 3rd, 6th, 7th, and 8th grades
			Third grade salamander study in the streams on campus	School wide quests average 50/year
			K and second grade insect quest	
			Eighth grade practice water testing on campus, then hiking AT to do water monitoring	
			Spring Intensives on campus, project-based, tied to common core	

Table 7

Inputs into PEEC Key 5

PEEC Key 5:	Local learning serves as the foundation for understanding and participating appropriately in regional and global issues.			
Input Categories	Financial	Partnerships	Academics	School Culture
Data	Cashiers rotary funds 25 students to attend the Greenville Symphony	Atlanta Zoo	Eighth grade trip to Barrier islands- learn how local water sources are connected to global water sources	Strategic plan to include historical Cashiers connections to PBE at Summit

Table 8

Inputs into PEEC Key 6

PEEC Key 6:	PBE programs are integral to achieving other educational goals.			
Input Categories	Financial	Partnerships	Academics	School Culture
Data	Grants secured from local organizations to go to 1 to1 iPad goal	Humane Society- Middle School helping hands SEEC	Spring Intensives- project-based PBE groups	Quests
		Cashiers Literacy Council- Assist with reading education	Challenge group fourth and fifth grade to explore PBE topics	Educational Gardens
		Zachary-Tolbert House- Cashiers historical society to help bring local history alive	STEAM to connect to PBE	Greenhouse

Table 9

Inputs into PEEC Key 7

PEEC Key 7:	Learning is grounded in and supports the development of a strong and personally relevant connection to one's place.			
Input Categories	Financial	Partnerships	Academics	School Culture
Data	Summit receives funds from local organizations for local quests	Ingles grocery	Trails on campus	Quest
	Summit purchases 11.5 acres to expand existing campus	Several local country clubs: Wade Hampton High Hampton Mountain Top Country Club of Sapphire Valley Cashiers Non-Profits: Chamber of Commerce Fishes and Loaves Fire Station Humane Society Boys and Girls Club Cashiers library	Gardens	Amphitheater

After all input data were entered into the tables above, a more comprehensive look into the PBE program at Summit Charter School was conducted by using the Horsch (2008) Logic Model. The following table represents a summary of the data collected as they pertain to inputs, resources, outputs, and outcomes. It was determined by the researcher to what extent each key was represented in the data that were collected.

First, each input was looked at to determine if that specific input could be directly

related to one of the keys of successful PBE programs. Table 10 summarizes the

researcher's findings of the inputs into Summit's PBE program to determine which of the

seven keys of successful place-based programs were achieved by that input.

Table 10

PBE at Summit Evaluated using Horsch's (2008) Logic Model

Inputs	Resources	Outputs	Outcomes As related to Seven Keys to a Successful PBE program
Financial	Grants, Fundraising, State Funds	1 to 1 iPads, Quest program, campus expansion	1, 2, 3, 5, 6, 7
Partnerships	Country Clubs, Local Non-profits, Local Businesses	Community service opportunities for students, Connection to local businesses/ organizations create a connection to students' place	1, 2, 3, 4, 5, 6, 7
Academics	PBE intensives, Challenge group, STEAM, quests, educational gardens, trails on campus	Connecting academics with surrounding environment and community	1, 2, 3, 4, 5, 6, 7
School Culture	Summit family Association, Martin Luther King Day service projects, Bi-weekly school-wide round up, quests, Staff Development to include PBE and History of Cashiers, character education, parent volunteer hours	Summit culture intentionally includes community service opportunities, which give back to the community and teach students more about their local community. Parents are invested stakeholders at Summit Charter School.	1, 2, 4, 5, 6, 7

Initial findings would indicate that, indeed, almost each input could be directly

related to a PEEC key outcome. Further investigation was needed to determine the extent

to which each key was met at Summit. The researcher created a scale to determine

baseline data for this program evaluation that would determine a key to be present and

successful at Summit Charter School. The researcher used data collected to determine if

one of the seven keys of successful PBE programs was met at Summit. If 10 or more

evidences supported each of the seven keys, the key was considered a success at Summit.

If five to nine evidences were present, the key was considered emerging. If zero to four

evidences presented themselves in that key, it was considered not met at Summit.

