BILINGUAL CURRICULUM DEVELOPMENT AND IMPLEMENTATION IN THAILAND: A CASE STUDY OF SATIT BILINGUAL SCHOOL OF RANGSIT UNIVERSITY

BY

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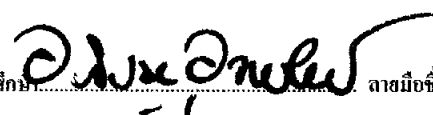
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คำสำคัญ : การพัฒนาหลักสูตรทวิภาษา, การจัดการเรียนการสอนสำหรับหลักสูตรทวิภาษาใน ประเทศไทย, กรณีศึกษาโรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิต

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ในศตวรรษที่ผ่านมานั้นได้มีการเปลี่ยนแปลงอย่างมากกับการศึกษาในประเทศไทย และ ในปัจจุบันกระแสโลกาภิวัตน์เป็นปัจจัยพื้นฐานที่ส่งผลต่อการเปลี่ยนแปลงระบบการศึกษาของไทย เช่นเดียวกับประเทศอื่นๆ ทั่วโลก ด้วยเหตุที่สังคมไทยได้แสดงท่าทีที่ชัดแจ้งในการปรับตัวสู่การ เป็นสังคมพหุวัฒนธรรม และสังคมทวิภาษา ทำให้ภาครัฐเห็นความจำเป็น ในการปฏิรูปหลักสูตร เพื่อเตรียมแรงงานที่มีคุณลักษณะความเป็นทวิภาษา และเท่าทันกระแสความเปลี่ยนแปลงในสังคม นานาชาติ โดยเฉพาะอย่างยิ่งในกลุ่มประเทศเพื่อนบ้านที่เป็นสมาชิกในสมาคมประชาชาติเอเซีย ตะวันออกเฉียงใต้ หรือ ASEAN ด้วยกัน ในขณะเดียวกันก็ไม่ละเลยการเรียนการสอนวัฒนธรรมไทย

วัตถุประสงค์ของดุษฎีนิพนธ์นี้ได้แก่ 1) เพื่อศึกษาเปรียบเทียบหลักสูตรทวิภาษาแบบ องค์รวมของโรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิตกับกรอบหลักสูตร English Program (EP) มาตรฐานที่กำหนดโดยกระทรวงศึกษาธิการ 2) เพื่อศึกษาเปรียบเทียบวิธีการจัดการเรียนการสอนที่ โรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิตใช้ในการจัดการหลักสูตรทวิภาษาแบบองค์รวม กับรูปแบบ การจัดการเรียนการสอนของโรงเรียนทวิภาษาอีกโรงเรียนหนึ่งเป็นกรณีเปรียบเทียบ และ 3) เพื่อ สำรวจความคิดเห็นของผู้ปกครองนักเรียนโรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิตที่มีต่อหลักสูตร ทวิภาษาแบบองค์รวม ดุษฎีนิพนธ์นี้เป็นการศึกษาที่เกี่ยวเนื่องกันสองส่วน ส่วนแรกเป็นการศึกษา เชิงลึกว่าโรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิตได้ปรับและควบรวมหลักสูตรแบบ English Program ระดับต่างๆ ของกระทรวงศึกษาธิการเข้ากับหลักสูตรทวิภาษาอย่างไร และศึกษาถึงวิธีการบริหาร จัดการหลักสูตร โดยทำการศึกษาเปรียบเทียบกับโรงเรียนทวิภาษาอีกหนึ่งโรงเรียน ส่วนที่สองเป็น การศึกษาเชิงสำรวจเกี่ยวกับทัศนคติและความคิดเห็นของผู้ปกครองของนักเรียนโรงเรียนสาธิตแห่ง มหาวิทยาลัยรังสิต

ลายมือชื่อนักศึกษา....................................... ลายมือชื่ออาจารย์ที่ปรึกษา.......................................

ผลการวิจัยที่สำคัญจากการศึกษาในส่วนแรก (การนำหลักสูตรทวิภาษาแบบองค์รวมที่
โรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิตไปปฏิบัติ โดยเปรียบเทียบกับวิธีการบริหารจัดการหลักสูตร
ของโรงเรียนทวิภาษาอีกแห่งหนึ่ง) สามารถสรุปได้ 6 ประการ ซึ่งผู้วิจัยได้ทำการวิเคราะห์
กระบวนการบริหารจัดการหลักสูตรของโรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิต โดยทำการ
เปรียบเทียบกับโรงเรียนทวิภาษาอีกแห่งหนึ่งที่เลือกใช้เป็นกรณีศึกษาเปรียบเทียบ นอกจากนั้น
ผู้วิจัยได้ทำการสำรวจข้อคิดเห็นของผู้ปกครองต่อแนวทางการนำหลักสูตรทวิภาษาแบบองค์รวมไป
จัดการเรียนการสอนของโรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิตอีกด้วย จากการวิจัยทั้งสองส่วนได้
แสดงให้เห็นอย่างชัดเจนว่า การจะปรับหลักสูตรอย่างมีประสิทธิภาพจากกรอบโครงสร้างหลักสูตร
ของกระทรวงศึกษาธิการ และการนำหลักสูตรที่ปรับปรุงแล้ว ไปจัดการเรียนการสอนให้เกิดผล
สำเร็จนั้น จะต้องอาศัยความเข้าใจอย่างดีจากบุคลากรสายการสอน รวมถึงผู้ปกครอง จากผลการ
สำรวจทัศนคติและความเข้าใจหลักสูตรของผู้ปกครอง พบว่า ระดับการศึกษาของผู้ปกครองส่งผล
ต่อความเข้าใจหลักสูตร และการยอมรับหลักสูตร รวมถึงวิธีการจัดการเรียนการสอน และการ
บริหารจัดการหลักสูตรของโรงเรียน

ข้อแนะนำสำหรับผู้ที่สนใจศึกษาเกี่ยวกับการพัฒนาหลักสูตรในอนาคต คือควรศึกษา
น้ำหนักที่สมดุลระหว่างปฏิบัติการการสอน และกิจกรรมการเรียนรู้ที่เหมาะสมกับแต่ละกลุ่มสาระ
วิชา สำหรับการศึกษาเกี่ยวกับการนำหลักสูตรไปจัดการเรียนการสอนนั้น มีความจำเป็นเร่งด่วนใน
การทำการศึกษาวิจัยในชั้นเรียนเพื่อให้แน่ใจได้ว่าหลักสูตรทวิภาษาแบบองค์รวมนั้นได้ถูกนำไปใช้
จัดการเรียนการสอนอย่างมีประสิทธิภาพในชั้นเรียน ในส่วนของการศึกษาเกี่ยวกับผู้ปกครองนั้น
ผู้บริหารโรงเรียนต้องหาแนวทางที่มีประสิทธิภาพในการสื่อสารกับผู้ปกครองเกี่ยวกับการ
เปลี่ยนแปลงของหลักสูตร และการปรับวิธีการจัดการเรียนการสอน

ลายมือชื่อนักศึกษา.. ลายมือชื่ออาจารย์ที่ปรึกษา..

Education in Thailand has undergone significant changes over the past century. Currently, globalization is one of the major factors behind the educational reforms not only in Thailand but in virtually every country in the world. There is a clear movement towards multiculturalism and bilingualism. The Thai government has identified the need to reform the curriculum in order to develop a workforce that is both bilingual and keenly aware of the outside world, especially Thailand's neighbors, all of whom are members of the Association of Southeast Asian Nations (ASEAN).

The objectives of this present research were to 1) to compare the unified (bilingual) curriculum of the Satit Bilingual School of Rangsit University (SBS) with the framework of the English Program (EP) Curriculum prescribed by the Ministry of Education, 2) to compare the methods used by SBS in implementing the unified bilingual curriculum with the methods used by another bilingual school, and 3) to survey the views of SBS parents with respect to the unified bilingual curriculum. Thus, this research consisted of two related investigations. The first was an in-depth investigation of how the Satit Bilingual School of Rangsit University modified and unified the Thai Ministry of Education's English Program curriculum with a bilingual curriculum, and its subsequent implementation, in contrast with that of another bilingual school. The second was a detailed survey of the views of parents.

The major findings of the first investigation (the process of implementation at SBS as contrasted with that of another bilingual school) are reported under six topics. Implementation procedures were analyzed at Satit Bilingual School of Rangsit University and compared to those used by another (selected) bilingual school. Also a survey was made of parents' views of how SBS implemented the unified bilingual curriculum. It was clear that effective curriculum modifications and successful Implementation of those modifications require good understanding on the part of all teaching staff members as well as parents. An analysis of parents' survey data with respect to the implementation procedures followed by SBS revealed differences of understanding and acceptance among the educational levels of parents.

Recommendations for further research in the area of curriculum development include exploring the weight that should be accorded each subject strand if there is to be an effective balance between teaching practices and learning activities. In the area

Student's Signature................................ Supervisor's Signature...............................

of curriculum implementation, there is an urgent need for more classroom-based research in order to make sure that the unified bilingual curriculum is being effectively implemented at the classroom level. With respect to parents, school leaders must look for effective ways to keep parents well informed about changes being made in the curriculum as well as modifications in teaching practices.

Student's Signature... Supervisor's Signature.............................

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Education in Thailand has undergone significant changes over the past century. Currently, globalization is one of the major factors behind the educational reforms not only in Thailand but in virtually every country in the world.

The Thai government has identified the need to reform the curriculum in order to develop the future workforce that is both bilingual and keenly aware of the outside world, especially Thailand's neighbors, the ten countries that have banded together to form the Association of Southeast Asian Nations (ASEAN). There appears to be is a clear movement towards multiculturalism and bilingualism.

In Thailand, bilingual education has been introduced with some important caveats: preservation of Thai identity, national culture, self-reliance, and universal knowledge (Act, 1999, B.E. 2542). The Act of 1999 asserts that bilingual education is one solution to the country's need to meet the challenges of globalization. Among these challenges is the need for higher-level English proficiency and more effective communicating skills of its citizens. Thus Thai learners must become bilingual and bicultural – Thai, with global awareness and understanding.

Thailand has stated in various government publications for the need of education reform. That is the reason why the Government has publicly identified the need for reinventing education to fulfill the aim of modern manpower development towards mastery in the English language, particularly for its citizens to be able to deal with international contacts and business transactions. Since the Government has become well aware of acute needs for change in the areas of political, social and cultural developments in the past decade, all authorities in the government and private sectors are becoming concerned about education reform and the need to prepare the future workforce for personal, social and economic well-being for the present time and beyond (Act, 1999 (B.E. 2542)).

Increasing needs in international transactions have been identified by the Bank of Thailand since 2008.   Thailand's economy heavily relies on international trade as shown by the statistical data of the Bank of Thailand (2008) that the percentage of export per Gross Domestic Product (GDP) from 2003-2007 has been on the continuous rise from 93.50 to 103.60, 114.10, 119.50, and 121.70 respectively. The percentage of import per GDP has also been at a high rate of 89.00 up to 102.00,

122.80, 118.60, and 112.30 from 2003 onwards (Bank of Thailand, 2008). Hence, international trade definitely requires skilled and technically competent manpower and in turn generates greater need for bilingual education.

The Ministry of Education has required that Thai basic education teach Thai ethical values and cultural heritage as part of the four specific objectives for all learners (Ministry of Education, 2008; Office of the Education Council, 2004). These objectives are (1) preserving Thai identity, (2) desired way of life, (3) livelihood, and (4) further education.

The Ministry developed the English Program Curriculum in 1999, 2542 B.E.) to include Thai cultural qualities and economic competitiveness as indicated in the Eleventh National Economic and Social Development Plan 2009-2014 (2009). Thus, the new English Program (EP) curriculum would be one of the reforms, while at the same time maintaining Thai culture and identity. It was the aim of the Ministry to provide opportunities for learners to achieve academic competence in the use of English both as a learning tool as well as the medium of instruction.

It should be noted that Thailand has Thai as an official language of communication and instruction. This is unlike most developing countries such as, Guinea-Bissau, Niger, Mozambique in Africa and Bolivia, Columbia in Latin America, Singapore, Malaysia, and Hong Kong in SE Asia, to name but a few. These countries have inherited the ex-colonial language, mainly English.

It is well known that the majority of Thai people are not fluent in English language communication. This kind of limitation has hampered their competitiveness in the international arena. That is the main reason why the country's National Education Act of 1999 emphasizes foreign language abilities as well as cultural identity. The English Program Curriculum or generally known as a Bilingual Curriculum prescribed by the Ministry of Education is also designed for young learners to understand and internalize the essential understanding of the country's system of governance and acquire positive attitudes towards the political, social and economic institutions (Uttranan, 1985).

The Strategic Action Plan of the Ministry of Education further reiterated that the goal is to raise the standard of learning of Thai students to that of developed countries in order that graduates can assist in international collaboration and cooperation among agencies within the country and international agencies. Through the goal of "*Lifelong Education for All*" as one of the major goals stated in the Education Act 1999 and 2008, the country will be moving towards achieving a thorough and comprehensive integration of formal, non-formal, and informal education (Wongboonsin, 2006). Bilingual curriculum development will therefore served as an instrument to raise the educational standard of the country.

Since bilingual education has considered by the Ministry of Education as an important tool for developing manpower needed for future national development, the researcher decided to explore how the prescribed EP Curriculum can be modified for use in bilingual schools. In preparing the background for the study, the researcher

looked into the following areas: (1) Curriculum, (2) Curriculum development, (3) Curriculum implementation, and (4) Bilingual curriculum.

In addition (5) it was decided to investigate how parents are reacting to the new curriculum development and implementation in an actual school setting. All these areas are briefly described below and will be further documented in Chapter 2 as an extensive review of contemporary literature.

1.2 AREAS OF REFERENCE

1.2.1 Curriculum

The term 'Curriculum' has been defined since 1939 by various scholars and educators that it carries various meanings depending on how it is built upon a new body of knowledge (Finch and Crunkilton, 1939). After these two scholars, quite a few have still interpreted curriculum in somewhat different ways. Pratt (1980) coined curriculum as "an organized set of formal education and/or training intentions." (Saylor, and others, 1981). defined the term curriculum as "a *plan* for providing sets of learning opportunities for persons to be educated." Wiles and Bondi (2002) viewed curriculum as a 4 four-step *plan* involving "purpose, design, implementation and assessment" as well as dealing with "experiences of the learner." Armstrong (2003) perceived curriculum as "decision-making processes that focus on preparation and assessment of *plans* designed to influence students' development of insights related to specific knowledge and skills." Ornstein and Hunkins (2004) put forward a concrete definition that it refers to "a *plan* for action or a written document that includes strategies for achieving desired goals or ends" and it could refer to anything in school, even outside of school as long as it is planned [extracurricular activities] as part of the curriculum."

It can be concluded that there is no one curriculum that will suit each group of learners. The concept of curriculum by these earlier scholars in fact serves as guidelines for educators and curriculum developers to have a broad view of how others utilize and define their curriculum. It can be said that no one particular prescribed curriculum be a perfect fit for any one school context. Educators and curriculum developers would have to design or identify one prescribed curriculum to suits the needs for each group of learners, culture, and nature of each country. In this regard, the researcher would like to adopt the definition given by Ornstein and Hunkins (2004).

1.2.2 Curriculum Development

Curriculum development provides a blueprint for school management and teachers to effectively implement the Curriculum in school. Therefore, curriculum development can be defined as improving the existing curriculum or designing a whole new curriculum from scratches or producing new teaching and learning materials (Saylor, 1981). The term *curriculum development* is also specifically coined by Saylor (1981) as involving the process of development and implementation.

Hence, curriculum development refers to effective management team, Heads of Departments and teachers to implement the curriculum effectively in classrooms. Along the same line of thought, Ornstein and Hunkins (2004) considered it a plan or a blueprint for structuring learners to the most appropriate environment and coordinating the elements of personnel, materials and equipment together

Since the early nineties, many scholars such as Bobbitt, Taylor, Taba and Piaget also have taken into account factors of human development by age and psychological factors to the blueprint of the curriculum development. They have categorized curriculum development into stages of human development and age. Therefore, curriculum development was designed to support each life cycle stage. The stages of human development start from (1) birth or sensorimotor stage, (2) age two to seven or preoperational stage, (3) age seven to eleven or concrete operation and ages eleven to sixteen or formal operation stage (cited by Armstrong, 2003). Erikson (1982) has similarly defined curriculum development as based on his conceptual framework that ideally young people master each task at different age levels from infancy or from birth to age two through adolescence or ages twelve to eighteen.

Armstrong (2003) addressed the factor issue when developing a curriculum that it cannot do without ethnic, cultural, and language differences in planning or developing a new curriculum or revising old ones. Particularly, Uttranan (1985) asserted that developing a new curriculum should require high consideration of cultural changes in a particular society in which learners should be able to adapt to changes in culture to fit in an appropriate context. The key persons in curriculum development who need to be consulted are policy makers, school management, teachers, parents and students to find the right curriculum for the specific ethnic, cultural and language background.

Many scholars have perceived curriculum development as an ongoing process. It is one that needs continuous effort of monitoring and adjustments to best fit the students and the school's objectives. Armstrong (2003) cautioned that curriculum developers should not build up a school program by simply borrowing or transferring existing curriculum as a recipe for teaching students in the format that has less and less connection to the best knowledge available. Such practice could generate unintended problems in the long-term. This standpoint was highlighted by Reagan (2000) and Ornstein and Hunkins (2004) who shared their view of curriculum development as an ongoing process that include participation from both educators and learners. A perfect blend between the demand of how a curriculum should be for educators and the means to achieve academic excellence of learners definitely requires careful consideration.

As seen, curriculum developers since the early nineties have defined curriculum development in terms of school management, factors of human development and psychological stages, followed by a continuous process. For the purpose of the current study, the researcher would like to adopt the definition of curriculum development after Saylor (1981).

1.2.3 Curriculum Implementation

Curriculum implementation generally relies on effective communication among important stakeholders of the school: management, teachers, learners, and parents. Curriculum implementation was defined by Ornstein and Hunkins (2004) as a process which involves time and efficient people as well as positive interaction and communication to implement an effective curriculum. Successful curriculum implementation takes time because this lengthy stage involves winning over people. Effective curriculum implementation is a two-way street, or a two-way communication channel both formal and informal types (Ornstein and Hunkins, 2004). Curriculum developers must seek the best mode of communication that is both lateral and horizontal to ensure that the message gets delivered to all concerned groups without distortions.

In order for curriculum to be effectively implemented, teachers who are the most direct implementer need to be trained. Ornstein and Hunkins (2004) pointed out that one problem in curriculum implementation resulted from teachers lacking a deep understanding of what a curriculum is and how it is created. As teachers are the key in implementing the curriculum, it is essential for school management to train and make clear understanding of the school curriculum. Lack of total understanding and correct information will lead to negative feedback from both learners and parents which are stakeholders of the institution. The most effective way to rapidly make teachers feel comfortable with the curriculum is by in-service training or staff development.

In brief, curriculum implementation involves two main processes in effective communication among stakeholders, followed by significance of teacher training programs. In this study, the researcher would like to adopt the definition of curriculum implementation after Ornstein and Hunkins (2004).

1.2.4 Bilingual Curriculum

Bilingual curriculum involves teaching most subjects in school through two languages, mainly the mother tongue and a second language. A more extensive definition was given by Saunders (1982), who asserted that "bilingualism implies the ability to use more than one language, but this conceals a variety of possibilities regarding the forms of language that are used and the contexts in which they are brought into play." According to Paulston (1992), bilingual curriculum refers to "the use of two languages, one of which is English, as a medium of instruction for the same pupil population in a well-organized program. It encompasses part or the entire curriculum and includes the study of the history and culture associated with the mother tongue." Bilingual curriculum was later on defined as "instruction given in, and study of, English, and, to the extent necessary to allow a child to progress effectively through the educational system, the native language" (Sec/703(a)(4)(A)(i)) in (Weisse and Garcia, 2001). As for this study, the meaning of the term *bilingual curriculum* will be adopted from Paulston (1992).

It should be noted that bilingual curriculum implementation is one of major educational concerns among stakeholders. In particular, parents' perspective towards

the school curriculum can have a strong impact on school management. In our modern society, the consumer's perspective is always of key importance. Parents' perspective on the school's curriculum will therefore serve as an invaluable input for long-term success in the school's curriculum implementation.