Key 1: Learning takes place on site in the school yard and in the local

community and environment, focusing on local themes, systems, and content. This

key presented 12 individual evidences of support during this investigation. There were

three evidences of financial input, two evidences of partnership inputs, three evidences of

academic input, and four evidences of school culture. This key is considered to have

been met at Summit and can be considered a direct part of the school's success, both as a

PBE institution as well as a public school of learning.

Key 2: Project-based learning experiences contribute to the community's

vitality and environmental quality and to supporting the role the community plays

in fostering environmental quality. Key 2 presented six pieces of evidence to support

its role at Summit Charter School. There was one financial input associated with this

key, two partnerships inputs, two academic inputs, and one evidence that supported

school culture for this key. With six evidences, this key is considered to be emerging.

While it is present at Summit Charter School, it could not be confidently stated by this

researcher that it directly impacts the success of Summit Charter School as a whole.

Key 3: Learning is supported by strong and varied partnerships with local

associations, organizations, agencies, and businesses. Key 3 yielded eight pieces of evidence to support its application on the campus of Summit Charter School. Inputs into Key 3 included two financial, four partnerships, two academic, and zero school culture evidences. With eight pieces of evidence, this key is considered to be emerging. It is present on the campus of Summit Charter School, but the researcher cannot state with confidence that it directly impacts the overall success of Summit Charter School as a PBE institution.

      Key 4: Learning is interdisciplinary and costumed-tailored to local opportunities. Key 4 presented eight individual pieces of evidence to support its implementation of Summit's campus. There were no financial inputs associated with Key 4. There was one partnership, five academic, and two school culture evidences associated with this key. With eight evidences presented, Key 4 is implemented at Summit, but the researcher could not state with confidence that it directly impacts the overall success at Summit Charter School.

      Key 5: Local learning serves as the foundation for understanding and participating appropriately in regional and global issues. Key 5 presented four pieces of individual evidences to support its application on the campus of Summit Charter School. There was one evidence found by this researcher in each of the input categories: financial, partnerships, academics, and school culture. With four pieces of evidences, this key was determined to not have been met at Summit Charter School. This key does not relate to the overall success at Summit Charter School.

      Key 6: PBE programs are integral to achieving other educational goals. Key 6 presented with 10 individual evidences to support its role on Summit Charter School's campus. There was one financial input evidence to support Key 6. There were three

partnership evidences, three academic evidences, and three school culture evidences to support the implementation of Key 6 at Summit. It can be stated with confidence by this researcher that Key 6 plays a direct role in the success of Summit Charter School as a PBE institute as well as the overall success of the school.

Key7. Learning is grounded in and supports the development of a strong and personally relevant connection to one's place. Key 7 presented nine pieces of evidence to support its application at Summit Charter School. There were two financial inputs, three partnership inputs, two academic inputs, and two school culture inputs found by the researcher to support this key. With nine pieces of evidence, this key is considered to be emerging at Summit Charter School.

Review of Criteria for Successful PBE Program

The criteria for Summit Charter School to be considered a successful PBE institute, with PBE playing a significant role in the success of the school, would be indicated if all seven of the keys of a successful PBE program set forth by PEEC (2003 are met by the baselines data. If two or more keys are found to be met, no more than one key not met, and the rest found to be emerging, the school would be considered to be an emerging PBE institute; and further research would be needed to determine how to shift the school into a successful PBE institute. If two keys are found to not be met and the rest are emerging or successful, the school would be considered at risk of being a successful PBE institute. Further research would be needed to determine how best to address the keys that are not currently being met at Summit Charter School. If all of the keys are found to be not met, the school would be considered to not be a successful PBE institute. Recommendations are included for the applicable scenario in the concluding chapter of this program evaluation.

Summary

In the data collected and analyzed by the researcher, it was determined that two of the keys of a successful PBE program were met. Those two keys were Keys 1 and 6; therefore, it can be stated by the researcher with confidence that learning at Summit Charter School takes place on site, in the school yard, and in the local community and environment, focusing on local themes, systems, and content. The researcher can also state with confidence that PBE at Summit Charter School is integral in achieving other educational goals.

After research and analysis, there were four keys that were determined to be emerging on the campus of Summit Charter School. Those were Keys 2, 3, 4, and 7. The research supports the presence of these keys on campus, but there was not enough evidence to confidently state these as areas of success. Furthermore, while evidence supports the presence of these particular keys of a successful place-based program on the campus of Summit Charter School, there was not enough evidence to show how these keys directly impact the teaching and learning at Summit as a whole.

Project-based learning experiences at Summit Charter School seem to contribute to the community's vitality and environmental quality; however, there was little evidence to suggest that Summit supports the role the community plays in fostering global quality. This key is considered to be emerging.

There was evidence suggesting that learning at Summit Charter School is supported by strong and varied partnerships with local associations, organizations, agencies, and businesses; however, there was not enough evidence collected to suggest that these partnerships play a role in the overall success of the school. This key is considered to be emerging.

Evidence did support that learning at Summit Charter School is interdisciplinary and costumed tailored to local opportunities. There was not enough support, however, by the evidence collected and analyzed by the researcher to confidently connect this key with the overall teaching and learning at Summit Charter School. This key is considered to be emerging.

Learning is grounded in and supports the development of a strong and personally relevant connection to one's place at Summit Charter School and in the community of Cashiers. While the researcher made several connections between the school and community, there was not enough evidence presented to confidently connect this key to the overall teaching and learning at Summit Charter School. This key is considered to be emerging.

One of the keys to successful PBE programs was found to not be met on the campus of Summit Charter School. Local learning serves as the foundation for understanding and participating appropriately in regional and global issues. There was not enough evidence to support the implementation of this particular key at Summit Charter School.

Using the criteria set forth by the researcher, it was determined that two of the seven keys for a successful PBE program were met, four of the seven keys were emerging, and one key was not met. These data indicate that Summit Charter School is emerging as a PBE institution. Further implications are explored in the following chapter.

Chapter 5: Conclusions

Statement of the Problem

Summit Charter School is a tuition-free public school that operates as a PBE school. The school has been operating as a PBE school since 2007. In that time, this unique school has never conducted a formal program evaluation to determine what role PBE plays in the overall success of the school. The school has made claims that stakeholders are invested and content with the school operating as a PBE institution. At Summit Charter School, PBE has been incorporated into the curriculum since 2007. Summit is thriving as a tuition-free charter school with wait lists for seven of the nine grades.

While stakeholder attitudes towards PBE tend to be favorable in this distinctive community, accountability and demand for excellence require a comprehensive examination on how PBE connects to Summit Charter School. A program evaluation was designed by the researcher to investigate PBE at Summit Charter School.

The researcher investigated how well the PBE program at Summit Charter School aligns with and meets the national standards and to what extent this impacts Summit's overall education program. Specifically, the researcher investigated the question, "To what extent does PBE impact the teaching and learning at Summit Charter School?"

Discussion of the Findings

Research was conducted in two stages. The first stage of research involved data collection from stakeholder surveys, board meeting minutes, and observations conducted on the campus of Summit Charter School. Complete analysis of this data can be found in Chapter 4. Stage two of this research analyzed the data collected from stage one, separating data into trends and patterns to determine Summit's connection to the keys of

successful PBE programs as set forth by PEEC (2003. These data were used to determine the overall connection of PBE at Summit Charter School to the overall education program at Summit. The findings of stage two will be further discussed here.

Summit Charter School was labeled as an emerging PBE school. The emerging label was determined after the researcher investigated and analyzed Summit Charter School's connection to each of the keys of a successful PBE program. It was determined that two of the keys of a successful PBE program were met at Summit Charter School. One of the keys of a successful PBE program was not met at Summit. The rest of the keys were found to be emerging.

The researcher outlined baseline data prior to the investigation to determine with confidence if each of the keys was met at Summit and, if so, to what extent the key played in the overall education at Summit Charter School. The following is a summary of the baseline data used to determine the presence of each key and the extent to which that key was found at Summit.

The researcher used data collected to determine if one of the seven keys of successful PBE programs was met at Summit. If 10 or more evidences support each of the seven keys, the key will be considered a success at Summit. If five to nine evidences present themselves, the key will be considered emerging. If zero to four evidences present itself in that key, it will be considered not met at Summit.

Summit Charter School would be considered a successful PBE institute, with PBE playing a significant role in the success of the school, if all seven of the keys of a successful PBE program are met by the baselines described above. If two or more keys are found to be met, one key not met, and the rest found to be emerging, the school will be considered an emerging PBE institute and further research would be needed to

determine how to shift the school into a successful PBE institute. If two keys are found

to not be met and the rest are emerging or successful, the school would be considered at

risk of being a PBE institute. Further research would be needed to determine how best to

address the keys that are not currently being met at Summit Charter School. If all of the

keys are found to be not met, the school will be considered to not be a successful PBE

institute.