1.2.5 Parents' Perspective

Parents' perspective will provide an added value to how they react towards the school curriculum. Lovelock (2001) a renown scholar in marketing defined parents' perspective or perception as an emotional state or feeling in which consumer's needs, desires, and expectations during the course of the service experience have been met or exceeded (Lovelock, et al., 2001). He further added that the understanding of parents' perspective is not only about improving the performance but will also involve managing how to meet their expectations. Parent's perspective has been conceptualized by del Bosque (2006) as a judgment incorporating cognitive and affective evaluation after their experience enrolment (Rodriguez del Bosque et al., 2006) and it is also seen as the value perceived by parents (Gallarza and Saura , 2004). Even though parent's perception may not directly determine the school's curriculum development; however, it has a strong impact on the school's curriculum implementation. Parents are usually concerned with learning activities, the amount of homework, the nature of assessment and testing papers as to affect their child's academic achievement. All of these are directly part of the school's curriculum implementation. As for the term *parents' perspective* in this study*, the researcher has identified the definition of the term after Lovelock et. al (2001).

1.3 STUDY RATIONALE

As described earlier, the researcher formulated a rationale for the present research as follows:

- The Ministry of Education has prescribed an EP Curriculum for schools that wish to teach some major subjects in English as part of the education reform.
- The Ministry of Education also allows schools to modify the prescribed curriculum up to 30% of the content in mathematics, science, foreign languages, and in bicultural programs, using a bilingual approach.
- There have been questions on how schools should modify the prescribed curriculum and what should be the best approach to implement the modified curriculum.
- Satit Bilingual School of Rangsit University has modified the EP Curriculum in mathematics and science with supplementary content drawn from international sources such as IGCSE and IB, and using as the language of instruction, English. The 'natural approach to learning a language' was adopted.
- It is important for schools such as Satit Bilingual School of Rangsit University to learn what are the perspectives of parents with respect to the implementation of its modified bilingual curriculum.
- To provide another perspective, a second bilingual school was studied. That second school also had modified its bilingual curriculum but with an emphasis on art and music.

1.4 STUDY OBJECTIVES

The main objectives of this research are:

- To examine the bilingual curriculum which Satit Bilingual School of Rangsit University developed and which was based on the framework of the EP curriculum prescribed by the Ministry of Education.
- To investigate implementation of the modified curriculum of Satit Bilingual School of Rangsit University in contrast with a selected second bilingual school. To secure information on parents' perspective of the implementation of the modified curriculum of Satit Bilingual School of Rangsit University.

1.5 TERMINOLOGY

Definitions in this study are adopted after the following researchers:

Curriculum is a plan for action or a written document that includes strategies for achieving desired goals or ends (Ornstein and Hunkins, 2004).

Curriculum development is defined as improving the existing curriculum or designing a whole new curriculum from scratches or producing new teaching and learning materials (Saylor, 1981).

Curriculum implementation refers to a process which involves time and efficient people as well as positive interaction and communication to implement an effective curriculum (Ornstein and Hunkins, 2004).

Bilingual curriculum is defined as the use of two languages, one of which is English, as a medium of instruction for the same pupil population in a well-organized program which encompasses part or the entire curriculum and includes the study of the history and culture associated with the mother tongue (Paulston, 1992).

Parents' Perspective is defined as an emotional state or feeling in which consumer's needs, desires and expectations during the course of the service which the service experience have been met or exceeded (Lovelock, et al., 2001).

1.6 SCOPE OF THE STUDY

The scope of the study outlines the importance of a case study that allows an in-depth investigation on how such a bilingual school as SBS has approached the EP curriculum modification and subsequent implementation. A narrow scope as such enables the researcher to find sufficient data as valid answers for the study's objectives. Below is a list of topics under the scope of this study.

- **Case study of Satit Bilingual School of Rangsit University (SBS)**
As the EP Curriculum prescribed by the Ministry of Education permits 30% of the curriculum to be modified, the study will examine what SBS did to modify the

EP Curriculum into its own Unified Bilingual Curriculum with specific approaches to the curriculum implementation. Also, the school has supplemented its curriculum with selected learning objectives and standards derived from international curricula—International General Certificate of Secondary Education (IGCSE) and International Baccalaureate (IB).

Thus, the modified curriculum of SBS has its focus on bilingual-bicultural mastery and natural language acquisition. It was deemed necessary because the EP Curriculum, though comprehensive in its coverage, lacked an in-depth dimension for development of analytical and critical thinking skills, including communication and leadership skills. (National Quality Assurance for Basic Education 2008-2010)

- **English Program (EP) Curriculum**

It appears that there has been no published research on how bilingual schools or EP schools have modified their curriculum as prescribed by the Ministry of Education. This present research aims to document through a case study approach, how two bilingual schools have developed and modified their curricula. The Curriculum Component Analysis Model will be used to carry out this research.

- **Second Bilingual School**

It is important for the researcher to investigate the implementation of the modified curriculum of the Satit Bilingual School of Rangsit University in contrast with another bilingual school to detect similarities and differences between the two modified curricula.

- **Parents' perspective**

In order to learn how parents view the modified bilingual curriculum at SBS, the researcher will survey the opinions of parents whose children are in grades 6, 9 and 12. These grades are considered critical stages at which time parents may transfer their children to a different school. The results of the survey could provide information on misunderstandings in how the school carried out its curricular modifications, for example.

Data collection

In examining SBS curriculum modification, the researcher will use the Curriculum Component Analysis Model to draw similarities and differences between the EP Curriculum and SBS Unified Bilingual Curriculum. As for data to be secured from a second bilingual school under study, the researcher will use a six-item structured interview with the school's executives. Data on parents' perspectives will be collected from a six-item parent survey. It should be noted that there are three sets of data to be obtained in this study: (1) Results from a detailed analysis of the modified curriculum of SBS and of the second bilingual school, (2) Qualitative data from structured interviews, and (3) Quantitative data from a parent survey. Details of data collection will be given in Chapter 4.

Subjects in the Study

The researcher will interview three groups of informants at Satit Bilingual School of Rangsit University for curriculum implementation data. As for the selected second bilingual school, the researcher will make an appointment with the school executive to arrange for date and time convenient to those who agree to provide data for structured interviews. It is expected that data from the second bilingual school will come from the School Director and those who are involved in curriculum implementation. The third set of data will be secured from parents whose children are in grades 6, 9, and 12. The researcher will contact all informants for data collection as convenient to the parties concerned.

Data Processing

After analysing the data derived from the curriculum component analysis, the researcher will report similarities and differences between the EP Curriculum and SBS Unified Bilingual Curriculum by means of brief description of each curriculum component. In dealing with data obtained from the executives of the second bilingual school, the researcher will report qualitative data according to the order of questions given in the structured interview. The third set of data (obtained from parents) will be analysed in terms of frequency and percentages. In addition, composite variables of parents' responses will be computed for further analysis using Statistical Package for Social Science (SPSS) statistical software.

Profiles of the Two Bilingual Schools:

A. Satit Bilingual School of Rangsit University

Satit Bilingual School of Rangsit University (SBS) is a bilingual school located in Pathumthani offering co-education from Kindergarten to the Secondary level with a student body of 900 (2011). SBS has responded to the country's need for bilingual education by developing its own Unified Bilingual Curriculum. The school follows the English Program (EP) Curriculum guidelines as required by the Ministry of Education. The EP Curriculum has eight subject strands: (1) Thai,   (2) Mathematics, (3) Science, (4) Social Studies (History, Geography, Culture, Citizenship), (5) English, (6) Art, (7) Physical Education, and (8) Career and Technology. SBS adds two more strands: ICT Information Communication Technology and Foreign Language Mandarin. It also offers Japanese as a foreign language major in grades 10-12 (Pholsward, 2007).

In modifying the EP Curriculum into a Unified Bilingual Curriculum, SBS in fact has integrated the EP Curriculum with in-depth contents from two international curricula IGCSE International General Certificate of Secondary Education and IB International Baccalaureate. Those subject contents refer to major strands like mathematics, science, social studies (history and geography), English, art, physical education, and information technology. Other subjects, i.e., Thai language culture and social studies (history and geography) are after the EP Curriculum as prescribed by the Ministry of Education.

The curriculum modification is derived from content analyses of the three curricula: The EP, IGCSE and IB to secure the in-depth contents of study topics

common in all three curricula. The secured contents classified as subtopics are therefore integrated across grades 7-12. Special attention is given to newly integrated subtopics in grades 7-10 and to be recycled or repeated in grades 11-12. The purpose is to enable students with good academic achievements to write examination papers of subjects required in IGCSE after grade 10, if desired. Those who wish to write examination papers as required in IGCSE and IB in grade 12 can proceed as planned or seek admission into local or international university programs as a path of their academic program of study. It should be noted that the subject strand of Foreign Language can include Mandarin or Japanese as seen appropriate by the school.

B. Selected Second Bilingual School

Selected Second Bilingual School was established in 1968 (B.E. 2511) and has offered its EP Program in 2004 (B.E. 2547) providing basic education from Primary 1 to Secondary 6. Another bilingual school is an all girls school located in Samutprakarn with a student body of 2,936 students with 155 teachers (2011). The school aims to develop learners to possess:

- Develop learners to have quality as indicated in the curriculum.
- Develop learners to become good citizens, with a strong sense of morality and ethics in the tradition of St. Paul.
- Develop the management system of the school to become most efficient and effective towards international standards in the teaching method.
- Develop staff to have high quality according to the standards in the tradition of St. Paul in developing the learning community.
- Cooperate with parents, alumni, organizations and community to develop the school (www.sjb.ac.th, 2011).

1.7 SIGNIFICANCE OF THE STUDY

Satit Bilingual School of Rangsit University (SBS) is an example of the schools that have modified the prescribed EP Curriculum. SBS has integrated key learning objectives and standards from two international curricula: International General Certificate of Secondary Education (IGCSE) and International Baccalaureate (IB). The SBS curriculum stresses mathematics and science as well as language learning through the natural language acquisition process. SBS has developed its new curriculum using as its base that which is prescribed by the EP Curriculum with added international content. To give a complete picture of the modified curriculum at SBS, the researcher will compare the EP curriculum with the SBS Unified Bilingual Curriculum to reveal differences and similarities (see details in Chapter 3).

According to the study objectives stated in the previous section, the researcher expects to achieve the following:

- The study will give comprehensive information about curriculum development and modification as developed by Satit Bilingual School of Rangsit University. This type of modification has been carried out within the framework of the EP curriculum prescribed by the Ministry of Education. The obtained analysis can serve as an example for other bilingual schools that are now seeking to modify their curriculum using recent theories of language learning, for example.

- Bilingual schools that wish to modify the EP Curriculum to project their own academic identity can benefit from the report on curriculum implementation in the two schools under study.
- Bilingual schools that have already modified their own curriculum will know the importance of parental support as major stakeholders and that their views should not be overlooked.

1.8 CONCLUSION

This chapter has provided the background for the present study by discussing: (i) the background of the research of bilingual curriculum development and implementation in Thailand through the demand of globalization and education reform (ii) areas of references, (iii) Study rationale, (iv) Study objectives, (v) Terminology, (vi) Scope of the Study, and (vii) Significance of the study. Further details of the study background will be reported in Chapter 2: Literature review.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

As stated in Chapter 1 that the Ministry of Education's EP Curriculum has permitted 30 percent of the EP Curriculum contents for bilingual schools to develop and modify their own curriculum as to fit the needs of their specific group of learners. The researcher was interested in examining the development of the modified contents of the Unified Bilingual Curriculum (UBC) and its implementation at Satit Bilingual School of Rangsit University. The researcher also approached this research as a case study. In doing so, the researcher would like to provide a background of the study in response to the study objectives. They are (1) examining curriculum development as modified by Satit Bilingual School of Rangsit University, (2) investigating the implementation of the modified curriculum known as the Unified Bilingual Curriculum (UBC), and (3) securing information on parents' perspective towards the modified curriculum implementation. The areas of literature review corresponding to the study objectives are (i) Bilingual curriculum, (ii) Curriculum, (iii) Curriculum development, (iv) Curriculum implementation, and (v) Parent's perspective towards the curriculum.

2.2 BILINGUAL CURRICULUM

Literature in the area of bilingual curriculum can be dated back to 1978. Scholars, researchers, and bilingual education practitioners have dealt with major issues related to (1) Preservation of indigenous language and immigrant policy in developed countries, (2) Bilingual curriculum development in developing countries, and (3) Bilingual Curriculum Models, (4) Research in Bilingual curriculum linked to high academic attainment, (5) Factors influencing the success of bilingual curricula, and (6) Bilingual curriculum in Thailand.

2.2.1 Preservation of Indigenous Language and Immigrant Policy in Developed Countries

The main research for bilingual curriculum in the developed countries has been conducted in the United States and Canada as an immigrant policy to preserving the indigenous language and prevent the loss of the mother tongue. The literature reveals a high rate of language loss among minority-language speakers, indicating that 'ethnolinguistic' minorities in the United States lose their ethnic mother tongue fairly completely by their second or third generation of encounter with American urban life'(Crawford, 1995; Fishman, 1991). These groups possess two major barriers to

educational success being low socioeconomic status and language inferior (Fashola, et al., 1997). Research concluded that bilingual curriculum in the United States are mainly for preventing the loss of the mother tongue of the immigrants who are Spanish and Indigenous Indians from mostly underprivileged families (Smith, 1999). Bilingual Curriculum developments in the United States are seen to preserve the indigenous language and prevent the loss of the mother tongue.

In Canada, bilingual curriculum was developed for a different purpose that it was designed for native speakers of the majority language (English) to become proficient in a minority language (French) and thus create an integrated national unity. Bilingual Curriculum in Canada therefore serves different types of learners of English among the student population (Swain and Lapkin, 1982). Other factors that obstruct language maintenance in schools (Allen, 1993; Smith, 1999) are reported by Allen (1993) and Smith (1999) as follows:

1) more time being devoted to English instruction;
2) more communication occurring in English, even during those periods reserved for minority language instruction;
3) few bilingual teachers having high levels of proficiency in two languages;
4) the personnel of bilingual schools, even those who possess a high degree of fluency in a minority language, utilizing more English in the school environment; and
5) resource materials e.g. textbooks, charts, videos, records in languages other than English being fewer in number and often less appealing than their English-language counterparts.

These factors also characterize the situation in the United Kingdom, Australia and New Zealand. Schools catered predominantly to students long-estranged from their own language and culture, as a result of colonizing processes, as in the case of the Maori in New Zealand, were ill-prepared and inadequately supplied, in terms of resources and expertise. Immigrant policy has supported bilingual education as being introduced in many developed countries. Using the mother tongue can be seen as empowering linguistic minorities in the spirit of cultural pluralism according to Casanova (1995). In the United States it is well documented that bilingual education was a political artifact. Most immersion and two-way bilingual programs involve Spanish as the target language (Casanova, 1995; Lyons, 1995; Met and Lorenz, 1997; Kondo, 1998). The context of bilingual schooling in the United States contrasts with the bilingual schooling concept in countries like Austria where any school may apply to the Ministry of Education to include bilingual teaching in its programs. Bilingual schools in this context are an intensified version of what exists already (English across the curriculum). Bilingual schools in Austria are not reserved only for the elite, as in many countries in South America, but are available to the whole population of learners (Morgan, 1999). Hence, one of the desirable conditions for bilingualism--extended discourse in both of the languages of instruction--was missing (Baker, 2001). Bilingual education in these countries for minorities is meant to preserve cultural identity and the indigenous language (Rau, 2004). In short, in developed countries, bilingual education serves as part of the Immigrant policy of preserving the indigenous language and the mother tongue.

2.2.2 Bilingual Curriculum Development for in Developing Countries

Bilingual Curriculum development in developing countries is meant for serving the elite as well as preserving the first language of the minority. In some developing countries, bilingual curriculum has also functioned as a tool of colonialism by developed countries including Germany, France and England. For these countries, national-centered entities as well as colonial powers were strengthened for segregation or assimilation by one official language.

In the late 1950s, the language debate played a key role in the process of decolonization in both Africa and Asia. Languages imposed by colonization were used almost exclusively for an extended period of time (Akkari, 1998). Furthermore, there is a great deal of evidence that bilingual schooling offers developing countries a way to improve the delivery of quality basic education to a linguistically diverse population (Benson, 2002). Research has pointed to the fact that bilingual education in countries such as Colombia and Ecuador, are provided only to the middle and upper-middle classes, to the international community, and to those working for multinational organizations (Majia, 2004; Simpson, 2004). Bilingual schooling in developing countries evolved from their historical roots in scattered missionary efforts, separate-but-unequal mother tongue schooling, and/or ragtag experimentation, into better-informed and more systematic programs (Benson, 2005).

Many prestigious schools in Hong Kong, Singapore and Taiwan strongly defend their English medium tradition, as reflected from the start of the streaming policy launched and its implementation since 1994 (Education Commission, 1990). Bilingual education was imposed in countries such as Hong Kong, Singapore and Taiwan through the process of colonization (Poon, 1999). Enforcing the Chinese medium was the result of government policy fearing the loss of the Chinese language and dialects (Poon, 1999). Research and media in Hong Kong, for example, report that parental and student preferences tended overwhelmingly towards English medium instruction to the neglect of Chinese. This was because English medium education permitted a better career path for students. One case of the inception of bilingual curriculum similar to that of Thailand is seen in Singapore, for economic reasons. Singapore's economy was dependent on trade. Lee Kuan Yew, Prime Minister of Singapore, cites economic reasons as the impetus behind the nation's retention of English as an official language (Dixon, 2005). The Singaporean government then established a bilingual educational policy, under which all learners were required to study two of the official languages (Dixon, 2005). This approach, involving the co-development of literacy in students' L1, alongside the development of literacy through English, has made Singaporean learners today perform better than those in other countries studying a former colonial language. Singapore's bilingual educational policy has succeeded in educating learners to perform as well as learners schooled monolingually in predominantly monolingual industrialized countries.

2.2.3 Bilingual Curriculum Models

As described in the literature in sections 2.2.1 to 2.2.2, there have been studies on bilingual curriculum models reported by quite a few researchers. Bilingual

curriculum models were reported in the late nineties, particularly by Baker (1993) and Morgan (1999). Baker (1993) cited in Morgan (1999) mentions ten different types of bilingual curriculum, and put emphasis on the differences between weak forms (where language minority learners are assimilated into a majority culture and language bilingualism is not fostered) and strong forms (where a non-majority language is positively fostered in the classroom) (Morgan, 1999).

From the literature dated back to the nineties, the widely implemented Bilingual Curriculum Models can be categorized as follows:

1) Dual Immersion Model (Two-Way Immersion): This is an increasingly popular form of bilingual education in the USA in which English-speaking children and minority- language speakers learn together in the same classroom. The goals are to develop bilingualism/biliteracy, cross-cultural understanding and high academic achievement (Palmer, 2007). Dual immersion classrooms typically divide their days and weeks between the two languages of instruction (Palmer, 2007). The two popular programs are known as the 'balanced' or 50:50 model, in which instruction for all levels is balanced evenly between the two languages; and the 'minority language dominant' or 90:10 model, in which instruction begins in kindergarten with 90% of the day in the minority language and 10% in English, and English instruction gradually increases each year until, by the 4th or 5th grade, the percentages are equal (Palmer, 2007). This model aims to preserve the indigenous language. Specific to indigenous-language education, three well-known models are the Navajo, the Hawaiian, and the Blackfoot language programs. These serve the purpose of maintaining the heritage language (Ngai, 2007). The shortcoming of this immersion bilingual models is lack of continuity. It sometimes focuses on elder-child bilingualism rather than parent-child bilingualism.

2) Code-switching/Code-mixing Model: Language alternation is intended to help promote meta-linguistic awareness through the communicative use of two languages. This model builds the teaching and learning experience on the basis of language alternation, the fundamental idea being that the alternating use of both languages reinforces awareness of the free, non-fixed relationship between objects and their labels and the necessary ability to separate words and concepts (Coste and Pasquier, 1992; Gajo and Serra, 1999; Coste, 2000; Moore, 2002).

3) Developmental Bilingual Model (Traditional Bilingual Model): This model allows for the continuous development of L1 as an extra-curricular activity for enrichment purposes (Coste and Pasquier, 1992; Gajo and Serra, 1999; Coste, 2000; Moore, 2002).

In addition to the first three Bilingual Curriculum Models, Olivares (2002) has proposed three bilingual learning models:

4) The Communicative Model: sees communication as an important feature not only in language learning but in all learning (V. and D.F., 1998). For example, in Mathematics learning, Sierpinska (1998 : 31) states that, "communication is not

understood as just a necessary means of education; education is identified with communication."

5) The Constructivist Model: based on the importance of prior knowledge for the acquisition of new knowledge in any learning environment (Brooks and Brooks, 1993). This view is supported by Cummins (1994), namely that the ways in which an English Language Learner (ELL) uses background knowledge to acquire new knowledge crucial for authentic learning (Cummins, 1994).

6) The Language Transfer Model: This model involves the transfer between what the student knows of the content in the first and second language, as well as what the students know about the content [knowledge of specific contents]. For example, according to Krashen (1996 : 28) "there is very good evidence that reading in all languages is done in a similar way and acquired in a similar way."

2.2.4 Research in Bilingual Curriculum Linked to High Academic Attainment

Research in Bilingual Curriculum also reports a high linkage to learner's academic attainment. There has been some research dating back in the last decade concerning the linkage between academic excellence and bilingualism. Bilingual curriculum develops students' English-reading skills through the use of student's native language. Therefore, a successful bilingual curriculum should provide the development of academic skills and concepts in both languages (Cummins, 1979; Cummins, 2000; Cummins, 1978). Bilingual rather than monolingual education is beneficial to the educational development of learners in general (Cummins, 1986, Poon, 1999). It is generally accepted by scholars and researchers that for learners of English as a second language, there is a transfer of language learning skills from the native language to the second language especially in writing (Friedlander, 1990; Krapels, 1990; Eisterhold, 1990; Hinkle, 1994; Bell, 1995; Simpson, 2004).

The best hypothesis about why bilinguals may excel in meta-cognitive awareness, and therefore do better at self-assessment. Bilingual learners attain lifetime experiences in activating and inhibiting two language codes. Their meta-cognitive awareness underlies self-control mechanisms while monitoring and regulating behavior and should be considered a bilingual advantage not just in childhood but throughout the college years (Bialystok, 2003; Kellogg, et al., 2006). Research done by Ransdell, Barvier and Nit (2006) confirms the above theory findings in contrast with claims by earlier researchers that monolingual and bilingual pupils perform equivalently, or that bilinguals will always underperform in their non-native language.

Cummins (1992) demonstrated that literacy in one language provides a clear advantage to developing literacy in any other language. Many researchers like Cummins have extended concept of bilingualism to attained literacy that is best developed in a child's L1 for optimal literacy and subsequent schooling success (Gonzalez, 1998; Tucker, 2001). Literacy includes not only language-specific decoding skills, but also complex processes such as reading and the ability to comprehend a written communication (Olivares, 2002).

It is interesting to look at claims made in Cummins' Developmental Interdependency theory that proficiency in a second language largely depends on a well-developed first language. Cummins asserted that once learners have reached their *threshold* level, they are able to master a certain level of proficiency in both the native and second language for the beneficial aspects of bilingualism. Some researchers pinpointed that language learning develops interdependently, which means that the level of proficiency in one language has an effect on the level of proficiency in the other language. This interdependence hypothesis of second language acquisition suggests a strong basis in one's first language (Dixon, 2005). If a learner speaks one language at home, but writes and speaks another in the classroom, the learner is more likely to be able to acquire skills independently in each language (Ransdell, et al., 2006). Considering these developmental concepts of language acquisition, we can see the relationship between the first and the second language in that both languages can gradually grow and complement each other in developing language proficiency as well as academic attainment in school. Undoubtedly, bilingual education has been recognized for substantiating second language acquisition, as well as enhancing awareness of a new culture (Devitt, 2008).

Cummins and Krashen further confirmed that learners with strong educational backgrounds in their native language, literacy and content knowledge learned in one language can transfer their prior knowledge to the target second language (Cummins, 1981; Krashen, 1996). Thomas and Collier (1997) reported that the best predictor for academic achievement in English is derived from the learner's academic achievement in the native language. Hickey (2007) also suggested that there is a significant positive correlation between reading fluency and comprehension. Studies in second language acquisition have shown repeatedly that language will be most effectively learned when learners have a real purpose to learn and when language use is authentic, rich, and meaningful to learners. It could be seen from past studies that confirm bilingual curriculum as highly linked to students' academic achievements.

2.2.5 Factors Influencing the Success of Bilingual Curricula

The factors that are relevant to successful implementation of Bilingual Curricula are found in the areas of (1) qualified bilingual teachers, (2) teacher's attitudes towards the curriculum, (3) funding, and (4) the objective of bilingual curriculum policy in each country.

2.2.5.1 Qualified Bilingual Teachers

For the most effective implementation of bilingual curriculum, teaching staff should be qualified bilingual teachers. Cohen and Tellez (1994) demonstrated that bilingual teachers with high interpretive skills tend to use cooperative learning more frequently than their counterparts. The commitment of a school, the quality of teachers will determine the effectiveness of any bilingual initiative (Morgan, 1999). Ghadessy and Nicol (2002), in their study of a Brunei school, have made a number of suggestions for improving the English-language teaching, involving the training of qualified teachers, teacher support, changing the school curriculum, designing new examinations, and practicing language-rich activities in the classroom (Mohsen and

Mary, 2002). In various governmental policies, such as in Ireland, it has been required that the teaching staff should be bilingual (Department of Education, Western Isles, 2004). Furthermore, teachers who are in charge of classes should be native speakers. Teachers who are not bilingual should be encouraged to learn and be given the opportunity to do so, in order to contribute to the fullest extent in a bilingual context (Department of Education, Western Isles, 2004). In short, to carry out the effective bilingual curriculum implementation requires qualified teachers.

2.2.5.2 Teacher's Attitudes towards the Bilingual Curriculum

Successful bilingual curriculum implementation in schools also depends on the understanding of the teaching staff towards the school curriculum. Teachers often have little knowledge of what occurs in others' sectors and make up for this lack of knowledge with intelligent guessing. There is an apparent acknowledgement of sector hierarchy, where status and salary appear important (Morgan, 1999). Other research has highlighted reasons for ineffectiveness as being the lack of contact between schools, lack of information, differences in teaching approaches, and strained relationships between primary and secondary staff (Morgan, 1999). Olivares and Lemberger (2002) have recommended ways in which teachers can apply the principles of the communication approach to their classroom activities. Teachers should promote and create a constructivist learning environment in which learners are assisted in the transfer of knowledge. Schools need to make available the necessary materials and resources, in addition to conducting staff development programs to enhance teachers' sense of teaching efficacy and to give them autonomy and peer support in implementing the innovative curriculum (Ghazi, 2004).

Rich (1990) and Brody (1998) concluded that teachers' ideological beliefs about education affect the determination of whether or not instructional innovations and the implementation of new methods are sustained. Likewise, curriculum implementation will be the more successful the greater teachers' sense of their personal teaching efficacy and their own expectations that they will be able to perform well the tasks required of them. These findings lead to the conclusion that the innovations in education practice or curricula should be addressed and incorporated as an integral part of efforts to establish a cooperative school environment leading to the effective bilingual curriculum implementation (Rich, 1990, Brody, 1998). Teachers' beliefs regarding the acquisition of knowledge and second language learning influence the way in which a school implement its curricula (Ghazi, 2004).

2.2.5.3 Objective of the Bilingual Curriculum Policy in each Country

Government policies have been identified in research conducted in many developed countries in the effective implementation of bilingual curriculum. The United States, for example, has passed the Bilingual Education Act (BEA) as the primary federal legislative framework for providing equality of education opportunity to minority-language learners (Weise, 2001). One of the most difficult issues is often the fact that decisions to initiate implementation can be frustrated even when many practical obstacles have been overcome through experimentation (Benson, 2005).

Many developing countries on the other hand, have implemented bilingual curricula only because developed countries have done so. Many have also taken the 'ad hoc' approach, addressing one issue at a time, without looking at the big picture or factors involved, which results in a culture of 'pilot projects' (Benson, 2005). However, even when policy is made, implementation is not guaranteed. Factors which affect the bilingual curriculum implementation are:

2.2.5.4 Funding

In order to effectively implement Bilingual programs or curricula, sufficient funding needs to be allocated. For example, the United States' Bilingual Education Act (BEA) mentions funding as a priority for bilingual programs which 'provide for development of bilingual proficiency both in English and another language for all learners'. 75% of the funds are reserved for transitional bilingual education programs (Wiese, 2001). While the BEA did not prescribe particular methods of instruction, institutions were expected to create programs based on the general goals of the legislation. In many instances insufficient funding is the underlying cause of ineffectiveness in bilingual curricula. In a study done by Ngai (2007) concerned with bilingual education for non-native students in the United States, it was found that non-government funding is needed for two categories, namely (1) the part-time or full-time salary of a language teachers and (2) teacher training to help mainstream teachers to integrate some language into their regular classes.

2.2.6 Bilingual Curriculum in Thailand

As globalization emerged, a new cadre of highly qualified and competitive manpower is a requirement for all countries in the open market economy. That is why the Government has publicly stated the need for reinventing education to fulfill the aim of modern manpower development through 'lifelong education' (Act, 1999 (B.E. 2542)). Thai citizens shall become bilingual and bicultural and can compete internationally. Thailand is therefore responding to internationalization in similar fashion as other countries, where educational systems are geared towards being increasingly bilingual and multicultural.

In response to the growing demands of globalization, Thailand has taken a critical step towards bilingual education with the aim of strengthening people's academic capacity to compete internationally (Ministry of Education, 2004). The direction of education in Thailand has changed significantly over recent decades from being based on a purely Thai curriculum with elements adopted from international curricula, towards being more attuned to a bicultural and bilingual community. Indeed, the government has stated the need to reinvent education in order to develop manpower in line with modern requirements through 'lifelong education' (Office of the National Education Commission, 1999 (B.E. 2542)). The underlying demand for change has been further accentuated following the serious political, cultural and social crises that the country has experienced over the past decade, prompting all the relevant actors, in both the public and private sectors, to seek reform of education (Office of the National Education Commission, 1999 (B.E. 2542)). In short, there has been a growing need for the reform of bilingual education in the country since 1999 with the

ultimate goal of equipping Thai learners with analytical thinking skills, the capacity for creative thinking, and inculcating a desire for life-long education and the preservation of desired Thai qualities. The Ministry of Education has initiated the English Program Curriculum for schools embodying these objectives.

The underlying reason for introducing bilingual education in Thailand stemmed from the increasing openness of the country to the global economy in terms of international trade and capital transactions. Thailand's economy depends largely on tourism and its related industries. In 2006, the tourism sector generated AUD$16,077 million in revenue from 13.2 million international visitors to Thailand (Tourism_ Authority_of_Thailand, 2008). According to Bank of Thailand (2008) statistics, exports as a proportion of Gross Domestic Product (GDP) increased continuously from 2003-2007 has been on the continuous rise from 93.5, 103.6, 114.1, 119.5, and 121.7 respectively. The percentage of import per GDP has also been at a high rate of 89.0, 102.0, 122.8, 118.6, and 112.3 from 2003 onwards (Bank of Thailand, 2008a, Bank of Thailand, 2008b). This shows that the reliance Thailand's economy international trade has increased the demand for manpower of higher caliber in terms of language communication skills and bicultural skills.

The direction of educational in Thailand has changed significantly over the past century, with increasing stress laid upon the language proficiency of learners and to become bilingual. This has led to the development of the EP Curriculum being prescribed by the Ministry of Education as part of the country's educational reform to meet the needs of the country's economic stance. *The Thailand Education Acts* (1999 and 2004) have stated clearly that the country will be moving towards achieving *"Lifelong Education"* with the goal of bilingualism (Wongboonsin, 2006). The Strategic Action Plan of the Ministry of Education further reiterated that the goal is to raise the country's learning standard to that of developed countries by strengthening inter-sectoral collaboration and cooperation among organizations within the country and international agencies. All stakeholders comprising industrial councils, private sector and government agencies are encouraged to increase their investment in education while promoting the opening of bilingual programs in educational institutions at all levels (Act, 1999 (B.E. 2542)) (Ministry of Education, 2004, Krungthepdhurakij, 2009).

However, there has no research found in Thailand in the areas of Curriculum implementation of how a bilingual school modifies its curriculum contents. Therefore, the researcher is interested in studying how a bilingual school has modified its curriculum. It can be concluded that the effective development and implementation of bilingual curriculum prescribed by the EP Curriculum can lead to the successful outcome of education reform. Bilingual Curriculum serves as a possible solution to the country's education reform. Ideally, the ultimate educational goal for Thailand should aim towards creating programs built upon students' first language while the learners simultaneously acquire English, with the goal of becoming bilingual. Hence, an effective bilingual curriculum implementation is one that will lead to creating a balanced individual, instilling an understanding and appreciation of their Thai background while enabling them to be competent on an international level.

In bringing bilingual education as an agenda for the country's education reform, Thailand has learned a few lessons from the experiences of other developing countries. As indicated by (White, 2004) and (Benson, 2005), principles of bilingual curriculum development and implementation have been formulated mainly in the developed nations. They provide answers for the developed world's problems of creating curricula that meet the needs of multicultural and multifaceted societies as in America, Britain and Canada.

With the stance of bilingual education development and implementation, Thailand has announced through government publications its intention to maintain the country's culture and heritage, as highlighted in the National Economic and Social Development Plan as part of its education reform. The core curriculum guidelines prescribed by the Ministry of Education reaffirm the preservation of Thai culture and heritage as of prime importance (Ministry of Education, 2008). Such a bilingual curriculum should respond to the need of the country to preserve the qualities of Thai culture, heritage and to the implications of being internationalized. It should promote desired cultural competency and the maintenance of the mother tongue, while equally optimizing learners' abilities and readiness to compete academically, socially and professionally in the international arena in line with the country's educational reform goals as set out in the Thailand Education Acts of 1999 and 2004. This requires all related authorities to cooperate in developing and implementing a system of bilingual education which will address the need for maintaining the desired Thai qualities (Act, 1999 (B.E. 2542)) (Ministry of Education, 2004, Krungthepdhurakij, 2009)

The challenges in effectively implementing bilingual curriculum lies in the beliefs of the teachers. In the case of Thailand, the teaching staff in bilingual schools comprise both the country's natives and native English speakers. Both groups of teachers have different views about and orientations towards curriculum formation, development and actual application. The two groups are often not adequately reoriented to plan and work regularly together in the overall teaching and learning process. Teachers may be ambivalent regarding the place of L1 in the formal school setting. Such ambivalence can lead to difficulties in implementing the appropriate bilingual curricula (Benson, 2005). Furthermore, it is not an easy task to implement a bilingual curriculum which involves changing the beliefs of teachers and weaning them from the traditional way of teaching. Weaver and Henke (1992) suggested that for a meaningful and permanent change to occur especially in the areas of education, teachers need ample opportunity to

1) Talk and share with colleagues, as well as visit their colleagues' classrooms.

2) Interact in an atmosphere that promotes trust and risk-taking over an extended period of time; and

3) Exercise choice in the curriculum of their own professional development (Weaver and Henke, 1992).

2.2.6.1 Terminology of Bilingual Curriculum

The definition of Bilingual Curriculum to be used is that given by Paulston (1978) as the "use of two languages, one of which is English, as a medium of instruction

for the same pupil population in a well-organized program which encompasses part or all of the curriculum and includes the study of the history and culture associated with the mother tongue. A complete program develops and maintains the children's self-esteem and a legitimate pride in both cultures." A more extensive definition was proposed by Saunders (1982 : 30), who considers that "bilingualism implies the ability to use more than one language, but this conceals a variety of possibilities regarding the forms of language that are used and the contexts in which they are brought into play." Bilingual education was defined as "instruction given in, and study of, English, and, to the extent necessary to allow a child to progress effectively through the educational system, the native language" (Sec/703(a)(4)(A)(i)) in (Weise and Garcia, 2001). To quite a few scholars, bilingual education involves teaching most subjects in school through two different languages - in the United States, instruction occurs in English and a minority language, such as Spanish or Chinese, with varying amounts of each language used in accordance with the program model (www.en.wikipedia.org/wiki/ Bilingual_education, 2008). Some researchers cautioned that teaching a second language should largely rely on the native language of the speaker. This is to maintain a strong sense of one's culture and language as necessary to acquire another language and culture (www.oregonstate.edu/instruct/anth370/gloss.html, 2008).

2.3 CURRICULUM

Curriculum has been defined in various ways by different scholars. The definitions are not mutually exclusive, nor are their meanings obsolete. They have been built upon new body of knowledge. Pratt (1980) defines curriculum as "an organized set of formal education and/or training intentions". However, ever since the term "curriculum" was added to educators' vocabularies, it has conveyed different meanings to different people (Finch and Crunkilton, 1939). Saylor (1981) defines curriculum "as a plan for providing sets of learning opportunities for persons to be educated". John Wiles and Joseph Bondi (2002) view curriculum as a four-step plan involving "purpose…design…implementation…and assessment". Armstrong (2003) refers to curriculum as "decision-making processes that focus on preparation and assessment of plans designed to influence students' development of insights related to specific knowledge and skills" (Armstrong, 2003). Ornstein and Hunkins (2004) term curriculum as "a plan for action or written documents that includes strategies for achieving desired goals or ends". Curriculum can be defined broadly as dealing with "experiences of the learner". Not that only definitions involving a plan, system, and field of study represent key or legitimate uses of the word curriculum (Ornstein and Hunkins, 2004).

Ornstein and Hunkins (2004) divided curriculum into planning, implementation, and evaluation. Fenwick English viewed curriculum in terms of ideological, technical, and operational issues. Edmund Short outlined the domains of curriculum as policy making, development, evaluation, change, decision making, activities or fields of study, and forms and language of inquiry (Ornstein and Hunkins, 2004). Analyzing curriculum development is the most traditional approach to showing how curricula have evolved, are planned, implemented and evaluated. Ornstein and Hunkins (2004)

have observed that one kind of curriculum may be more suitable with one school than another.

A good curriculum has to be an ongoing process that is built upon past experience and knowledge of educators. Good curriculum functions as a stimulus. It should lead to instruction that provides excellent raw material for learners to consider as they engage and interpret content in the light of their own experiences (Armstrong, 2003). From various scholars' notions of curriculum, it could be concluded that the term curriculum has no definitive meaning. Theory should be integrated with reality. Theories on curriculum are guidelines for educators and curriculum developers to have a broad view of how others utilize and define their curriculum. Therefore, no prescribed curriculum can be a perfect fit for any one school. "Building school programs by simply borrowing from existing curricula is a recipe for teaching students information that has less and less connection to the best knowledge available" (Armstrong, 2003 : 17). Educators and curriculum developers should design curricula best suited to each group of learners, culture, and nature of each country. There is broader acceptance [by curriculum developers?] of the varied cultural backgrounds that students take to school, adding strength to the learning experiences of all. Curriculum today should embrace certain historical realities of western and non-western groups (Armstrong, 2003). Curriculum development and implementation would then be essentially different as between Asia, South America, and North America, since the requirements of a curriculum differ according to culture, heritage, ethnic background, and the mother tongue of the specific populace. Furthermore, curriculum developers should take into consideration the viewpoints of both educators and learners. The prime consideration must be the finding of an appropriate blend between what a curriculum should be for educators and the means to achieve academic excellence in learners. Furthermore, other stakeholders in an educational institution, namely teachers, students, parents and the management, should all be taken into account in the overall process of development with the aim of arriving at the most effective curriculum.

2.4 CURRICULUM DEVELOPMENT

Curriculum development involves a process not only of development but also of implementation. Curriculum development is defined as improving the existing curriculum, designing a whole new curriculum from scratch, or producing new teaching and learning materials (Saylor, et al., 1981). There are many different curriculum development models, created by various leading scholars, among the famous being Bobbitt, Taylor, Taba and Piaget. Analyzing curriculum development is the traditional and most common approach to the field according to Ornstein and Hunkins (2004). The idea is to show how curricula evolve or are planned, and how implementation and evaluation are involved in constructing curricula (Ornstein and Hunkins, 2004).

These scholars have taken into account human development factors such as age and psychology. Erik Erikson (1982) has similarly defined curriculum development on the basis of his conceptual framework that, ideally, young people master each task

at different ages from infancy or from birth to age two, through adolescence, or ages twelve to eighteen (Erikson, 1982). Therefore, curriculum development was designed to support each life cycle stages.

The renowned educational scholar, Jean Piaget, categorized curriculum development into stages of human development from birth or the sensorimotor stage, between age two to seven, the preparational stage, age seven to eleven, or the concrete operation stage, ages eleven to sixteen or the formal operation stage (Armstrong, 2003). All curriculum development models show the relationships between various decisions, activities, and processes (Ornstein and Hunkins, 2004). According to Armstrong (2003) Curriculum development in the twentieth century should reflect the following:

- Recognition that schools have responsibilities to respond to the individual needs of students.
- Ongoing debate between seeing education as preparation for college and university and as preparation for future careers or living in the world at large.
- A recognition that, over time, there have been different responses to the question "what is wrong with today's schools?"
- A recognition that growing public demand for meaningful and highly competitive schools has been a driving force supporting the development of national level curriculum guidelines that all schools are expected to follow (Armstrong, 2003).

Tyler curriculum criteria focused on subject matter, to be organized in terms of knowledge, skills, and values, with particular emphasis on problem solving. A good educator is a generalist, not a specialist (Tyler, 1971). Curriculum cannot be completed without considering Ralph Tyler's notions (1902-1994) which viewed curriculum as a science and an extension of a school's philosophy, using objectives to select and organize learning experiences, and evaluation to determine outcomes or whether the objectives have been achieved. William Reid argues that one needs to go beyond rational and logical methods, beyond traditional models, systems, and taxonomies. "We need to be visionary, to advance beyond discussed commitments and stated promises" (Ornstein and Hunkins, 2004). He would rethink the curriculum in terms of aesthetics, morality, and spirituality.