The findings of this researcher concluded that two keys were met, four keys were

considered to be emerging, and one key was not met at Summit, placing Summit in the

emerging category. While strong evidence was found as to the connection between PBE

and Summit Charter School, a direct connection to each of the seven keys of successful

PBE programs was not established by the researcher.

Of the triangulated data that were collected for research purposes, two of the three

areas showed positive correlations between the success of Summit Charter School and

PBE. Stakeholders present positive perceptions between the school and PBE. Inputs that

went into Horsch's (2008) Logic Model also presented with a positive correlation

between the school and PBE as evidenced by outcomes in the model.

While observations did not fully align with national PBE standards as set forth by

PEEC (2003), it can be stated with confidence that Summit Charter School is providing

PBE inputs that produce outcomes that align with some of the seven keys of a successful

PBE program.

Recommendations

The purpose of the program evaluation was to determine the overall role that PBE

plays at Summit Charter School. While evidence supports the presence of PBE on the

campus of Summit and connections can be made to the national standards of a successful

PBE program as set forth by PEEC (2003, the extent of those connections remains undefined.

In order for Summit to verify its claims as a PBE institute of learning, a more direct connection to the national standards of PBE needs to be achieved. General recommendations will be made in the following paragraphs, with more detailed recommendations by key and in direct connection with the observations following.

The researcher recommends a PBE leadership conference for the administration at Summit Charter School. If PBE is to be an important part of Summit Charter School that influences both the teaching and learning that takes place, its leaders need to be fluent in the practices of PBE and, furthermore, model PBE ideals at every opportunity.

Further recommendations would be for staff development on a continuing basis that allows for an understanding of PBE, the keys to successful PBE programs, and direct opportunities for lesson plan development that will include these keys. The researcher recommends that time be allotted in the monthly schedule that allows for collaboration among the staff for ways to implement more of the keys of successful PBE into Summit's curriculum.

> Where place assumes a central role in PBE, what is taught, how it is taught, and when it is taught, are guided by environmental, social, and community related factors. In this way the curriculum serves the learner located within their community, to understand who they are, where they have come from, and what future directions might be, as well as celebrating the richness and uniqueness of their place and its cultural traditions. (Bartholomaeus, 2006, p. 480)

Recommendations from Observations

Key 1: Learning takes place at Summit on and around campus and in the

local community and environment, focusing on local themes, systems, and content.
Middle grades math did not meet this key in the observed lesson. The lesson observed
could have met this goal by making scale projects using buildings and landmarks in
Cashiers or even a scale model of Summit. A scale town could have been constructed.
Students could have measured distances on campus and in town and created a scale
model of Cashiers. The scale model could have been placed on display in the library,
giving other teachers opportunities to use the scale model in their lessons.

"Small worlds work wonders for children…. The world is simplified and
knowable. They provide cognitive accessibility because all the disparate elements of a
place are brought into one view" (Sobel, 2008, p. 46). Creating small models of a bigger
place helps children to understand that place in a deeper way. They can see connections
in a scale model they might miss every day.

Key 2: Project-based learning experiences contribute to the community's
vitality and environmental quality and to supporting the role the community plays
in fostering global environmental quality. PBE allows for real connections to be made
between the classroom and the community (Sobel, 2004). Using real-life projects that are
based around community issues not only brings the learning alive for the students but has
the ability to contribute positivity to real issues in the community.

Six of the observed classes did not meet this key. First grade could have met this
key by using –ER and –EST endings to compare local businesses and landmarks, which
they did, but then go a step further and connect local landforms and landmarks to global
landforms and landmarks. Second grade could have met Key 2 with a "Cashiers or
Summit" focus how-to project. Examples would be (a) how to hike the Quiet Coyote
Trail on Campus, (b) how to grow vegetables in the greenhouse on campus, or (c) how to

survive tourist season in Cashiers. After a topic for how-to discussion was picked, a comparison to a global topic that is similar would have made this lesson more intentionally PBE.

Fourth grade was very engaged with their rocket building. This lesson could have been more PBE centered by exploring where rockets are built in the world and contacting local engineers to come in and explain the purpose of rockets today.