Developing a curriculum for a school is an ongoing process for many scholars. Nor is it an easy task. It is one that needs continuous monitoring and adjustments to ensure that the curriculum best addresses students' needs and responsiveness to the school's objectives. Furthermore, developing a new curriculum requires due consideration of socio-cultural changes in the particular society. Learners should be able to adapt to changes in the socio-cultural context (Uttranan, 1985).The principal was the initiator of the two-way bilingual immersion programs, the rest of the stakeholders played the critical parts in sound development of their respective programs (Blackmore, 1989; Armendariz and Amendariz, 2002). The purpose of this process is to enable learners to attain the school's goal and their own personal goals. To build up a school program by simply borrowing or transferring an existing curriculum is a recipe for teaching students in the format that has less and less

connection to the best knowledge available in one's own culture (Armstrong, 2003). It is essential for curriculum development that it be an ongoing process. (Reagan, 2000; Ornstein and Hunkins, 2004). The most important factor is that power must be shared among the administrators in the bilingual immersion program. Curriculum developers need to also carefully consider issues associated with ethnic, culture, and language difference when planning or developing new curriculum or revising the old ones (Armstrong, 2003). The key persons who need to be consulted are policy makers, school management, teachers, students, and parents to find the right curriculum for the particular ethnic, cultural and language background.

Researchers worldwide have confirmed that bilingual curricula offer clear pedagogical advantages over traditional programs (Cummins, 1992; Benson, 2002). In addition, bringing the culture and language of the home into the school is important for enhancing identity and personality as well as group empowerment (Cummins, 2000; Benson, 2005). Taking as a starting point the various scholars' notions of curriculum development models, the present research will use the Curriculum Component Model, consisting of Philosophy, Objective, Content, Teaching method, Learning activities, and Evaluation, as the prime analytical model.

2.5 CURRICULUM IMPLEMENTATION

From understanding the terms and applications of the curriculum and curriculum development, the research will further discuss the essential qualities of the curriculum implementation. Smooth and effective curriculum implementation takes time and efficient people, as well as positive interaction and communication (Ornstein and Hunkins, 2004). The underlying reason for lengthy deliberation is that it essentially involves winning over people. Effective curriculum implementation is a two-way street, or a two-way communication channel of both formal and informal types (Ornstein and Hunkins, 2004). Curriculum implementers must seek the best mode of communication that is both vertical and horizontal, using good human relation practices to ensure that the message gets delivered to all concerned groups without distortions. As teachers are the key in curriculum implementation, it is essential for school management to reorientate and train teachers and ensure that they understand the direction and the overall foundation of the curriculum that they are teaching. Lack of total understanding and or of correct information will lead to adverse feedback from both students and parents who are stakeholders of the institution. The most effective way to rapidly make teachers feel comfortable with the curriculum is through in-service training or staff development. Many teachers lack a deep understanding of what a curriculum is and how it is created (Ornstein and Hunkins, 2004).

Effective Curriculum requires qualified bilingual teaching staff and the understanding of cultural differences. Bilingual teachers are preferred when teaching a class of non-native speakers. A holistic constructivist instruction curriculum includes offering students choices of meaningful tasks with authentic, real-world functions; providing whole texts; centering curricula on students' experiences and knowledge; emphasizing students' meanings over a concern for literacy tasks; and providing opportunities for collaboration and mediating in the learning community of teachers

and students (Ruitz, et al., 1995). The first factor is qualified bilingual teachers in following the code-switching theory. Arnest and Jurgensen (2003) studied how code-switching may develop into a bilingual competence in learners within the first year of intensive training (Arnfast and Jurgensen, 2003). Bilingual teachers can enable code-switching in classrooms which in turns help students overcome communication problems (Zabrodskaja, 2007). Research by Zabrodoskaja (2007) concluded that allowing code-switching in ways that resemble non-classroom bilingual interaction helps learners become comfortable with using two languages, thus becoming bilingual (Zabrodskaja, 2007).

The second factor involves the cultural understanding towards a successful implementation of a bilingual curriculum implementation. Teaching linguistically and culturally diverse learners requires teachers to be involved in cross-cultural understanding and training, thus creating responsive teaching strategies in addressing these differences (Carrasquillo and Rodriquez, 1995; Banks and Banks, 1997). In working with diverse students whose native language is not English,, teachers should be more attentive to their learners' backgrounds and cultural differences (Scarcella, 1992; Freeman and Freeman, 1998). Dong (2002) has studied three Biology teachers working with non-English speaking students in public schools in the United States founded that the successful teaching should focus on the following areas:

- Providing comprehensive input and integrating language with subject strands;
- Promoting language use and scientific thinking through group work;
- Explicitly teaching learning skills;
- Acknowledging cultural differences and using a modified classroom talk;
- Appreciating diversity and using learners' prior knowledge in the subject strand.

The experiences provided learners with ample opportunities and rich contexts for active language use, thereby facilitating language and literacy skills development (Snow, et al., 1989; Chamot and O'malley, 1994).

Enriching the curriculum and providing a rich language use environment (Dong, 2002). Moreover, the experiences which learners had through being interview with a scientist and reading a scientific article, enabled them to make connections between the subject strand learnt in school and in real life. Thus, the need in the training of teachers for more exposure to and practice of responsive teaching of linguistically and culturally diverse groups of learners, which are the focus of bilingual education. In pre-service and in-service training programs, teachers need not only to learn the theories but also field-tested teaching methods and techniques in dealing with such groups of learners. It is crucial for teachers to be trained and have a firm understanding without criticism of multicultural and multilingual issues and practices prior to being sent to the real classroom environment (Dong, 2002).

2.6 PARENTS' PERSPECTIVE

Having said that effective curriculum implementation is a two way communication channel between home and school. Parents as key stakeholders become a prime indicator of how the school has effectively implemented the curriculum. Parents' perceptions will determine the overall perspective towards the curriculum and the school. For a school curriculum to be successful in the long term, it must meet parents' perspectives. A school, in as much as any other type of business entity, essentially views customer satisfaction as one of the key factors enhancing its success. Research concluded that expectations influence perception (Gnoth, 2000). Hence, a clear understanding of the school curriculum will determine parent's expectations and if expectations are met at this level, the satisfaction will increase.

Parents' perspective according to Lovelock can be defined as an emotional state or feeling in which the consumer's needs, desires and expectations during the course of the service experience have been met or exceeded (Lovelock, 2001). A school, in as much as any other type of business entity, essentially views customer satisfaction as one of the key factors enhancing its success. Compared to conventional schools with little parental participation in the past decade, modern schools today are required to reorient their stances to be more collaborative and receptive to the increasing role of parents. It is evident that parents, both individually and collectively under Parent-Teacher Associations, are becoming more and more involved in students' learning as well as daily life at school. With increasing competition, there is increasing demand that teachers and the management listen and understand parents' needs and their involvement in the school's operation. Lovelock (2001) noted that understanding customer satisfaction is not only about improving the performance but also involves managing to meet customer expectation (Lovelock, et al., 2001). Ideally, parents' satisfaction with a school should exceed their expectation in order that they become a valuable group that creates positive word of mouth for school publicity.

With the advent of the government's privatization policy, schools will need to have a firm value-based clientele which, in this case, constitute parents and students. Parental or customer satisfaction will need to exceed expectations in order to affect their choices among available alternative educational institutions. Satisfaction is also the key to consumer's post-purchase evaluation of the overall service experience which will then lead to brand loyalty.

It is likely in many countries that parents bring a range of factors in their decision to place their children into bilingual schools. Some of the most influential factors include a successful academic record, language acquisition and cultural heritage preservation.

Parents are key stakeholders to an effective school's curriculum implementation. Parents are key participants in making a school function. A research in the United States found that the major contributors to the success of school curriculum were a well-informed, caring, committed, and supportive parent group, that were trying to do justice to the education of learners (Armendariz and Armendariz, 2002). These

individuals should be called upon by the principal, not only to assist in the development and implementation of the program, but also to receive input on how to improve the program and assist in the promotion of the concept throughout the communities on the local, city, and national level (Armendariz and Armendariz, 2002).

Parents also play a significant role in the students being bilingual. Studies done by Ghadessy and Nicol (2002) show that there is a strong relationship between parents and children's attitudes as well as their reading and comprehension ability along with other independent variables such as gender, ethnic identity and parents' educational level (Mohsen and Mary, 2002). Therefore, parents and the community at large need to be knowledgeable about the type of bilingual program.

Hickey (1999) has examined the importance of parental support for early immersion in the context of Irish-medium schools and concluded that the links between parental involvement and school achievement have in general been well researched, and that positive effects have been found in the areas of parent tutoring, children's reading and mathematics scores (Jackson, 1974; Karnes, 1975; Delgado-Gaiten, 1990; Delgado-Gaiten and Trueba, 1991; Hickey, 2007). Hickey (1999) has examined the importance of parental support during early immersion in the context of an Irish-medium school and concluded that the links between parental involvement and school achievement have, in general, been comprehensively studied, and that positive effects have been found in the areas of parent tutoring, children's reading and mathematics scores.

Research indicates that parents play a central role in education of minority languages. The impact of parental input into children's literacy development is also a strong factor in children becoming bilingual (Sneddon, 2000). Since bilingual curriculum is a new concept for the Thai educational community and the potential clients, higher emphasis should be targeted towards enhancing parents' understanding and satisfaction. Parents' increasing involvement in school social and cultural events will enhance their confidence and belief in the school operation and foster pride in being a partner in enriching their children's progress. This research will attempt to study the approaches being applied and measure how well parents have faith in the bilingual curriculum implementation through the Curriculum Component Model.

2.7 CONCLUSION

The Chapter has reviewed past literatures in the areas of Bilingual Curriculum, Curriculum, Curriculum development, Curriculum implementation and in additionally the parents' perspective towards the bilingual curriculum in other parts of the world. Literatures findings also found the importance why bilingual curriculum has been part of Thailand's education reform due to factors of globalization, international trade, and necessity for its citizen to become bilingual in language communication skills. However, as past literatures were not found as to how EP schools can modify the curriculum as prescribed by the EP Curriculum, it will be beneficial to investigate how a bilingual school in Thailand has developed its curriculum with modified

contents. As the Ministry of Education have prescribed the English Program Curriculum for all EP schools in Thailand to be able to modify their curriculum to fit the needs of learners, the next chapter will use Satit Bilingual School of Rangsit University as a case study to see how a bilingual school in Thailand has developed and modified its curriculum through a Curriculum Component Analysis Model.

CHAPTER 3

ENGLISH PROGRAM (EP)/BILINGUAL CURRICULUM

3.1 INTRODUCTION

Since the objectives of the study deal with bilingual curriculum development and implementation, it is important for the researcher to analyze the components of the English Program Curriculum (also known as the Bilingual Curriculum as prescribed by the Ministry of Education of Thailand). This is to give a clear picture of the English Program as a core curriculum to be further developed or modified by bilingual schools reported in this study, i.e., Satit Bilingual School of Rangsit University (SBS) and Selected Second Bilingual School. The EP Curriculum Versions 2001 and 2008 will be analyzed by means of the Curriculum Component Analysis Model, covering (1) Philosophy, (2) Objectives, (3) Contents, (4) Teaching method, (5) Learning activities, and (6) Evaluation.

The first part of this chapter will explain the EP Curriculum (Version 2001 and 2008). The second part will present the SBS curriculum utilizing the Curriculum Component Analysis Model. The third part of the analysis will present the components of the SBS Unified Bilingual Curriculum which is modified with contents and specific criteria of academic achievements of two international curricula: International Baccalaureate (IB) and International General Certificate of Secondary Education (IGCSE). The Unified Bilingual Curriculum has incorporated four major areas of educational practices, namely: (1) Process-based teaching methodology, (2) Interactive learning activities, (3) Authentic assessment and (4) ICT literacy.

The last part of the chapter will deal with the significance of the Unified Bilingual Curriculum to Thai students. The strength of the Unified Bilingual Curriculum essentially lies in internationalization which rests upon linguistic and cultural competency of English. With such a curriculum, desirable Thai qualities and historical knowledge of the country will be dealt with as in the National Thai Curriculum as prescribed by the Ministry of Education. Various government news releases and the objectives of Educational Reform in 2001 and 2008 have spurred demands for bilingual education in Thailand and leading bilingual schools have identified major components of their curriculum on the platform of the EP Curriculum in order to develop their identity of educational practices and targets for students' academic achievements.

3.2 EP CURRICULUM

The Curriculum Component Model will be used to analyze the English Program Curriculum (EP Curriculum) prescribed for the selected schools as follows:

3.2.1 Philosophy

The National core curriculum provides a framework for the development of the school curriculum, from primary to secondary education. It can be applied to formal, non-formal, and lifelong education systems (Ministry of Education, 2001). However, each educational institution is encouraged to establish its own curriculum on the basis of the substance and standards stipulated by the Thai Ministry of Education (Ministry of Education, 2001). As there is not any specific curriculum vested for the English program schools they, therefore, have to apply a similar structure that requires 70% to be in line with the MoE's core curriculum leaving 30% for needed adjustment and adaptation. All concerned educational institutions are expected to bear in mind their own community issues, intellectual outputs, and desirable characteristics in designing the curricula that meet the goal of fostering good members of the family, community and society at the national and international levels.

The national core curriculum aims to develop learners in four areas: morality, intellectual growth, quality of life and competitive ability. The Basic Education Curriculum B.E. 2544 and 2551 (A.D. 2001 and 2009) is the national core curriculum which provides guidelines for all English program schools in Thailand (Education 2001). The main focuses are on realizing and enhancing the potential of learners, enabling them to live a happy life as good citizens of the country and as members of the world community, developing their professional or vocational abilities; and enabling them to make appropriate decisions in furthering their education in line with their competencies, interests and experience and to become "lifelong learners" (Education 2001).

The underlying *Philosophy* of the curriculum aims to preserving the stability of the country, the religion, the Monarchy and the Thai language, culture and heritage (Ministry of Education Order, 2001). Following the MoE's Basic Education Curriculum, education institutions establish their own English curricula under the designated English Program (EP).

The analysis of both EP Curriculum years 2001 and 2008 can be consolidated with regard to Philosophy and summarized as follows:

1. Education aims at preserving the stability and unity of the nation, underscoring the invaluable Thai-ness of the country in parallel with international consciousness;
2. Education is available to all Thai citizens who have equal rights to be educated, while all concerned social institutions are invited to be state partners in the process of education revision;

3. Learners are to be continually supported and facilitated to become lifelong learners, on the basis that education is to be learner–centered and essentially conducive to self-development and self-realization;

4. The curriculum structure, substance, time-frame, and the management of learning processes is to be flexible in adapting to local conditions and situations;

5. The curriculum is to be applied to all education systems and to all target groups. For the purpose of technical exchange, learning results and experiences are to be equated and replicated (Education 2001).

6. The curriculum must be responsive to the powers officially delegated to local authorities in order to enhance local community participation in educational arrangements with the aim of meeting specific local community needs;

7. The curriculum structure is to be flexible with respect to teaching methods, learning time and learning concepts;

8. The curriculum should be supportive to both government and non-government educational institutions thus covering all groups of learners while facilitating learners' credit transfer among all educational institutions (Curriculum 2008).

The overall Philosophy thus has eight criteria, three of which were added under Curriculum 2008. However, the overall Philosophy stresses equal opportunity in education, aimed at lifelong learning, at the same time as providing broad guidelines to local communities to adapt it to their own population and resources.

3.2.2 Objective

The Basic Education Curriculum aims at Thai citizens becoming well-orientated human beings of good citizenship, possessed of intellectual competency, happiness, "Thainess" and the capability to seek further education and careers, all of which are stated as follows:

1. He/she should see his/her self worth with discipline in adherence to the Buddhist teaching and way of life under good morale, ethics and values;

2. Creativity in seeking new knowledge through reading, writing and research;

3. International knowledge and readiness to change and adapt to technological and environment change, and new knowledge in management, through communication technology and its use with appropriate management skills;

4. Master comprehensive knowledge and skills in processing key areas of Mathematics, Science and creative thinking and apply them to daily life;

5. Physical education and exercise to maintain good health and good personality as well as health consciousness and healthy living;

6. Effectiveness in producing and consuming. Understanding the concept of balanced living whereby human beings cannot merely consume but need to be producers;

7. Understand Thai history, take pride in being Thai and a good citizen in a democratic society, with utmost reverence for His Majesty the King;

8. Mindful in preserving the invaluable qualities of "Thainess": language, culture, history, natural resources and environmental development;

9. Love the country and community and be willing to do things of value for society (Education 2001).

10. Capability of learners to communicate, solve problems and use technology and human skills (MoE 2008) in five areas:

10.1 Communication competency - ability to send and receive messages in languages, transmitting under cultural know how. Communicate ideas, understanding, thoughts and personal views to exchange information and experience beneficial to individuals and society as a whole. This essentially includes the negotiation skills for reducing conflict as well as skills in selecting and receiving information;

10.2 Thinking ability - Analytical, innovative thinking which is beneficial to individuals and society as a whole. Thinking skills should help learners in developing new ideas or new technology which will be useful for individuals and society;

10.3 Problem solving ability - Ability to resolve conflicts and clear obstacles effectively through reason, morality and technological skills. Adaptive to change with consideration of oneself, society and its effects on others;

10.4 Human skills - Able to adapt processes learned to daily living, self learning, and continuous learning at work, group and enhance relationships with others. Adaptive to societal and environmental changes. Lessen unfavorable behavior towards others in the society;

10.5 Technology competency - able to select and use technology for self-development as well as for the overall development of society in the areas of learning, communication, career development and problem solving through good moral and righteousness practice and innovation (MoE 2008).

11. Love the country, religion, and the King
12. Decency
13. Discipline
14. Enthusiastic to learn
15. Self sufficiency
16. Career search
17. Thainess
18. Charitable (Education 2008)

It could be said from the above-mentioned factors that the 2001 EP Curriculum aims broadly at learners becoming "good citizens", self-sufficient and happy citizen, whereas the 2008 Curriculum introduced the concept of technology as a key relevant factor.

3.3 CONTENTS

The core curriculum contents analyzed under the Curriculum Component Model will comprise:

3.3.1 Band Division

To ensure that curriculum content meets the Ministry of Education's guidelines, it is sub-divided into Bands (grade levels):

- Band 1 Primary   levels 1-3
- Band 2 Primary   levels 4-6
- Band 3 Secondary   levels 1-3
- Band 4 Secondary   levels 4-6

3.3.2 Weight

The content of the English Program (EP) Curriculum as per each level of education shall observe the following guidelines for learning hours for the 8 subject strands from Primary level to Secondary level according to Curriculum 2001 and 2008:

The learning time allocations for each grade level are divided as follows from Curriculum 2001:

Band 1 shall have an annual average of 800-1,000 hours or daily average of 4-5 hours;
Band 2 shall have an annual average of 800-1,000 hours or daily average of 4-5 hours;
Band 3 shall have an annual average of 1,000-1,200 hours or daily average of 5-6 hours;
Band 4 shall have an annual average of not less than 1,200 hours or a daily average of not less than 6 hours (Ministry of Education, 2001).

1. Primary Level (Pratom 1-6) arranges learning time annually with learning hours not exceeding 5 hours a day.

The EP Curriculum in the Primary School specifies that English shall be used as a medium of teaching only in specific subjects whose content may be bound with English language such as Language, Mathematics, Sciences, physical education, etc.;
2. Lower Secondary Level (Matayom 1-3) arranges its learning time each semester, with learning hours not exceeding 6 hours a day. Use credits as weight for each subject and uses the 40 hours per semester.

The EP Curriculum in the Secondary School specifies that English shall be used as a medium of teaching in every subject except in the case of Thai and Social Studies or any course content which reflects Thai culture, cultural heritage and Thai law (Ministry of Education Order, 2001).

3. Upper Secondary Level (Matayom 4-6) arranges its learning time each semester, with learning hours not exceeding 6 hours a day. Uses credits system with 40 hours per semester (MoE 2008).

3.3.3 Subject Strands

The Subjects have been divided into 8 subject strands

Learners should become balanced individuals through comprehensive learning of 8 subject strands:

Thai- Knowledge, skill and use of language for communication, self admiration, taking pride in the invaluable cultural heritage pertaining to the language and the country.

Mathematics- Ability to apply knowledge in mathematics to solve problems, to facilitate day-to-day living and continuing education based upon rational and innovative thinking.

Science- Ability to apply scientific knowledge in learning, seeking new knowledge and solving problems. Able to analyze and utilize critical thinking as well as innovative thinking in further development.

Social Studies, Religion and Culture- Able to live in harmony with people of different cultures as good citizens and with faith in the religion. Realizing the value of natural resources, the environment and taking pride in being Thai.

Health and Physical Education- Able to apply knowledge in supporting and developing personal health and the health of others. Adhere to prevention, learn to be selective and behave with due consideration for health in daily life.

Arts- Learning to be creative, using imagination in developing new ideas and realizing the value of art.

Career and Technology- Value knowledge and skills in one's working life, career management and technology.

Foreign Languages- able to communicate in foreign languages and search for new knowledge in relation to one's career and life (MoE 2001; MoE 2008). A more detailed description from the MOE content guidelines could be found in the attached appendix (Appendix A).

The subjects are sub-divided into two related groups to lay down essential groundwork for learners to grow in harmony and in response to changes. The first group includes substances such as Thai language, mathematics, science, social studies, religion and culture whereas the latter consists of substances such as physical education, art, career and technology, and foreign languages. The teaching and learning processes for each specific group are aimed at developing the quality of learners, most particularly in the building up of firm foundation for rational and constructive thinking, analytical skills for problem solving while being conscious of humanities, morale and having access to all knowledge essential for them to be well-adjusted to lead a happy life in a fast-changing world. Educational institutions can be flexible in adding other subjects or extra-curricular activities which are deemed supportive of individuals' capacities, aptitudes, interests and potential (Ministry of Education, 2001).

1. THAI LANGUAGE

The Thai language is a national identity, a cultural heritage which essentially creates and maintains national unity and enhances the 'THAINESS" in the personality of the Thai population. It is the mechanism for communicating and establishing interpersonal relations essential for joint business undertakings, working and living together peacefully in a democratic society. It is also a tool for searching for knowledge and experience through information technology, for developing new knowledge, updating analytical, critical and creative thinking to meet social change and advances in Science and technology in as much as using the language in enhancing professional developments for promoting economic security. Thai language also connotes the aesthetic cultural heritage of our ancestors, an invaluable resource to be preserved and transmitted to the successive generations.

Learning substances

1. Reading: pronunciation of words, sentences, reading different styles of prose and verse, contemplated reading to enhance understanding, analytical skill and accumulation of knowledge from reading to be used in daily living;

2. Writing: writing and spelling in line with orthography, writing for effective communication and publicity, writing in different forms such as composition, summary, report, imaginative writing, analytical and critical writing, creative writing, etc;

3. Listening, observing and speaking: listening and observing critically, expressing one's own opinion and feeling, speaking systematically and rationally, giving speeches in both formal and informal circumstances and communication for motivation;

4. Principles of usage: nature and theory of learning the Thai language, correct application in accordance with specific situations and persons, composing verses of different types and studying the influence of foreign languages on the Thai language;

5. Literature and literary works: analyzing literature and literary works to gather information on underlying concepts and values of the written works and the joy of reading them. Learning and understanding the meaning of classical music and songs sung during the glorious Royal Barge floating ceremony, lullabies and folk songs created through the indigenous wisdom of local people could help transferring the thinking, feeling, values, culture, tradition, ways of life of Thai people in the past including the appreciation of the beauty of the Thai language, and will generate delight and great pride in the invaluable cultural heritage maintained from the time of our ancestors up to the present.

Key performance indicators of learners' development

Band 1 (Prathom 1-3)

● pronouncing words, rhyming words, phrases, short stories and simple poems correctly and promptly; understanding the meaning of the words and texts read; capable of raising rational questions, knowing the sequences of the story read and envisaging what will happen; summarizing knowledge or ideas gained from the story, doing what is being told or explained based upon the story; understanding the meaning of data in diagrams, maps or charts, reading books regularly and studiously;

● possess neat handwriting skills in full sized alphabets; capable of simple descriptive writing, keeping a day diary, writing leave of absence letters to the teacher, giving accounts of personal experience, including well-written imaginative stories;

● telling details and important points of the story, raising questions, giving answers, expressing ideas and feelings about what is heard and seen; communicating by telling experiences, giving advice or motivating others to follow suit, all in good conduct of listening, observing and speaking;

● spelling words and understanding their meaning, the difference between words and phrases, the functions of words in a sentence; possessing skill in using a dictionary to find the meaning of words; being capable of writing simple sentences, rhyming verses or mottoes and knowing how to integrate the standard Thai language and local dialects to meet specific conditions or circumstances;

● understand and being capable of summarizing ideas from reading Thai literature or literary works, applying them for use in daily living; being capable of expressing ideas concerning what has been read; knowing and appreciating folk songs and lullabies which are part of the indigenous culture; being capable of singing children's folk songs and reciting verses of individual interest.

Band 2 (Prathom 3-6)

● reading and correctly pronouncing prose and poetry and correct melody; explaining the direct and indirect meaning of words, sentences, messages, and idioms; understanding the instructions and explanations written in the handbook and being capable of differentiating between fact and fiction as well as being capable of grasping the important points from the reading, applying the knowledge and ideas therein to solve the problem faced in daily living; reading in good manner, acquire the reading habit and realize the value of reading;

● having neat handwriting, both full size and half size; correct spelling and writing of words, making sentences, messages and other clear and accurate communications; being capable of applying diagrams, outlines and conceptual frameworks to improve written work such as compositions, summaries, letters, form-filling, expressing feelings and ideas in words including creative writing in observant of good conduct in writing;

● speak out to express knowledge, opinions about things heard or seen, give account of or summarize matters learnt, post questions and answers in connection with personal experience; being capable of evaluating rationally the credibility of commercial advertisements seen or heard; speak clearly on any issue in a well-

structured way, presenting reports of what is read, heard, seen or discussed with skill in motivation as well as good conduct in observing and addressing issues;

● spelling words correctly and understanding their meaning, including idioms, locutions, and proverbs; knowing and understanding the type and function of words in a sentence, types of sentence, and the use of foreign language in the Thai language; appropriate use of court language and polite wording; being capable of writing sentences, composing poems and Thai classical verse of different types;

● understanding and realizing the value of Thai literature and literary works; reciting folk tales, singing folk songs and being capable of applying what has read to daily living; learning the designated recitations by heart.

Band 3 (Matayom 1-3)

● reading prose and poetry in correct melody while understanding their direct and indirect meaning; being capable of grasping the important points and details of the text read; providing opinions or contradicting points concerning the issues read; being capable of writing conceptual frameworks, laying out ideas, summarizing issues and writing reports of the thing read; being capable of rational and systematic analysis and criticism, of evaluating the credibility of the things read and the data inherent therein;

● good and legible handwriting, being capable of selecting the right words to meet different literary forms, such as mottoes, proverbs, blessings for different occasions, advertising messages, addresses, bio-data, summaries, business letters, application forms, etc; being capable of rational analysis and criticism, presenting knowledge, ideas or opposing ideas based on sound reasoning; being capable of writing research reports and project proposals;

● providing opinions based upon sound analysis and criticism of things heard and seen and applying the knowledge gained in daily living; being capable of giving verbal reports on research or issues under systematic study; acquiring the art of public speaking and being able to give effective speeches in different occasions; being capable of communicating for motivation while possessing good conduct in listening, observing and speaking in the public.

● fully understanding and making good use of the court language, Pali and Sanskrit, words directly transferred from foreign languages, officially designated words; being capable of analyzing the differences between wordings for speaking and writing, the variegated structure of the sentence and complex sentence, the nature of the official, semi-official and unofficial language, including the ability to compose different types of classical verses and poems.

● analyzing and criticizing issues in Thai literature and literary works, using the basic principle of literature review; knowing and understanding the significant characteristics of Thai literature, indigenous wisdom in language and folk tales in relation to learning history and Thai ways of life; being capable of evaluating the written arts and utilizing the lessons learned in real life situations .

Band 4 (Matayom 4-6)

● being able to read, fully understand and correctly pronounce prose and poetry; being capable of explaining, translating and further expanding the issues read;

analyzing and criticizing issues, expressing reasonable contradictions and suggesting new ideas based on sound reasoning; being capable of making predicting based upon the issues read, writing conceptual frameworks, laying out ideas, summarizing issues and writing reports on things read; being capable of using knowledge gained for self development, improve learning and professional development by applying the knowledge and ideas in solving problems which might occur in daily living; acquiring good conduct and reading habits;

● effectively communicating in different forms with the best use of language as a tool to achieve the desired objectives; making summaries of information found in the various media, writing essays demonstrating creativity and eloquence; writing research reports based on good technical writing principles, utilizing information technology in reference to different forms of one's own product, such as documentaries and entertaining articles as well as evaluating works of other writers with a view to further improve one's own writing.

● raising questions and giving opinions concerning issues heard and seen; being discreet in selecting issues to be heard and seen, analyzing objectives, underlying concepts, the nature of language usage, the credibility of the issue and then applying it in daily living; acquire skill in public speaking both formally and informally by using the right language; being capable of expressing one's own opinion, opposing ideas, motivating others and promoting new ideas based on sound reasoning, all in observance of good conduct in hearing, seeing and speaking.

● understanding the nature and influence of language and the characteristics of the Thai language; being capable of using the words, phrases, and groups of words to form the desired sentence; being capable of composing classical Thai verse and poems of different forms; using language appropriate to specific situations; using correct court language and polite wordings; being capable of analyzing the principles of Thai word formation, the influence of foreign language on the Thai language and local dialects; analyzing and evaluating language usage in the written and electronic media.

● analyzing and criticizing literature and literary works using the basic principle of literature review; realizing and understanding the key characteristics of Thai literature, indigenous wisdom in language and folk tales in relation with the learning in history and Thai ways of life; being capable of evaluating the value of literature and usage of the lessons learned in real life situation.

2. MATHEMATICS

Mathematics is highly important for the development of the human mind. It enables a person to acquire skills in creativity, logic and systematic and methodical thinking. It allows one to carefully and thoroughly analyse various problems or situations, to anticipate, plan, make decisions, solve problems and accurately and appropriately apply mathematics in daily life. Mathematics serves as a tool for learning science, technology and other disciplines. It is therefore useful to one's life, enhances the quality of life, and enables people to live in harmony with others.
The learning area of mathematics is aimed at enabling all children and youths to continuously learn this subject in accord with their potential. The contents prescribed for all learners are as follow:

- Numbers and Operations: numerical concepts and sense of perception; real number system; properties of real numbers; operation of numbers; ratios; percentages; problem-solving involving numbers; and application of numbers in real life
- Measurement: length; distance; weight; area; volume and capacity; money and time; measuring units; estimation for measurement; trigonometric ratios; solving problems of measurement; and the application of measurement in various situations
- Geometry: geometric figures and the properties of one-dimensional geometric figures; visualization of geometric models; geometric theories; and geometric transformation through translation, reflection and rotation
- Algebra: pattern; relationship; function; sets and their operations; reasoning; expression; equations; equation systems; inequality; graphs; arithmetic order; geometric order; arithmetic series; and geometric series
- Data Aanalysis and Probability: determining an issue; writing questions; determining methods of study; study; data collection, systematization and presentation; central tendency and data distribution; data analysis and interpretation; opinion polling; probability; application of statistical knowledge and probability; application of probability in explaining various situations as well as for facilitating decision-making in real life
- Mathematical Skills and Processes: problem-solving through diverse methods; reasoning; communication; communication and presentation of mathematical concepts; linking mathematics with other disciplines; and attaining ability for creative thinking

Band 1 (Prathom 1-3)

- Have numerical knowledge, understanding and a sense of cardinal numbers not more than 100,000; zero; the operation of numbers; being able to solve problems involving addition, subtraction, multiplication and division; being aware of the validity of the answers reached
- Have knowledge and understanding of length, distance, weight, volume, capacity, time and money; being able to measure correctly and appropriately; being able to apply the knowledge of measurement for solving problems faced in various situations
- Have knowledge and understanding of triangles, quadrilaterals, circles, ellipses, cuboids, sphere sand cylinder as well as point, line segment and angle
- Have knowledge and understanding of patterns and being able to explain relationships
- Being able to collect and analyse relevant data and information about oneself and one's surroundings in daily life; being to use pictograms and bar charts for discussing various issues.
- Being able to apply diverse methods for problem-solving; to use mathematical knowledge, skills and processes appropriately for solving problems faced in various situations; to give reasons for decisions and appropriately present conclusions reached; to use mathematical language and symbols in communication, as well give accurate and appropriate presentations of mathematical concepts; to link various bodies of mathematical knowledge; to link mathematics with other disciplines; to be able to think creatively

Band 2 (Prathom 4-6)

• Have numerical knowledge, understanding, and a sense of cardinal numbers and zero, fractions, decimals of not more than three places, percentages, the operation and properties of numbers; being able to solve problems involving addition, subtraction multiplication and division of cardinal numbers, fractions, decimals of not more than three places and percentages; being aware of the validity of the answers reached; being able to find estimates of cardinal numbers and decimals of not more than three places

• Have knowledge and understanding of length, distance, weight, area, volume, capacity, time, money, direction, diagrams and the size of angles; being able to measure correctly and appropriately; being able to apply knowledge of measurement for solving problems faced in various situations

• Have knowledge and understanding of the characteristics and properties of triangles, squares, circles, cuboids, cylinders, cones, prisms, pyramids, angles and parallel lines

• Have knowledge and understanding of patterns and can explain their relationships and solve problems involving patterns; being able to analyse situations or problems as well as write linear equations with an unknown that can be solved

• Being able to collect data and information and discuss various issues from pictograms, bar charts, comparative bar charts, pie charts, line graphs and tables used for presentation; and to apply knowledge of basic probability in projecting various possible situations

• Being able to apply diverse methods for problem-solving, making use of mathematical and technological knowledge, skills, and processes appropriately to solve problems faced in various situations; to provide suitable reasons for decisions and appropriately present the conclusions reached; to use mathematical language and symbols for communication as well as accurate and appropriate communication and presentation of mathematical concepts; to link various bodies of mathematical knowledge and link mathematical knowledge with other disciplines; and being able to think creatively

Band 3 (Matayom 1-3)

• Understand concepts of numbers, ratio, proportion, percentage, real numbers expressed in exponential notation with integer indices, square root and cube root of real numbers; being able to carry out operations involving integral numbers, fractions, decimals, exponents, square roots and cube roots of real numbers; and apply numerical knowledge in real life

• Have knowledge and understanding of surface areas of prisms and cylinders, and volume of prisms, cylinders, pyramids, cones and spheres; being able to appropriately choose units of the various systems for measuring length, area, and volume; and to apply knowledge of measurement in real life

• Being able to construct and explain the stages of constructing two-dimensional geometric figures with compass and straight edge; to explain the characteristics and properties of three-dimensional geometric figures, i.e., prisms, pyramids, cylinders, cones and spheres

- Understand properties of congruence and similarities of triangles, parallels, Pythagoras' theorems and converse; being able to apply these properties for reasoning and problem-solving; and understand geometric transformation through translation, reflection and rotation

- Being able to visualise and explain the characteristics of two-dimensional and three-dimensional geometric figures

- Being able to analyse and explain the relationships of patterns, situations or problems; and use single-variable linear equations, two-variable linear equation systems, single-variable linear inequality, and graphs in problem-solving

- Being able to determine an issue, write questions about a problem or a situation, determine methods of study and collect and present data by utilizing pie charts or any other forms of presentation

- Understand the concepts of measures of central tendency, arithmetic mean, median, and mode of non-frequency distribution data that can be chosen appropriately for application; apply knowledge in considering statistical data and information

- Understand the concepts of random sampling and probability; being able to apply knowledge of probability for making projections projecting and decision-making in various situations

- Being able to apply diverse methods for problem-solving; to make appropriate use of mathematical and technological knowledge, skills and processes to solve problems faced in various situations; to provide suitable reasons for decision-making and appropriately present conclusions reached; to use mathematical language and symbols for communication; to communicate and present mathematical concepts accurately and clearly; to link various bodies of mathematical knowledge; to link mathematical knowledge, principles and processes with other disciplines; to be able to think creatively

Band 4 (Matayom 4-6)

- Understand the concepts of the real number system, absolute values of real numbers and real numbers expressed in radicals and in exponential notation with rational indices; being able to find estimates of real numbers expressed in radicals and exponents through appropriate calculation methods; to apply the properties of real numbers

- Being able to apply knowledge of trigonometric ratios for estimating distance and height, and to solve measurement problems

- Understand the concept of sets and their operation; being able to apply knowledge of Venn-Euler diagrams for problem-solving and checking the validity of reasoning

- Understand and being able to apply reasoning through induction and deduction

- Understand relations and functions that can be applied to problem-solving in various situations

- Understand the concepts of arithmetic sequence, geometric sequence and being able to find general terms; understand the concepts of the sums of the first n terms of arithmetic and geometric series by using the applicable formulae

- Know and understand the concept of solving equations and inequalities with one variable (of not more than two degrees); being able to use graphs of equations, inequalities or functions for problem-solving

- Understand the simple methodology of opinion polling; being able to choose measures of central tendency suitable to data and objectives; to find arithmetic means, medians, modes, standard deviations and percentiles of data; to analyse data and apply the results of data analysis for facilitating decision-making

- Understand the concepts of random sampling and probability; being able to apply knowledge of probability for making projections and for decision-making in various situations

- Being able to apply diverse methods for problem-solving; to use mathematical and technological knowledge, skills and processes for appropriately solving problems faced in various situations; to provide suitable reasons for decision-making and appropriately present the conclusions reached; to use mathematical language and symbols for communication; to communicate and present mathematical concepts accurately and clearly; to link various bodies of mathematical knowledge, principles, and processes with other disciplines; to be able to think creatively

3. SCIENCE

Science plays a leading role for our global society today and in the future. Science permeates everyone's daily routine including the variegated professions and technology. The appliances, tools and materials that living things use in facilitating their living are essentially the products of knowledge in science coupled with related innovations and other supportive sciences. Science helps us develop our overall thinking process incorporated reasoning, creativity, analytical and critical thinking; it provides us the skill in searching for knowledge, the capacity to solve problems systematically, to make good decisions based upon supportive data which are empirically reliable. Science has become an inevitable culture of the new world of our knowledge-based society. Therefore each and everyone should undertake comprehensive learning of science to thoroughly understand nature and the technologies created by fellow human beings and be capable of applying science rationally, with creativity and with a good ethical orientation.

The objectives of science are to ensure that learners study this subject in terms of theory and of its practical application.; develop skills in research and the development of new knowledge derived from the process of identifying problems and finding alternative means for solving them, during which learners will take part at every single step of the process with hands-on experience.

Learning substances

1. Living things and the process of living: living things, their basic classes, structure and function of each system, the process of maintaining livelihood, the issue of bio-diversity, heredity transfer, evolution and diversity of living things and bio-technology;

2. Life and environment: diversity of living things in the environment, relationship between them and the environment, relationship among various types of living things in the ecological system, the importance of natural resources, the usage and management of natural resources at the local, national and global levels; factors affecting the survival of living things in different surroundings;

3. Matters and properties: Properties of objects and materials, pulling strength among molecules, changing situation of materials, material solution, chemical reactions, chemical equations and extraction of materials;

4. Force and mobility: nature of force, magnetic force, gravitational force, nuclear force; act of force upon materials, movement of materials, friction, moment of different forms in daily living;

5. Energy: relationship between energy and daily living, energy transformation, property and phenomenon of light, sound, electrical circuits, electro-magnetic waves, radioactivity and nuclear reactions, interaction between materials and energy; effects of energy usage on living things and the environment;

6. Evolution of earth: structure and composition of the earth, geology, physical property of the soil, stone, water, air, property of the earth's surface and atmosphere, process of change of the earth's crust, geological phenomena, factors affecting changes in the atmosphere;

7. Astronomy and space: evolution of the solar system and galaxy, internal solar system, their relationship and effects upon living things on earth; relationship between the sun, the moon and the earth; the importance of space technology;

8. Nature of science and technology: process of scientific discovery, knowledge acquisition, problem solving and psychology science.

Key performance indicators for learners' development

Band 1 (Prathom 1-3)

● understand the structure and function of different systems of species of living things and their relationships in different environments;
● understand the nature of appearance and changes of materials in the surrounding environment, forces in nature, types of energies;
● understand the physical properties of the soil, stone, water, air, the sun and the stars;
● be capable of raising questions concerning living things, materials and different phenomena occurring around them; observe, explore, examine by using simple apparatus and disseminate the acquired knowledge by talking, writing or drawing;
● apply knowledge and scientific processes in daily living in search of additional knowledge; initiate projects or pieces of work assigned or based upon individual interests;

● be eager and active in learning and admiring the surrounding environment while expressing sympathy and care for other living creatures;

● conduct and complete all assignments with full determination, care, sense of economy, honesty; happy to work with other people.