The fifth-grade STEAM could improve PBE connections with a unit that has children research local environmental issues, plan and design a solution to that environmental issue, build and experiment with their design, and then compare their environmental issue with global environmental issues. They could also compare and contrast how other parts of the world with the same issue have tried to solve it.

Middle school math could address this key in the Cashiers scale project that was previously mentioned. Middle school language arts could help to connect plants on Summit's campus with plants in another part of the world. How do these plants connect to the local community vitality? How do these plants connect to the ecosystems around the globe?

Middle school language arts class could have addressed Key 2 by connecting the plants and their purposes with plants in other areas of the world. Are there local flora and fauna that have uses outside of this area? Key 2 also could have been met in this lesson if a direct relationship between the plants and the community's vitality had been addressed. How do these plants play into the biggest economic drawl of this region, tourism?

Key 3: Learning is varied by strong and varied partnerships with local associations, organizations, agencies, and businesses. Creating partnerships between local organizations and schools can benefit the students, the school, and the community.

PBE, at its strongest, strives for solid partnerships to enhance the educational experience of the student. Community partnerships with local schools are a big component of doing PBE to its fullest potential.

Five of the lessons that were observed did not meet this key. In the first-grade lesson that was observed, learning about –ER and –EST endings, students could have walked around campus finding big pinecones, bigger pinecones, and the biggest pinecone. Each student could have picked something and tried to find something bigger and something that was the biggest on campus. Students could connect this lesson to writing by creating a story about their pieces. They could also turn their nature into art. In order to connect to local businesses, the stories and art work could be displayed at local businesses.

Second grade could have connected with one of the local restaurants and created "how-to" make pizza instructions. Students could write the steps in class and then visit one of the local restaurants to make their pizzas according to their directions. There are several restaurants and country clubs that allow students to visit. Summit has had students grow vegetables in Summit's gardens and then take those vegetables to a country club to be prepared by a chef in a true farm-to-table experience.

Fifth grade could have addressed this key in the observed lesson by getting a local engineer, perhaps a parent, to come in and talk to the students about the design process and go over their designs. Guest speakers from local organizations are a great way to connect the classroom with the community without leaving campus.

Middle school math could have met this key in their scale projects by scaling local businesses and organizations. Students could contact the local businesses they wanted to scale and have a day to take measurements and meet with business owners. A

showcase on campus could be part of a Summit Family Association meeting which happens quarterly. Local business owners could be invited to see the scale model of their business on display. This would not only connect Summit to local businesses but also bring people to campus who have not previously been to Summit.

Key 4: Learning is interdisciplinary and custom tailored to local opportunities. PBE is guided by the principle that education is grounded in local learning experiences. PBE is an umbrella under which all other learning falls. A successful PBE program needs to be interdisciplinary so community-based projects can take place while still fulfilling academic goals.

Key 4 could have been addressed in the fifth grade observed lesson by adding mathematic formulas to their design process. Writing and reading could have been added with a written design plan and reading about engineers.

Key 5: Local learning serves as the foundation for understanding and participating appropriately in regional and global issues. Students are more likely to understand global issues if they can relate to them at a local level. PBE seeks to connect the student to nature and the community surrounding them so students can understand local issues and how they connect with larger, more global issues (Sobel, 2004).

Six observed lessons did not meet this key. While local learning was touched upon in most lessons, there was no evidence of an effort to connect to global issues. Kindergarten could have made global connections by mapping where different frogs are found around the world. First grade could have used comparative language to understand differences between environmental problems in western North Carolina compared to other parts of the world. Solutions to these problems could have been explored using comparative language. Second grade could have connected this lesson on a global scale

by choosing how-to writings about global themes.

Middle school social studies did a great study of the history of Cashiers. A focus on where immigrants settled in Cashiers would have made this lesson connection a global level. Middle School math did touch on buildings around the world. Students could have researched the buildings they were making models of to determine their purpose, who designed the building, and why that building is important to that culture. Middle school language arts could have mapped where else in the world local trees are found; what the usages of this tree are; and, if it is used as lumber, where in the world is it shipped.

Key 6: PBE programs are integral to achieving other educational goals. PBE, in success, provides the large, overlying pedagogy under which all other content areas fall. Successful place-based programs use PBE to accomplish all other academic and institutional goals.