Band 2 (Prathom 4-6)

● understand structure and functions of different systems of the living things and their relationship in different environments;

● understand the property and typology of materials, their condition, ways of inducing changes; materials found in daily living and how to analyze them;

● understand the result of force acting upon materials, pressure, basic principles of buoyancy; properties and fundamental phenomena of light, sound and electrical circuits;

● understand the characteristics, the components and property of the earth's surface and hemisphere; relationship of the sun, the earth and the moon, affecting the occurrence of natural phenomena;

● raise questions concerning things to learn, evaluate alternative answers; plan and conduct surveys and investigations using simple scientific tools; analyze data and communicate acquired knowledge.

● apply knowledge and scientific processes in daily living and in searching for additional knowledge; initiate projects or pieces of work assigned or based upon individual interests;

● express interest, determination, responsibility, carefulness and honesty in search of scientific knowledge;

● express deep care for, and cherish and preserve invaluable natural resources and the environment through supportive behavior;

● work with others constructively, expressing one's own opinion while being mindful of the other people's opinions.

Band 3 (Matayom 1-3)

● understand the characteristics and the significant components of the cells of living things, the relationship between their working systems, heredity transfer, biotechnology, biodiversity of living things, their behaviors and responses to stimuli, the interrelationship of living things in the environment;

● understand the composition and property of liquid solutions, pure materials, changing states of materials, the occurrence of liquid solutions and chemical reactions;

● understand friction, moment of force, mobility of different forms of life, rules for energy conservation, energy transformation, thermal equilibrium, reflection, refraction and light intensity;

● understand the relationship between electrical quantities, the principles of connecting electrical circuits at home, electric power and the basic principles of electronic circuits;

● understand the process of changes of the earth's crust, the location of mineral resources, factors affecting the changes of the hemisphere, internal

interactions of the solar system and their effects upon life on earth, the significance of space technology;

●   understand the relationship between science and technology; development and its effect upon the quality of life and the environment;

●   write questionnaires with designated and controlled variables, estimate alternative responses; plan and conduct surveys, analyze results and evaluate   the reliability of data and then build up acquired knowledge;

●   communicate ideas and knowledge acquired from surveys and investigations through talking, writing, staging exhibitions or through information technology;

●   utilizing acquired knowledge and scientific processes in daily living, continuing studies; initiate projects or pieces of work based upon individual interests;

●   express interest, determination, responsibility, carefulness and honesty in searching for knowledge, utilizing the right tools and effective methodology which will yield reliable outcomes;

●   realize the value of science and technology in daily living and in responsible profession; express admiration, esteem and respect intellectual property rights of other inventors;

●   express deep care for, and cherish and preserve invaluable natural resources and the environment through supportive behavior; actively participating with local people in protecting the natural resources and environment;

●   work with other people in a constructive manner; expressing one's own opinion while being mindful of other people's opinions.

Band 4 (Matayom 4-6)

●   understand the process of maintain equilibrium of cells and the mechanism for maintaining the balance of living things;

●   understand the process of genetic transfer, mutation, evolution of living things, the diversity of living things and the factors affecting their survival in various environments;

●   understand the process, the significance and outcome of biotechnology, and their effect upon humans, other living things and the environment;

●   understand atomic structure and its component particles, the periodic table, chemical reactions and the formulation of chemical equations, factors affecting the rate of chemical reactions;

●   understand the types of binding energy among particles and the property of materials related with binding energy;

●   understand the occurrence of petroleum, the extraction of natural gas and the distillation of crude tar oil; usage of petroleum and its side effects upon living things and the environment;

●   understand the type, property and significant reactions of polymers and bio-molecular materials;

●   understand the quantitative relation between various types of motion, the property of mechanical waves, the benefits and dangers of electromagnetic waves, radioactivity and nuclear reactions;

●   understand the process of changes of the earth and geological phenomena and their effects upon living things and the environment;

- understand the origin and evolution of the solar system, the galaxy, the universe and the importance of space technology;
- understand the relationship between science and the development of technology of different types; the contribution of technology developments towards advanced scientific discoveries; the effect of technology on life, society and the environment;
- problem identification, questionnaire formation designating the relationship among variables; literature review of various sources; formulate alternative hypotheses and decide which ones can be feasibly investigated;
- formulate action plans for surveys and investigations for solving problems or answering questions; analyze, correlate the relationship of variables by utilizing arithmetic equations or creating models from the results or findings of the investigations;
- communicate ideas and acquired knowledge through talking, writing, staging exhibitions or through using information technology;
- explain knowledge and apply the scientific processes to daily living as well as in continuing studies; initiate projects or pieces of work based upon individual interests;
- express interest, determination, responsibility and honesty in the search for knowledge with the right tools and methodology which would yield reliable outcomes;
- realize the values of science and technology in daily living and in responsive profession; express admiration, pride and respect to local products under the intellectual property rights and advanced development of technology;
- express deep care for, and cherish and preserve invaluable natural resources and the environment through supportive behavior; actively participating with local people in protecting the natural resources and
- express pleasure and consciousness of the values in discovering new knowledge, knowing the answer and being capable of solving the problems;
- work with other people constructively, express one's own opinion while being mindful of other people's opinion.

4. SOCIAL STUDIES, RELIGION AND CULTURE

Social studies, religion and culture contain the substances which will help learners gain knowledge and understanding of human beings in leading their life both individually and living together in the community, adjust themselves to the environmental conditions, manage limited resources, understand the dynamism of development which changes with age, time and other causes; understand oneself and other people with the sense of endurance, self restrain, accept individual differences and adhere strictly to virtue while being capable of applying acquired knowledge in daily living as a good citizen of the country and of the world at large.

The main objective is to help and encourage people to live together peacefully in a society with extensive and complex social networks and substantial differences among individuals and groups. This is to ensure that they can adjust themselves to their environmental, be good and responsible citizens, possessing appropriate knowledge, skills, virtue and values.

Learning substances

1. Religion, morality and culture: basic concepts of religion, morality and ethics; the teachings of Buddhism or other religions that learners may believe in; ability to apply the teachings in self-development and living together peacefully; do good deeds, adhere to favorable values, continue to develop oneself and serve society as a whole;

2. Civil responsibility, culture and life in society: current socio-political system of the Constitutional Monarchy whereby His Majesty the King is the Head of State, the function of the system, characteristics and importance of good citizenship, diversity and differences in culture, values, belief; implant the values of the ruling Constitutional Monarchy, citizens' rights, responsibilities, and freedom to live peacefully in the Thai society and the global society;

3. Economics: basic knowledge about production, distribution and consumption of goods and services, effective management of limited resources; how to lead a balanced life and apply the principle of economic subsistence in daily living;

4. History: Era and chronology of historical development, methodology in historical studies, evolution and development of human beings from past to present, relationships between critical events, highlighting the impact of important events in history; important personalities influencing major historical changes; chronology of the development of the Kingdom of Thailand, its cultural heritage and intellectual property; Thailand as a leading world cultural heritage destination;

5. Geography: physical structure of the earth, physical structure of the Kingdom of Thailand; mapping of resources and climate in Thailand and in other regions of the world; usage of mapping and geographic tools; relationship among things in nature and between human beings and the natural environment as well as manmade inventions; presentation of IT-based geo-data; environmental conservation for sustainable development.

Key performance indicators of learners' development

Band 1 (Prathom 1-3)

● understand oneself, people in one's immediate circle, local environmental conditions and housing; extend experience to the world at large;
● acquire skill in data processing and accumulate essential information for developing one's morale and ethics; behave oneself as a good citizen according to religious precepts, be responsible in living and working with others in a spirit of team work, actively participate in class activities including practical training in decision making;
● possess holistic knowledge of oneself, family, school and community; ways of thinking about the past up to present; basic knowledge in economics including

ideas concerning family income and expenses, the difference between being producers and consumers, basic saving methods and undertaking a subsistence economy;

● acquire knowledge and understanding of basic concepts concerning religion, codes of conduct, ethics, responsible citizenship, economics, history and geography, all of which constitute essential groundwork for higher level schooling;

Band 2 (Prathom 4-6)

● acquire knowledge about historical and physical characteristics of one's own country concerning the provinces, regions, society, tradition, culture including politics, system of government, economic condition with particular emphasis on Thainess;

● acquire knowledge and understanding about religion, morality, ethics and behave in line with religious principles as well as participate more often in religious ceremonies and perform religious rites;

● behave oneself as appropriate to one's position, role, right and responsibility as good citizen in one's province, region and country; participate more often in traditional and cultural activities including local festivals;

● being capable of comparing the historical accounts of Thai provinces in different regions of the country with neighboring countries; develop essential social concepts in religion, morality, ethics, citizen's responsibility, economy, history and geography for the purpose of expanding the experiences in building up international understanding with countries in the eastern and western hemispheres in connection with religion, morality, ethics, values, beliefs, culture, tradition, ways of living, formation of social order and social transformation from the past up to the present time;

Band 3 (Matayom 1-3)

● acquire knowledge about the changing world through comparative studies of Thailand in relation to countries in other regions of the world to develop the concept of living together in peace;

● develop conceptual and analytical thinking skills which facilitate the use ideas and experience in comparing Thailand with countries in other regions, namely Asia, Australia, Oceania, Africa, Europe, North America, South America, in the areas of religion, morality, ethics, values, beliefs, culture, traditions, politics and governance, history and geography, using methodologies applicable to scientific and social studies;

● acquired knowledge and understanding of conceptual and analytical methods in forecasting changes which may occur in the future which could be used in leading one's life and formulating appropriate work plans.

Band 4 (Matayom 4-6)

● acquire wider and deeper knowledge concerning the changing world;

● behave as a good citizen in strict observance of morality and ethics; behave in accordance with one's own religious principles, upholding desirable values, being

capable of living happily with other people and in society; having adequate potential to undertake continuing education as needed;

● acquired knowledge of Thai indigenous wisdom, take pride in being Thai and in Thai history, adhere to Thai ways of life and the Constitutional Monarchy with His Majesty the King as Head of State;

● acquire good consumer's habit, being capable of making appropriate choice of things to consume; be mindful of and actively participate in conserving the invaluable Thai culture and tradition as well as the environment; love the motherland, attempt to do good and contribute the best for society;

● being capable of making a personal learning plan, guiding oneself towards a better and brighter future as well as undertaking lifelong learning in society.

5. HEALTH AND PHYSICAL EDUCATION

Health or state of health means the human condition with full development in all respects—physical, mental, social and intellectual or spiritual. Health or state of health is therefore important, as it is linked to all dimensions of life. All should learn about health for acquisition of knowledge, accurate understanding with proper attitude, morality and appropriate values, as well as practical skills in health for acquiring hygienic habits, resulting in the achievement of a society of quality.

Learning substances and standards

Health and physical education is education about health with the aims of maintaining and strengthening health and sustainable development of quality of life of individuals, families and communities.

Health Education places emphasis on enabling learners to concurrently develop behaviours regarding knowledge, attitude, morality, values and health practices.

Physical Education places emphasis on enabling learners to participate in kinaesthetic activities, physical exercises, playing games and sports. It serves as an instrument in holistic development in all respects—physical, mental, emotional, social and intellectual, as well as imparting capacities for health and sports.

The learning area for health and physical education includes the following bodies of knowledge:

• **Human Growth and Development**: the nature of human growth and development; factors affecting growth; relationships and linkages in the functioning of various body systems as well as self-conduct for attaining growth and development in accord with students' age

• **Life and Family**: students' values and those of their families; self-adjustment to changes in various respects—physical, mental, emotional, sexual;

creating and maintaining relationships with others; sexual health practices and life skills

• **Movement, Doing Physical Exercises, Playing Games, Thai and International Sports:** various forms of movement; participation in a variety of physical activities and sports, both as individuals and in teams, and both Thai and international sports; observance of rules, regulations, orders, agreements for participation in physical activities and sports, and having sporting spirit

• **Strengthening of Health, Capacity and Disease Prevention:** principles and methods of selecting food for consumption, health products and services; capacity-strengthening for health and prevention of communicable and non-communicable diseases

• **Safety in Life**: self-protection from various risk behaviours, i.e., health risks, accidents, violence, harm from use of medicines and addictive substances as well as guidelines for promoting safety in life

Key performance indicators of learners' development

Band 1 (Prathom 1-3)

• Have knowledge and understanding of human growth and development, factors affecting growth and development, methods of creating relationships in family and in groups of friends.
• Have good health habits in eating, rest and sleep, cleanliness of all parts of the body, playing games and doing physical exercises.
• Protect themselves from behaviours conducive to using addictive substances, sexual harassment and know how to refuse improper affairs.
• Are able to control their own movements in accord with development of each age range; are skilful in basic movements and participate in physical activities; engage in games and activities for physical capacity-strengthening for health with enjoyment and safety.
• Are skilful in selecting food for consumption, toys, utensils beneficial to health; able to avoid and protect themselves from accidents.
• Are able to conduct themselves properly when faced with emotional and health problems.
• Observe rules, orders, agreements, advice and various steps, and willingly cooperate with others until successful completion of tasks.
• Observe their own rights and respect those of others in team play.

Band 2 (Prathom 4-6)

• Understand relationships and linkages in the functioning of various systems of the body and know how to take care of important parts of such systems.

- Understand the nature of changes in various respects—physical, mental, emotional, social, and sexual urge of men and women; when entering the age of puberty and adolescence, able to appropriately adjust and manage themselves.

- Understand and appreciate value of having a warm and happy life and family.

- Are proud of and appreciate value of their own sex; able to correctly and appropriately observe sexual practices.

- Protect and avoid risk factors and risk behaviours detrimental to health or conducive to contracting diseases, accidents, violence, addiction and sexual harassment.

- Skilful in basic movements and self-control in coordinated movement.

- Know principles of movement and able to select participation in physical activities, games, folk games, Thai sports and international sports with safety and enjoyment; have sporting spirit by observing rules, regulations, their own rights and duties until successful completion of tasks.

- Plan and regularly participate in physical activities and activities for physical capacity-strengthening for health as appropriate and required.

- Are able to appropriately manage emotions, stress and health problems.

- Are skilful in seeking knowledge, data and information for health-strengthening.

Band 3 (Matayom 1-3)

- Understand and recognise the importance of factors affecting growth and development that have influence on health and life during various age ranges.

- Understand, accept and are able to adjust themselves to changes in various respects - physical, mental, emotional; sexual feelings; gender equality; create and maintain relationship with others, and make decisions for solving life problems with appropriate methods.

- Choose to consume appropriate food in suitable portions beneficial to growth and development in accord with their age.

- Are skilful in assessing the influences of sex, friends, family, community and culture on attitudes and values about health and life, and are able to appropriately manage such influences.

- Protect themselves from and avoid risk factors or risk behaviours detrimental to health and conducive to contracting diseases, accidents, misuse of medicine, addiction and violence; know how to strengthen safety for themselves, family and community.

- Participate in physical, sports and recreational activities as well as activities for physical capacity-strengthening for health by applying principles of mechanical skills with safety and enjoyment, and regularly engage in such activities in accord with their aptitudes and interests.

- Show realisation of the relationship between health behaviours, disease prevention, health maintenance, emotion, and stress management; do physical exercises, play sports and enjoy healthy lifestyles.

- Realise their own self-worth, potential and independence.

- Observe rules, regulations, duties and responsibilities; respect their own rights and those of others; cooperate in sport competitions and systematic team working with self-determination and sporting spirit until successful achievement of the goals with delight and enjoyment.

Band 4 (Matayom 4-6)

- Through systematic planning, are able to efficiently take care of their health, strengthen health, protect themselves from diseases, and avoid risk factors and risk behaviours detrimental to health and conducive to accidents, misuse of medicine, addiction and violence.
- Show love, care, concern and understanding of the influences of family, friends, society and culture on sex behaviours, way of life and healthy lifestyles.
- Do physical exercises, play sports, participate in recreational activities, engage in activities for strengthening capacity for health by accurately and regularly applying skills and mechanisms with delight and enjoyment.
- Show responsibility; cooperate and observe rules, regulations, rights and safety principles while participating in physical activities, and play sports until successful achievement of their goals and those of their teams.
- Show good manners in watching, playing and competing with sporting spirit and practise good manners on all occasions until imbued with good personality.
- Analyse and assess personal health to determine strategies to reduce risks and strengthen and maintain health; disease prevention, and ability to accurately and appropriately manage emotions and stress.
- Apply processes of civil society to strengthen community to enjoy safety and desirable lifestyles.

6. CAREER AND TECHNOLOGY

Career and technology contains substances which help learners to develop essential knowledge, understanding and basic skills necessary for maintaining having a good life and being receptive to change; be capable of applying the knowledge of how to lead one's life, career and technology, working creatively and competitively both in Thai society and internationally; foresee one's future career, enjoy working, possess a positive attitude towards working and being able to live happily in society applying a philosophy of self-sufficiency.

This subject matter aims at a comprehensive development of the learners, equipping them with well-rounded knowledge and experience in leading their lives, enhancing good working skills and foreseeing ways to successfully realize professional opportunities and continuing studies.

Learning substances and standards

1. Living and family life: contains day-to-day works, the ability to help oneself, one's own family and society under the principle of economic self-sufficiency and sound environmental conservation; focus on conducting hands-on experiences to

build up self-confidence and pride in success at work; being capable of discovering one's own talent, potential and self-interest;

2. Design and technology: contains substances related to the development of creativity in learners, transferring knowledge through the process of technology to design and invent objects, utensils as well as design know-how which could enhance the quality of life;

3. Information and communication technology: contains issues in relation to the process of information technology, communication arts, data collection, usage of data and information; problem solving or career opportunities; facilitating factors and the side effects of information and communication technology;

4. Career: containing essential skills for related professions, creating a sense of responsibility in professional ethics, morale and good professional attitudes; appropriate use of technology, adhering to professional transparency and being capable of visualizing one's future career

Key performance indicators for learners' development

Band 1 (Prathom 1-3)

● understand ways of working to help oneself, one's own family and society as a whole; being capable of using the right materials and equipment appropriate to the type of work; skillful in the working process; maintain good working habit underscoring eagerness, punctuality, economy, security, carefulness and consciousness of environmental conservation;

● understand the values of objects and utensils being used in daily living, being mindful in problem solving and respond to increasing need with creative ideas, skillful in creating toys, simple utensils following the total process of developing technology, from problem or need identification to data collecting, designing by transforming ideas into 2 dimensions, drafting to actual production and evaluation; being mindful in selecting the right supplies and equipment and making best use of them in daily living under sound management and realization of the opportunity for recycling;

● understand the process of data collection and develop skills in systematic data collection; being capable of presenting data through various styles and different media while knowing ways to maintain the IT apparatus.

Band 2 (Prathom 4-6)

● understand the assignment and process of working by each step; be skillful in managing and team working; pursue work systematically with creative ideas; maintain good working habits, including diligence, responsibility, honesty.

● understand the meaning and evolution of technology and the composition of each system; be capable of developing ideas for problem solving or in meeting variegated needs; apply knowledge and skills in developing pieces of work to create objects and utensils as per interest   by using the sound process of technology

development namely: problem or need identification, data collection, designing and transforming ideas into 2 dimensions, drafting or conceptual mapping; produce and evaluate the products; select the technologies for daily living in ways that are constructive and useful for life and society and undertake good management practice through recycling technology.

● understand the basic principle of problem solving; possess skills in using computers to search for information, save data, create graphic works, documents; and produce each piece of creative work conscientiously and responsibly;

● realize and understand the profession; possess the knowledge, the capability and practice the ethics relevant to the profession.

Band 3 (Matayom 1-3)

● understand the process of working effectively by using team working; skillful in searching for knowledge, solving and managing problems; maintain good working habits, emphasizing sacrifice, virtue, rational and righteous decision making, being conscientious in using energy, natural resources economically and mindful of environmental conservation;

● understand the process and level of technology; utilize creative thinking in solving problems or responding to needs; invent objects or utensils, using technology correctly and safely for their development, transferring creative ideas into two-dimensional form or drafts, leading to the creation of pieces of work or their conceptual mapping and subsequent evaluation; select technologies which have are supportive of life, society and the environment, whilst managing them in such a way that they are economical in the use of resources and do not have negative impact upon the environment;

● understand the basic principles of information dissemination, computer networks, the principles and methods of problem solving or formulating programs of work using information technology; possess the skill to search for data and to communicate through computer networks whilst observing moral and ethical precepts; being capable of using computers to solve problems, to create pieces of work or projects from their initial concept and to use IT in presenting work;

● understand the means of selecting a profession under favorable attitude and the perceived importance of that profession, ways to find work, the necessary qualifications and experience for obtaining work in the chosen profession; being capable of evaluating alternative professions which may be suited to one's knowledge, skills and personal interest.

Band 4 (Matayom 4-6)

● understand the way to work to earn one's living, to work creatively; skillful in team working, management, problem solving and in searching for knowledge; work in compliance with professional ethics, being mindful of environmental conservation and using energy and natural resources in an economical and sustainable way;

● understand the relationship of technology with other related sciences; being capable of analyzing technology systems; use creative ideas in problem solving or responding to needs; invent and develop objects or utensils or methods of work by

using sound technology coupled with the use of software in designing or presenting products; analyze and select appropriate technology which is supportive of and contributes to daily living, society, the environment and adheres to clean technology principles;

● understand the composition of the IT system, the parts and working principles of computers; information dissemination systems within computer networks; characteristics of computers and the connecting apparatus; skill in using computers for problem solving, formulation of language programs, developing computer programs, using hardware and software; communicating and searching for information through the internet; using computers in compiling data and information for decision making; using IT in presenting projects, inventing pieces of work or program proposals;

● understand ways and means of selecting a profession, selecting and using the appropriate technology essentially in line with the profession; acquire experience relevant to the   chosen profession and attain good qualifications required by the profession.

7. FOREIGN LANGUAGE

In today's world, learning foreign languages is extremely important and essential for daily living. Language is an important tool for communication, education, knowledge search, engaging in an occupation, building up cultural understanding and vision of global community and in realization of cultural diversity and different viewpoints therein. Knowledge of foreign languages helps bring about cross-cultural friendship and international cooperation, helps learners to understand themselves and other people better, to learn and understand the differences between languages, cultures and traditions, ideas, socio-economic and political conditions, the nature of the government. Learning languages will also promote a favorable attitude to using foreign languages and to develop learners' capacity to communicate as well as to have easy access to more comprehensive knowledge which helps enlightening the vision for leading one's life.

The core curriculum for foreign language learning is English which is required for all levels of education until graduation. As for other languages e.g. French, German, Chinese, Japanese, Arabic, Pali or languages of neighboring countries, it is for the discretion of individual schools to arrange teaching and learning programs as may be deemed appropriate.

The learning objective is to promote favorable attitudes among learners in studying foreign languages, the capacity to use them in communicating in different conditions, searching for knowledge, facilitating their careers, continuing education as well as having access to knowledge and understanding about cultural diversity in the global society while being capable of constructively disseminating Thai culture and ideologies globally.

Learning substances

1. Language for communication: using foreign languages comprehensively in listening, speaking, reading and writing; exchange data, information, expressing feelings, opinions, interpreting, presenting information, key concepts and ideas about issues of concern and establishing appropriate interpersonal relations;

2. Language and culture: using foreign languages appropriate to the culture of its owner; knowing and understanding the relationships, similarities and differences between Thai and foreign languages and cultures and using foreign languages appropriately;

3. Language and relationships with other subject areas: using foreign languages in connection with other related subject areas to form the foundation for more extensive knowledge search and to expand the learner's horizon;

4. Knowledge and relationship with the community and the world: using foreign languages in different situations and for different requirements both inside and outside the classroom, in the community and in the world at large as a basic tool for facilitating continuing education, the attainment of future occupations and knowledge exchange in the global society.

Key performance indicators of learners' success

Band 1 (Prathom 1-3)

● take actions according to order and/or request for listening, reading alphabet, word, phrase, simple sentence and rhyming words correctly as per reading principles; give the correct meaning of words, written and having heard; respond to questions after listening to or reading sentences, conversation or simple stories;
● give simple answers during person to person communication upon listening, hearing order or request; express simple personal requests, ask for as well as give information concerning oneself and peers; express one's own feelings about things in the immediate environment or activities that one has heard about;
● give information about oneself and surrounding objects, using words that one has read or heard in connection with people, animals and objects;
● speak and act in line with the language owner's code of conduct and culture; mention simple words about festivals, days of national celebrations and the language owner's way of life; participate in activities in relation to language and culture suitable to one's age;
● tell the difference in the way letters of the alphabet, words, phrases and simple Thai and foreign sentences sound;
● tell the meaning of words related to other subject areas and learning substances;
● listen/speak out during simple situations occurring in the classroom;
● use foreign languages in assembling relevant words commonly used in daily living;
● possess the skill in using foreign languages (emphasizing listening and speaking) for communication, basically in matters concerning oneself, the school, the

immediate environment, food, drink, free time and recreation, altogether within 300-450 words (concrete only);

- use one-word sentences and simple sentence in daily conversation.

Band 2 (Prathom 4-6)

- act in response to orders, requests and recommendations in listening and reading, reading sentences, phrases, stories and short poems whilst practicing good reading principles; select/specify types of sentences and phrases; use symbols and signs correctly; be capable of speaking about the important points and responding to questions about what you have heard, read or been told;
- speak on a person-to-person basis; use orders, requests and suggestions; express needs and ask for assistance; know how to accept or refuse to give assistance; be able to request and give information, orally or in writing, about oneself, one's peer, family and closely related matters; be able to speak and write in a reasoned way about one's own feelings concerning closely related matters and certain activities;
- speak and write about oneself, one's peers and the immediate environment; draw pictures, formulate plans, create charts and tables illustrating data that you have heard or read about;
- use appropriate words, tone of voice and behave politely, observing the etiquette and cultural orientation of the language owners; present information concerning the festivals, important national celebration days, and ways of life of language owners; participate in activities concerning language and culture in which you are interested;
- understand the similarities and differences in the pronunciation of different types of sentences, the use of spacing and word positioning according to the structure of the Thai and foreign languages; compare the similarities and differences in arrangements among Thai and foreign festivals and other social and cultural celebrations;
- research and compile words which are related with other subject areas and learning substances; make verbal presentations and produce written reports;
- use foreign language in communicating different situations both in class and in other school settings;
- use foreign language in searching and compiling data as needed;
- be skillful in using foreign language (with emphasis on listening, speaking, reading, writing) in communications concerning oneself, one's family, the school, the environment, food, drink, free time and recreation, health and welfare, buying and selling, climate, within the range of 1050 – 1200 words (both concrete and abstract);
- use one-word and compound sentences for communicating under different contexts.

Band 3 (Matayom 1-3)

- act in response to requests, suggestions, advice, and explanations about what you have heard and read; make presentations of messages, news, advertisements, stories and short poems, applying good principles of communication; use forms of communication other than essays in connection with what you have heard or read;

provide titles, main points, supportive details, and one's own opinion about stories heard or read from different media, giving reasons and examples;

● provide information about oneself orally. in writing and in other forms of communication; make appropriate requests, give explanations and advice; speak and write to express needs; propose and render help; accept and refuse assistance, orally and in writing request or provide data, information, comparative interpretations, give appropriate opinions related to issues heard or read; give personal feelings and opinions in a reasoned way about different matters, activities, experiences, news or evidences rationally;

● speak and write about oneself, experiences, news, circumstances, current issues and matters of social interest; explain orally and summarize in writing underlying concepts and key ideas obtained from analyzing matters, news, circumstances, issues of current social interest; speak and write in a reasoned way of one's personal opinions about specific activities, experiences and incidents;

● use appropriate words and tone of voice and behave politely, observing the social etiquette and cultural orientation of the language owners; present information about their lifestyles, culture and tradition; participate in activities concerning language and culture in which you are interested;

● compare and explain the similarities and differences in pronouncing sentences of different types, the positioning of words according to the structure of sentences both in Thai and in the foreign language; compare, explain and make appropriate use of the similarities and differences between Thai lifestyle and culture and that of the foreign language owner;

● research, compile and summarize data and evidence concerning other subject areas and make presentations both verbally and in written form;

● use foreign language for communicating real situations and role-playing in the classroom, in educational institutions and in public settings;

● use foreign language in research, compiling, accumulating and summarizing data and knowledge from the media and other sources of information for facilitating continued education and attaining an occupation; disseminate and publicize data and information about the school, the community and the locality;

● possess the skill in foreign language (with emphasis on listening, speaking, reading, writing) for use in communications about oneself, one's family, the school, the environment, food, drink, free time and recreation, health and welfare, buying and selling, the climate, education and occupation, tourism, services, places, language, including science and technology within the range of 2100-2250 words;

● use compound sentences and complex sentences for communicating in various conversational contexts both formally and informally.

Band 4 (Matayom 4-6)

● take action in line with handbooks of different forms, suggestions, advice and explanations about what you have heard or read; make presentations of messages, news, declarations, advertisements, poems and short plays, applying good reading principles; explain and write sentences and messages in relation to the media, other than ion essay form, in connection with the sentences or messages you have heard or read; grasp the main points, analyze, summarize, interpret and provide opinions; express needs orally and in written form, propose and offer assistance, using words of

acceptance and refusal in real life situations or in role play; make requests for or provide data; make presentations, give explanations, make comparisons and offer supportive opinions in relation to issues, specific matters, news, information seen or read; express feelings and opinions orally and in written form in a reasoned way about various issues, activities, experiences, news;

● hold conversations and provide written information about oneself and things closely related, one's experience, specific situations, news, issues of current interest, appropriately and on a continuing basis; select and use words for making requests, giving explanations and advice; express needs orally and in written form; propose and offer assistance; accept and refuse offer of assistance in real life situations and in role-play; making requests for or provide data orally or in written form; make presentations, give explanations;, compare opinions and give your own about specific issues, news, things heard or read; express personal feelings orally and in written form in a reasoned way about issues, activities, experiences, news;

● speak and write about oneself, experience, news, and issues of current interest; explain orally and summarize in writing the underlying concepts and key ideas derived from analyzing issues, activities, news, and interesting situations; express opinions both orally and in writing concerning activities, experiences and interesting facts in the locality, in society, and in the world at large, citing examples and reasons;

● use appropriate words and tone of voice, behaving politely,. observing the etiquette and cultural orientation of the language's owner appropriate to the position of that person, the time, the opportunity and the place; explain and discuss the similarities and differences of lifestyle, thought, beliefs,. cultural origins and traditions of the language owner, in comparing with their Thai counterparts; participate, give advice and join in organizing activities in relation to language and culture;

● explain and compare the differences in sentence structure, meanings, idioms, locution, mottoes and poems as between that of the foreign language and Thai;

● research, compile, record, summarize and express opinions in relation to relevant data from other subject areas and make oral and written presentations;

● use foreign language in real-life situations and role-play in the classroom, educational institutions, in the community and in society;

● use foreign language in searching, compiling, accumulating and summarizing data and information from the media and other sources to facilitate continued education and attaining an occupation; disseminate and publicize data and information about the school, the community, provinces and the country as a whole;

● possess the skill to use foreign language (with emphasis on listening, speaking, reading, writing) for communicating, in a variety of forms, issues about oneself, the family, the school, the environment, food drink, interpersonal relations, free time and creation, health and welfare, buying and selling, the climate, education and occupation, tourism and services, places, languages, science and technology within the range of 3600-3750 words;

● use combined sentences and complex sentences for communicating in different conversational contexts, both formally and informally.

8. ARTS

The learning area of arts helps to develop creativity in learners, their artistic imagination, the appreciation of beauty, aesthetics and a sense of worth, all of which affect the quality of human life. Artistic activities help to develop learners in various respects - physical, mental, intellectual, emotional and social, as well as lead to environmental development. Artistic activities strengthen self-confidence in learners, thus providing a foundation for their future education or livelihoods. The main contents include:

• **Visual Arts:** knowledge and understanding of composition, visual elements; the ability to create and present works of art from owner's imagination by using the appropriate instruments as well as efficient artistic techniques and methods; the ability to analyse and criticise the value of works of art; understanding the relationship between visual arts, history and culture; appreciating the value of works of art representing one's cultural heritage, local wisdom, Thai and universal wisdom; taking delight in art and applying it in daily life

• **Music:** knowledge and understanding of composition; the ability to express oneself freely through music, to analyse and criticise the value of music and convey feelings freely through music; to delight in music and apply it in daily life; appreciating the relationship between music, history and culture; appreciating music which represents one's cultural heritage, local wisdom, Thai and universal wisdom; the ability to sing and play various forms of music, to express opinions about musical sounds, to express aesthetic feelings about music and understand the relationship between music, tradition, culture and historical events

• **Dramatic Arts:** knowledge and understanding of composition of drama; the ability to express oneself creatively through drama, to use its basic vocabulary, to analyse and criticise the value of drama, to convey feelings and thoughts freely, to create various forms of movement and to apply drama in one's daily life; understanding the relationship between drama, history and culture; appreciating the value of drama which represents one's cultural heritage, local wisdom, Thai and universal wisdom

Music

Band 1 (Prathom 1-3)

• The unit develops children's ability to create simple rhythmic patterns and perform them rhythmically using notation as a support. Children extend their understanding of rhythmic patterns, and in particular, ostinato. They create their own patterns and play them separately and in combination with other patterns. They identify repeated patterns in different types of music.

• This unit develops children's ability to create, combine and perform rhythmic and melodic material as part of a class performance of a song. Children develop their understanding of how instruments can be used to accompany songs.

They explore a variety of accomplishment devices, select appropriate phrases and patterns, and practice and rehearse towards a final class performance.

Band 2 (Prathom 4-6)

- The unit develops and demonstrates children's ability to take part in a class performance and play a two-part song, play instrumental accompaniments and rehearse and develop musical and performance ideas with understanding of how to achieve a quality class performance.
- The song could be recorded by colleagues, parents, pupils, and this recording used as a means of teaching the song to the rest of the class.
- Provides opportunities for learners to develop and demonstrate the musical skills, knowledge and understanding achieved by Primary level 6. During the unit the learner will develop an understanding of the process of composing by creating and performing music in response to musical and non-musical stimuli.

Band 3 (Matayom 1-3)

- This unit develops student's ability to recognize, explore and make creative use of musical devices found in variation form. During this unit students explore how musical ideas can be changed to create different moods and effects. They will explore a range of music in variation form from different times, identifying the main features of the music and the musical devices used by composures.

Band 4 (Matayom 4-6)

- Develops student's ability to identify, explore, and make creative use of musical devices found in jazz. Students learn some basic approaches to improvisation. They develop blue scale motifs within a 12-bar blues, improvise using chord/scale relationships and apply that understanding by developing patterns in a diatonic sequence.
- They analyze and develop riffs aurally, use ICT as an aid to practice, and begin to understand the importance of improvisation to jazz genres.
- Develop student's ability to recognize, perform, and create African dance music with an understanding of musical conventions and processes.
- Develop students ability to recognize and compose within the musical genre and overture. Learners learn how themes can be used.
- Learners identify structural and expressive features and refine, complete and notate compositions. They also appraise music critically, expressing and justifying their opinions, and appreciate hot the overture has been used in different times.

Arts

Band 1 (Prathom 1-3)

- Know about and understand shapes and forms and distinguish the visual elements of things in nature, the environment and works of visual art; have basic skills

in using materials and instruments to create coloured paintings by using lines, shapes, forms, colours and surfaces; be able to create collages, sculptures and simple mobiles; convey thoughts and feelings from stories, incidents and real life; create works of arts in accordance with their predilection; be able to give reasons and methods for improving their own work.

- Know and understand the importance of works of visual art in daily life, sources of works of visual art in the local area; know how to use materials, instruments and methods of creating works of visual art in the local area.

- Know and understand the origin and properties of sound; know and understand the roles, functions, meanings and importance of songs heard; be are able to recite verses, sing songs, beat time and attune the movements of the body to songs; to read, write and use symbols instead of sounds and beat time; to express opinions about music and their own singing; to participate in musical activities in daily life.

- Know and understand the unique characteristics of local music; delight in and recognise the importance and benefits of music in the lifestyles of the local people.

- Create various forms of movement; are able to perform musical callisthenics based on styles of dramatic art; have good manners in viewing performances; know the roles of the performers and the audience; know the benefits of performances of dramatic arts in daily life; participate in performances suitable to their age.

- Know and understand Thai children's games and local dramatic arts; find delight and pride in folk games; be able to link what oner sees in folk games with the Thai way of life; be able to tell the outstanding features and unique characteristics of Thai dramatic arts as well as the importance of the performance of Thai dramatic arts.

Band 2 (Prathom 4-6)

- Know and understand the use of visual elements, shapes, forms, light and shadow; have the basic skills to use materials and instruments, to convey thoughts, emotions and feelings; be able to apply the principles for arranging size, proportion, balance, weight, light and shadow, as well as to use complementary colours suitable for creating two-dimensional and three-dimensional works of visual art, e.g., works of mixed media, paintings, sculptures and lithographs, as well as being able to draw diagrams, plans and illustrations to portray oner's thoughts and imagination about various incidents, and be able to compare the differences between materials, instruments and methods between works; understanding the problems of arranging artistic elements, the principles of subtraction and addition in sculpture, conveying the meaning of one's own works of visual art; knowing methods of improving one's work as well as knowing and appreciating the value of works of visual art in people's lives in society.

- Know and understand the role of works of visual art reflecting life and society, and the influences of religious belief, faith and culture affecting the creation of works of visual art in the area.

- Know and understand musical sounds, singing voices and musical instruments, and their roles and functions; know the up and down movements of melodies, musical composition, musical terms in songs, lines and emotions of the songs heard; sing and play a musical instrument; do simple improvisations; use and

maintain musical instruments properly; read and write Thai and international music scores in various forms; know what makes a good musician; express opinions about musical elements; convey the feelings of songs heard; be able to use music to accompany activities relating to dramatic arts and story-telling.

• Know and understand the relationship between music and the way of life and traditions of Thai and other cultures, stories about music in history and the influence of culture on music; appreciate the value of music of different cultures; recognise the importance of conservation.

• Know and understand composition of dramatic arts; be able to present laban notations and basic dance vocabulary; create simple movements and performances of dramatic art and theatical work; be able to convey styles or emotions and design simple costumes or props; understand the relationship between dramatic arts and theatical work and what they encounter in daily life; express opinions upon viewing performances and describe one's own feelings about works of dramatic art.

• Know and understand the relationship between and benefits of dramatic arts and theatical work; be able to compare various kinds of Thai performance in each local area and things that reflect culture and tradition; appreciate the value of conservation and the transmission of performances of Thai dramatic art.

Band 3 (Matayom 1-3)

• Know and understand the visual elements and principles of design and diverse techniques for creating two-dimensional and three-dimensional works of visual art to communicate meaning and various stories with quality; analyse form and content, and evaluate one's own works of visual art and those of others; be able to choose works of visual art by applying appropriate criteria; be able to design pictures, symbols and graphics for presenting data; have the knowledge and necessary professional skills relevant to works of visual art.

• Know and understand the development of national and local works of visual arts in different periods; appreciate the value of works of visual art that reflect culture and be able to compare works of visual art from various periods and cultures.

• Know and understand the differences between the sounds, elements, emotions and feelings of songs from various cultures; be skilful in singing and playing musical instruments, both solo and in orchestra, with emphasis on singing and playing techniques of quality; be skilful in composing simple songs; be able to read and write scores on a scale with basic musical notation; know and understand the factors affecting the form and elements of musical works and those of other branches of the arts; express opinions and describe emotions and feelings about songs; be are able to present songs, giving reasons for one's choice; be skilful in assessing the quality of songs and musical performances; know various professions related to music and the role of music in the entertainment business; understand the influence of music on individuals and society.

• Know and understand the origins, relationships, influences and role of music of different cultures in various periods; analyse factors leading to the popularity of musical works.

• Know and understand the use of dance or theatre vocabulary for interpretation and communication through performance, as well as develop forms of

performance; be able to apply simple criteria in considering the quality of performances; compare works of dramatic art critically by applying one's knowledge of the composition of dramatic arts; participate in organising performances; apply the concepts of the performances, duly adjusted, to daily life.

- Know and understand types of Thai plays from various period; know and understand the factors affecting developments in Thai dramatic arts, folk dramatic arts, Thai plays and folk plays; compare the special characteristics of performances of dramatic arts from various cultures, as well as being able to describe and create props and costumes for performances of dramatic arts and plays; understand the importance and role of dramatic arts and plays in daily life.

Band 4 (Matayom 4-6)

- Know and understand the visual elements and principles of design for communicating meaning; be able to use the vocabulary of the visual arts; explain the objectives and contents of works of visual art; have the skills and techniques to use the materials, instruments and higher processes to create works of visual art; analyse the contents and concepts, techniques and methods of expression of Thai and international artists; apply various technologies for designing and creating works appropriate to specific occasions and place; express opinions about social situations through caricatures and cartoons; assess and criticise works of visual arts based on the principles of art criticism.

- Make a comparative analysis of works of visual art of Eastern and Western styles; understand the influences of cultural heritage and international wisdom affecting the creation of works of visual art in society.

- Know and understand the forms of various types of song and orchestra; distinguish between the forms of Thai and international orchestras; understand the influence of culture on the creation of music; compare the emotions and feelings inspired by the music of different cultures; read and write Thai and international music scores with various beats and rhythms; be skilful in singing or playing musical instruments, both solo and in orchestra, with emphasis on technique, expression and quality of performance; set criteria for appropriately assessing the quality of one's own and others' music compositions; be able to apply music to other activities.