The only grade level that did not meet this key was second grade. Other educational goals, such as science or social studies, could have been met by connecting common core standards to the how-to writings.

Key 7: Learning is grounded in and supports the development of a strong and personally relevant connection to one's place. PBE strives to connect the learner with one's place. Learning that is real to the learner, through connections to local community and environment, creates a strong connection to the learner's place.

Second grade could have met this key with a deliberate attempt to help kids understand their school and their town as they relate to the world. Third grade was observed on an overnight trip to the Atlanta Zoo. Connecting the wildlife that was at the zoo to wildlife that is found in Cashiers would have helped kids to understand the animals of their place. The fourth-grade lesson was engaging. It could have been

personally relevant to students if a direct connection between engineering rockets and Cashiers could be made. Middle school math could have made their projects about Cashiers, creating scale models of buildings and landforms in Cashiers. Middle school science could have connected the learning that occurred at the beach about the hydrosphere to local water systems.

Statement of Subjectivity

Peshkin (1988) stated that a subjective component of research is unavoidable. He further explained that it is the researcher's duty to identify one's own subjectivity and include it as part of the research process (Peshkin, 1988). To fully disclose the researcher's proximity and subjectivity in this research, the following statement has been constructed.

The researcher's educational philosophy, which shapes the mindset going into this study, includes the active pedagogy of environmental contact for students in order to satisfy the natural curiosity of the surrounding world within the educational framework. Environmental education is more than just the exposure of a child to the environment in which they live; it is the purposeful teaching of respect, stewardship, and importance of interactions between nature and humans.

The researcher disclosed previously that the school setting in which the research was conducted was the school in which the researcher currently teaches. The researcher is involved in varying aspects of school growth and public relations within the community where the school resides. Furthermore, the researcher is an active member of the community surrounding the school. It is an undeniable fact that the researcher feels strong admiration for Summit Charter School and the mountain community which surrounds it.

E. Pluribus Unum. Out of Many. Peshkin (1988) described this form of subjectivity as our preconceived ideas into the situation that we observe. Looking at the campus of Summit Charter School, the students, the parents, the community members, and each detail that goes into making this school, the researcher is one of many who has put in countless hours for its success. In being a part of seeking excellence in education, it cannot be denied that the researcher also seeks acknowledgement for a unique educational program.

It is with full disclosure that the researcher acknowledges the hopes that the research conducted on the campus of Summit Charter School could be used in the bigger education arena to spread PBE as a positive means of connecting academics and state educational goals with the nature and community that surround each school.

Conclusion

It is the opinion of this researcher that more resources should be put into the PBE program at Summit Charter School. The stakeholders are invested in the school. The community supports the school. There are key pieces of the charter school puzzle that come together perfectly in this small mountain town. Strengthening components of the PBE program would help Summit achieve the school's desire for more recognition as a PBE institute. There are valuable pieces of PBE in action at Summit.

Summit Charter School is emerging in its application of the keys of a successful place-based program. With focused effort, Summit could become recognized as a national model of PBE.

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Appendix A

Letter to the Summit Head of School

Danny Howell, Head of School   August 10, 2015
Summit Charter School

Mr. Howell,

      Summit Charter School provides a unique learning experience for its students with its focus on place-based education. Summit has operated as a place-based education school for the last nine years. Since the time of induction of the program there has not been a formal evaluation that connects the place-based education program to the success of the school. With your permission, I would like to conduct a formal program evaluation on the place-based education program at Summit. My research will focus on the following question:

How well does the place-based education program at Summit Charter School align and meet the national standards as set forth by the Place-Based Education Evaluation Collaborative and to what extend does this impact Summit's overall education program?

This program evaluation will be used to appraise the prevailing research question: To what extent does place-based education impact the teaching and learning at Summit Charter School?

    It is my sincere hope that the research conducted will be beneficial to the school and that the information and data will support growth at Summit Charter School. I look forward to working with you and sharing the results of this research with stakeholders' of Summit Charter School. Your signature below indicates acquiescence for me to conduct research on the campus of Summit Charter School.

Thank you,

Hannah Snow Moody

I, Danny Howell, grant permission for Hannah Moody to conduct a program evaluation on the campus of Summit Charter School during the 2015-2016 school year.

_____   _____

Danny Howell, Head of School Signature   Date

Appendix B

Letter Accompanying Stakeholder Survey

Dear Summit Stakeholders,

The school culture of Summit Charter School is one that greatly relies on the input of its invested partners. From parents to community members to staff members, your time, effort and input make this a great learning environment. As many of you know I am working on my doctorate degree in Curriculum and Instruction from Gardner-Webb University. As part of my graduate research I will be conducting a program evaluation on the place-based education (PBE) program at Summit.

 A crucial component of this study is an investigation on how stakeholders perceive place-based education at Summit. Your input is not only valuable, but critical to my research. The attached survey will help me to understand the stakeholders' opinion of Summit's place-based education based on national PBE standards, as well as provide insight to specific aspects of PBE on the campus of Summit and in our surrounding community.

Responses to the surveys will remain anonymous. Confidentiality will be maintained throughout this process.

I will be happy to answer any questions or concerns you may have about my research. Please contact me at my email or phone number below. I hope that you will take the time to fill out this survey and return it to school in the green folders by _____.

Thank you in advance for your support and participation!

Hannah Snow Moody

Contact Information:

** Contact information was included in the letter sent to parents, but left out here to keep the school and community's identity hidden in order to maintain confidentiality of this study.

Appendix C

Stakeholder Survey

Stakeholder Survey

Summit Charter School Stakeholder Survey

Please respond to the following statements regarding the place-based education program at Summit by circling the degree to which you agree or disagree with the statement. Your input is very valuable to the research of the place-based education program. Space is provided below each statement for additional comments you may have on that particular topic. Thank you in advance for your participation!

1. Learning takes place at Summit on and around the campus and in the local community and environment, focusing on local themes, systems, and content.
   1-Strongly Agree   2- Agree 3- Neutral   4- Disagree   5- Strongly Disagree

2. Project-based learning experiences contribute to the community's vitality and environmental quality and to supporting the role the community plays in fostering global environmental quality.
   1-Strongly Agree   2- Agree 3-Neutral   4-Disagree   5-Strongly Disagree

3. Learning is supported by strong and varied partnerships with local associations, organizations, agencies and businesses.
   1-Strongly Agree   2-Agree   3-Neutral   4-Disagree   5-Strongly Disagree

4. Learning in inter-disciplinary and custom-tailored to local opportunities.

   1-Strongly Agree   2-Agree   3-Neutral   4-Disagree   5-Strongly Disagree

5. Local learning serves as the foundation for understanding and participating in regional and global issues.

   1-Strongly Agree   2-Agree   3-Neutral   4-Disagree   5-Strongly Disagree

6. Place-based education is institutional to achieving educational and character-building goals at Summit.

    1-Strongly Agree   2-Agree   3-Neutral   4-Disagree   5-Strongly Disagree

7. Learning is grounded in and supports the development of a strong and personally relevant connection to one's place.

    1-Strongly Agree   2-Agree   3-Neutral   4-Disagree   5-Strongly Disagree

8. As an invested stakeholder at Summit Charter School I can explain the term "place-based education."

    1-Strongly Agree   2-Agree   3-Neutral   4-Disagree   5-Strongly Disagree

9. Place-based education is an important part of the culture of Summit Charter School.

    1-Strongly Agree   2-Agree   3-Neutral   4-Disagree   5-Strongly Disagree

10. I understand how Summit Charter School implements its place-based education program.

    1-Strongly Agree   2-Agree   3-Neutral   4-Disagree   5-Strongly Disagree

11. I understand the goal of place-based education at Summit Charter School.

    1-Strongly Agree   2-Agree   3-Neutral   4-Disagree   5-Strongly Disagree

** In space below, feel free to add any additional comments regarding the place-based education program at Summit Charter School.

Appendix D

Classroom Observation Form

Class:			Date:		Time:	
1. Learning takes place on site in the school-yard and in the local community and environment, focusing on local themes, systems, and content.	2. Project-based learning experiences contribute to the community's vitality and environmental quality and to supping the role the community plays in fostering global environmental quality.	3. Learning is supported by strong and varied partnerships with local associations, organizations, agencies and businesses.	4. Learning is interdisciplinary and costumed tailored to local opportunities.	5. Local learning serves as the foundation for understanding and participating appropriately in regional and global issues.	6. Place-based education programs are integral to achieving other educational goals.	7. Learning is grounded in and supports the development of a strong and personally relevant connection to one's place.