- Make a comparative analysis of the forms and outstanding characteristics of Thai and international music from various cultures; understand the role of music in reflecting the concepts and values of people in society and of the social status of musicians in various cultures; create guidelines and participate in promoting and conserving music.

- Be skilful in performances of diverse forms; show initiative in performances of dramatic arts in duos and in groups; create short plays in one's preferred form; be able to analyse the essence of performances of dramatic arts and plays intended to communicate meaning; analyse the influence of costumes, light, colour, sound, scenery, instruments and place on performances; criticise performances of dramatic arts and plays; develop and apply assessment criteria in evaluating performances; be able to analyse the gestures and movements of people in daily life and apply them to performances.

- Understand the evolution of dramatic arts and performance of Thai plays and the role of important personalities in Thailand's world of dramatic arts and plays in various periods; be able to compare performances on various occasions; propose ideas for the conservation of Thai dramatic arts.

Furthermore, the MoE prescribes additional activities for learner development in the areas of:

1. Counseling- Activities to develop and support learners to know themselves, to realize the importance of environmental preservation, to be able to respond and make sound decisions, learn problem-solving skills, self reliance in studies and career as well as being adaptive to changes; to enable teachers to know individual students' interests and actively support and advise parents to take part as learners.

2. Student activities- Aim to help learners attain leadership skills, be responsible in team work, develop problem-solving skills with moral reasoning in a spirit of sharing and harmonious relationships with others in society. Activities should fit individual interests, e.g. planning from evaluation, implementation according to plan, evaluate to improve with particular emphasis on team working, for instance:
    a. Scouts, social work
    b. Group work

3. Social and Charitable Activities - Activities focusing on societal, charitable work for local communities according to learners' interests on a voluntary basis. Activities responsive to needs in society, sacrificing, charitable giving (MoE 2001; MoE 2008).

Moreover, the National Education Act promotes the formulation of a basic curriculum to foster Thainess, good citizenship, competency in life skills, careers, and opportunities to further education (Ministry of Education, 2001). The results or expected outcomes for each learner are such that she/he should become a person with self-esteem, self discipline whilst adhering to a strict observance of religious teaching and practice: a person who possesses moral values, desirable social behavior and virtue. The knowledge of Thai history, pride in being a Thai national and being a good citizen are also emphasised. Consciousness in the preservation of the Thai language, art, culture, customs and indigenous wisdom are also part and parcel of the goal. Learners are encouraged to have access to "*universal knowledge*" and to keep up with its pace in the dynamism of the highly innovative academic world, communication and information technology and being capable of adjusting and redirecting their thoughts and working processes effectively when changes occur to them. Improvement of learners' skills through innovative teaching and learning processes in mathematics, science, as well as development of creativity and thinking skills are also key integral part of the objectives as well.

However, the Basic Education Curriculum substances and time-frame structures are only guidelines for each educational institution to follow. Each educational institution can adapt these structures to meet their specific needs while maintaining good quality education at all levels (Ministry of Education, 2001).

I. Teaching Method

The National Education Act A.E. 2542 Section 22 stipulates guidelines *for learning management such that education shall be based on the principle that all learners are capable of learning and self-development.* Teachers, instructors and administrators must shift their respective roles from guiding and knowledge transfer to facilitating, assisting and encouraging learners to acquire additional knowledge from the media and learning centers. Learners should also be encouraged to accumulate knowledge based on their individual interests (Ministry of Education, 2001). Educational institutions should emphasize learning for self-realization and actualization, including understanding of one's rights and the rights of others. Ways to solve emotional conflicts and attaining reconciliation are to be embedded in each substance of learning.

As globalization looms over the horizon, language learning is inevitable. The teaching method required by the English Program (EP) curriculum states that each educational institution should prepare Thai pupils to possess essential qualities to meet the challenges of globalization while preserving Thai-ness and Thailand's cultural heritage. Each educational institution, in teaching every subject, should emphasize of moral principles, good societal values and norms,. and encourage learners to use English as a medium of communication (Ministry of Education Order, 2001). The English Program (EP) curriculum mandates that instructors of English should at all levels be native speakers to enable natural language acquisition. If that is not achievable, the educational institution should see that the instructor possesses well-rounded writing, reading, speaking and listening skills as a native speaker. The guiding principle is that the teacher should acquire TOEFL scores of not less than 550, IELTS scores of not less than 5.5, or TOEIC scores of not less than 600 (Ministry of Education Order, 2001, Ministry of Education Order, 2003). Other basic qualifications of the instructor include a one-year contract with an educational institution, a Bachelor's Degree from universities recognized by the Ministry of Education. The native speaker must have attended at least 15 hours of the Thai culture and heritage training course. Furthermore, the educational institution should plan for constructive technical exchange sessions among staff members on a regular basis and provide opportunities for teaching staff to receive international training or attend seminars at least three times a year.

The learning methods can take on different forms and methodologies under the guiding principle of the English Program (EP) curriculum in order to fit individual learners' interest. Emphasis should be placed upon actual teaching-learning situations, self-learning, group learning and learning from the environment and nature together with integrated learning from actual practice. Furthermore, research shall be an integral part of the learning process. Learning of academic subjects shall be integrated with moral issues wherever possible. All of the objectives are aimed towards the common goal of a learner- centered education. The method of teaching can be utilized by one instructor, two or more instructors, multi-disciplinary integration, as well as integration by the project learning approach. This is to enable learners to apply the knowledge gained in actual practice and thereby increase their skill in the specific field.

The integration by two or more instructors facilitates team teaching so that teachers can work out an integrated teaching plan for a specific subject or theme. Combined teaching features joint instruction between two specialized subjects e.g. math and art or science and math. Multi-disciplinary integration means integrated teaching of subjects from different groups. In this connection, teachers may jointly arrange the overall learning process to ensure the success of students in grasping the combined knowledge. Project learning, on the other hand, aims at creating a project for integrated learning such as a music camp or an English language camp etc (Ministry of Education, 2001).

II. Learning Activities

The Basic Education Curriculum stipulates that all educational institutions shall apply the eight subject groups to build a firm foundation for students' thinking processes, learning and problem-solving. The subjects shall be divided into core and extra-curricular activities. The core subjects are aimed at the promotion of the humanities, the fundamental potential required for thinking and working skills. The extra-curricular activities are required for self-development in accordance with the individual's growth (Ministry of Education, 2001).

The Ministry of Education prescribes that educational institutions shall have the learning materials in Thai as required by the curriculum guidelines of which at least ten each should be readily available in the library. The learning materials and related exercises for every substance have to be sufficiently covered in English in every subject in close correlation with the subjects learnt. Furthermore, the arrangement of classrooms, laboratories and multimedia rooms should meet the standards laid down by the Ministry of Education (Ministry of Education Order, 2001). Learning materials should include IT facilities and networks, in particular materials in a self-taught manner. Learners and instructors may produce and develop their own learning media to suit each individual. Textbooks and supplementary materials should cover all subject areas.

There must be different types of materials, including publications, unpublished documents as well as natural objects. These materials are intended to stimulate learning and provide valuable experience. There are guidelines indicated by the Basic Education Curriculum (2001) for educational institutions to follow:
To produce and utilize locally available materials for learning media;
To study, seek and research development of materials suitable for learners' learning procedures;
To produce and acquire media for learners' study, and for strengthening instructors' knowledge;
To study media selection methods and efficient use of different kinds of media in line with learners' learning procedures, nature of learning subjects and individual differences;
To study analytical procedures and standard evaluation of produced and selected materials. Regular analysis and assessment must be undertaken;

To establish effective learning centers within educational institutions and communities for studying, researching and exchanging learning experiences and learning material development;

To establish learning networks for learning linkage and exchanges among educational institutions, communities and other concerned societies;

To arrange for periodical motivation, follow up and assessment of application results of learning media (Ministry of Education, 2001).

It could be concluded that inside the classroom activities should go hand in hand with extra-curricular learning activities.

III. Evaluation

The Evaluation criteria based on the English Program (EP) Curriculum guidelines require comprehensive testing of students' abilities upon completion of the secondary grade 12 for TOEFL or IELTS. Educational institutions shall underscore the importance of the evaluation process in the areas of morals, ethics and the desirable characteristics of learners. These procedures should all be documented for the future development of the learners. Also, the Ministry of Education requires each educational institution to follow up and re-evaluate the English program in terms of readiness, management and implementation capabilities both of the educational institution and learners. Furthermore, research on quality and outcome of the teaching and learning are specially emphasized in an effort to redevelop and maintain the quality of learners, teaching staff and management (Ministry of Education Order, 2001).

The evaluation criteria and guiding principles which are designated by the Ministry of Education for educational institutions to follow essentially allow room for flexibility in implementing by each school. In general, all learners must study the eight specified subject groups and successfully achieve the overall standard of completion by each grade level with combined strength in academic, physical, emotional and societal self development. Educational institutions should have the flexibility and authority to formulate its own student achievement evaluation parameter and record forms for documenting and monitoring student progress. The Basic Education Curriculum merely indicates the desirable output that learners are to become a well balanced and desirable character to the society.

Evaluation

However, the Curriculum 2008 has indicated more concrete measures for the evaluation process, involving the two-fold purpose of evaluating how learners are developed and of evaluating the learners themselves (MoE 2008).

The evaluation processes have been divided into a four-fold : classification

1. Classroom Evaluation: continuous evaluation measuring teaching and the learning process of learners. To evaluate teaching methods and techniques using different tools e.g. observation, questions, homework corrections, project work evaluation, files, exams etc. This method is done by teachers or opened to learners to

evaluate themselves, peer as well as parents. The method is designed to evaluate learners' development in the specified learning areas. This is to seek information to develop and adapt teachers' teaching methods in compliance with teaching standards.

2. Institutional Evaluation: To evaluate educational institutions annually or by semester. Evaluation criteria reading, writing and analytical skills. This is to evaluate whether educational institutions meet the objectives of learners. Furthermore, the evaluations are used in nationwide comparisons between institutions. The evaluation results are used to further improve policy, curricula, projects or teaching methods and educational development plans according to the curriculum standard of the Ministry of Education.

3. Educational District Evaluation: the criteria of evaluation shall be in accordance with the educational standard set by the National Curriculum for the use of educational improvements in each local community.

4. Nationwide Evaluation: Each educational institution shall have implement a formal evaluation process covering learners in primary 3, primary 6, secondary 3, and secondary 6. The results will be used to compare educational quality in each level and raise educational planning standards (MoE 2001, MoE 2008).

The evaluation methods are divided into the following levels:

Primary Level
Learners shall have learning time of no less than 80 percent of total learning time
Learner shall be formally evaluated in all criteria and comply with the criteria specified by the educational standard
Learners shall be evaluated in every subject.
Learners shall meet all requirements specified by the Ministry of Education in reading, writing and analytical thinking as well as the learning activities that develop learners' abilities specified by the MoE.

Secondary Level
Learners shall be evaluated in each subject and shall have learning time of no less than 80 percent of the total learning time.
Learners shall be evaluated against every indicator specified by the educational standard of the MoE.
Learners shall be evaluated in every subject.
Learners shall attain the standard of all educational indicators set by the MoE. Learners shall possess reading, writing and analytical skills and learning activities that will develop learners' abilities as specified by the MoE.

The Conclusion of English Program Curriculum Analysis

Bilingual education in Thailand has taken the form of The English Program (EP) embedded in the Core National Curriculum for Basic Education as prescribed by

the Ministry of Education. The Ministry has also allowed schools under its supervision to include academic contents and language skills as 30% of schools' curricula. In this regard, Thai schools with the English Program option can therefore develop their own school's bilingual curriculum within the framework of the Ministry's core curriculum. It is suggested that schools can teach particular subjects in English, mainly mathematics and science. It is also possible to teach physical education and information technology in English. School need to have two groups of teaching staff: native English-speaking teachers to teach the content subjects of mathematics, science, English, physical education, information technology and art; and local Thai teachers to teach the Thai language, culture, and social studies. It should be noted that for a bilingual curriculum to be successful, assigned teachers are required to accept the new curriculum (Ornstein and Hunkins, 2004) and that educators in developing countries should be aware of as well as learn from bilingual curricula being implemented in developed nations (White, 2004).

1. Unified Bilingual Curriculum at Satit Bilingual School of Rangsit University

Satit Bilingual School of Rangsit University (SBS) has responded to the country's need for bilingual education by developing its own Unified Bilingual Curriculum. The school follows the English Program (EP) Curriculum guidelines as required by the Ministry of Education. The EP Curriculum has eight subject strands: (1) Thai, (2) Mathematics, (3) Science, (4) Social Studies (History, Geography, Culture, Citizenship), (5) English, (6) Art, (7) Physical Education, and (8) Career and Technology. SBS adds two more strands: ICT Information Communication Technology and Foreign Language Mandarin. It also offers Japanese as a foreign language major in grades 10-12 (Pholsward, 2007).

In modifying the EP Curriculum into a Unified Bilingual Curriculum, SBS in fact has integrated the EP Curriculum with in-depth contents from two international curricula, IGCSE (International General Certificate of Secondary Education) and IB (International Baccalaureate). Those subject contents refer to major subject strands like mathematics, science, social studies (history and geography), English, Art, Physical education, and information technology. Other subjects, i.e., Thai language culture and Thai (history and geography) follow the EP Curriculum as prescribed by the Ministry of Education. The curriculum modification is derived from a content analyses of the three curricula, the EP, IGCSE and IB, to secure the in-depth contents of study topics common in all three curricula. The secured contents classified as subtopics are therefore integrated across grades 7-12. Special attention is given to newly integrated subtopics in grades 7-10 and to be recycled or repeated in grades 11-12. The purpose is to enable students with good academic achievements to write examination papers on subjects required in IGCSE after grade 10, if desired. Those who wish to write examination papers as required in IGCSE and IB in grade 12 can proceed as planned or seek admission into local or international university programs as a path of their academic program of study. It should be noted that the subject strand of Foreign Language can include Mandarin or Japanese as seen appropriate by the school.

SBS has been following the EP Curriculum guidelines and all components used by the EP Curriculum. However, SBS has modified and developed its own special features and characteristics which are believed to best fit the Thai population.

SBS, termed "bilingual", is seen to be in response to the new era of globalization and social and professional requirements. It means teaching more than two languages. At the moment the languages include Thai, English, Mandarin as core languages taught from Primary level to the Secondary level. Therefore, the word bilingual for SBS means the ability to develop its learners' capacity and proficiency to think, analyze, converse and communicate in both languages instantaneously. It does not mean merely thinking in Thai and translating into English, or writing in Thai then translating into English, and vice versa. At the same time, learners need to have firm roots in the ground of their motherland. Lessons from many countries have taught us that if we concentrate heavily or solely on foreign languages, indigenous languages may be wiped from the world language map (Vision Ourairat 2007). With this, SBS believes that its curriculum of bilingualism serves to respond to the country's reform needs to change its educational direction. The Analysis will draw upon the differences (italicized) between the SBS UBC and the EP Curriculum using the Curriculum Component Analysis Model.

The following part will compare the sharp differences between the English Program Curriculum and the Unified Curriculum at Satit Bilingual School of Rangsit University according to the Curriculum Component Analysis Model. The major differences from the EP Curriculum will be italicized.

1.1 Philosophy

The Unified Bilingual Curriculum has adopted the Philosophy of the EP Curriculum with an emphasis on *preserving the stability and unity of the nation* as well as a focus on *learners being supported and facilitated to become life-long learners.* However, the Unified Bilingual Curriculum has highlighted the significance of human resource development at a high level, specified in the school mission in *building leaders for tomorrow.* That is to say, the Unified Bilingual Curriculum does not only aim at academic achievements of learners but also communication and social skills to develop a strong sense of leadership and responsibility as a Thai and world citizen.

EP: The main focuses accelerate the potential of learners, enabling them to live a happy life as good citizens of the country and the world at large; to develop their professional or vocational abilities; to be able to make appropriate decisions for furthering their advanced education in line with their competences, interests and experience and to become "lifelong learners" (Education 2001).

The underlying *Philosophy* aims at preserving the stability of the country, the religion, the Monarchy, the Thai language, culture and heritage (Ministry of Education Order, 2001).

SBS's philosophy thus covers all the guidelines and requirements of the MOE with the intention to *"Build Leaders for Tomorrow"* through the Unified Bilingual Curriculum. The school also aims at nurturing learners with a sense of Thai ethics and appropriate social values to guide them toward a well-balanced personal and professional life.

SBS students will acquire two languages in a natural context to fully develop their linguistic potential and communication skills. This is a real challenge for the School in that it needs to seek the best possible methods to groom students to have initiative, be analytical and critical in their thinking, and independent in their search for knowledge, problem-solving, and decision-making. They are expected to have a good sense of social responsibility to enable them to make a good contribution as leaders to the economic and social development of Thailand in the near future.

SBS is a school which aims to be of world-class standard at the same time as maintaining its Thai heritage and culture thus *creating cultural competency in its curriculum.* Since the curriculum and learners are not static, the school's mission can never be completed. It involves ongoing and continuous development towards the right curriculum for learners. At SBS, one needs to stay alert to this unending process. Teachers will need to also learn and develop themselves at all times. SBS itself can be seen as a live research and development center. SBS aims to develop qualified manpower through various programs and benefit packages (Vision Ourairat 2007). *For SBS, being a bilingual school means more than two languages, adding Mandarin as a third language as defined by the Ministry of Education.*

1.2 Objective

The objectives of the EP Curriculum "*learners should see his/her self-worth with disciplined adherence to Buddhist teaching and moral and ethical values as a way of life,*" have been kept in the Unified Bilingual Curriculum. Both curricula seek creativity for new knowledge through reading, writing and conducting research. Learners shall be ready to acquire international knowledge and be able to adapt to new technology and environment through communication and appropriate management skills. Learners should master comprehensive knowledge in the areas of Mathematics, Science and Physical education as well as understanding the concept of balance living. Learners should understand the Thai history, and take pride of being Thai citizen in a democratic society with reverence to the King. Learners should preserve the Thai identity in their language, culture, history, natural resources, and environment.

The Unified Bilingual Curriculum has particularly stressed upon the learners' knowledge to be equipped with analytical thinking skills, communication skills and providing a learner centered environment through hands on learning activities. Emphasis is placed on learners to become bilingual and bicultural through the process of natural language acquisition. It should be noted that research in bilingual education has been of prime importance at SBS. This is to make sure that bilingual education practitioners can make sound and practical teaching and learning decision on the basis of research into specific areas under investigation, not by experiential perception or speculation.

In accordance with the Ministry of Education's guidelines towards creating proper citizenship to the country, SBS has foreseen and added the desirable characteristics for its learners as:

1. To provide high-quality basic education in order for learners to be able to access knowledge by *thinking analytically and critically, express their opinions constructively, master social and communication skills,* and develop good and pleasant personalities, as well as a positive attitude toward life, work, and the environment.

2. To encourage and develop *natural language acquisition* in children, to be able to master and sustain native-like language competency and appropriate communication abilities. At SBS Learners learn a minimum of two languages, English and Mandarin.

3. To equip learners with computer literacy and skills in accessing information technology and applying them to their advantage.

4. To provide a student-centered learning environment through the use of activities and individualization to maximize their academic potential.

5. To provide an educational context for research work in the area of teaching and learning in basic education, as well as for educational management that fully develops learners' academic potential and intellectual construct.

6. To serve as a learning center for educational practitioners in the area of bilingual education.

7. To establish networks for bilingual education at the regional and international levels.

8. To serve as a model for the operation of the Basic Education Curriculum 2001 of the Ministry of Education (MoE) using English as the medium of instruction in core strands.

EP: Thai citizens shall be well orientated human beings who possess good citizenship with intellectual competency, happiness, "Thainess" and the capability to seek further education and career.

SBS: SBS has two main objectives to meet the requirements set by the Ministry of Education:

Objective 1: "Learners shall be equipped with analytical thinking, social and communication skills."

Objective 2: "Develop natural language acquisition and sustain native-like language competency."

In short, SBS's objective follows that of the EP Curriculum thus putting forward more defined ways of achieving its goals by emphasizing the importance of learning English through "natural language acquisition" and stressing ICT and Mandarin.

1.3 Content

The EP Curriculum contains four bands, eight subject strands, and weight of curriculum contents in 800-1,200 hours per academic year from the primary to the secondary level. SBS has followed the EP Curriculum regarding the number of bands. However, the school has modified in the number of subject strands from eight to ten

by splitting Information Communication Technology (ICT) and Mandarin from the EP Curriculum subject strands of Career and Technology, and Foreign Language, respectively.

As for the number of hours as reflecting weight of curriculum contents, the EP Curriculum assigns 1,200-1,500 hours per academic year. SBS has assigned the number of hours at 40 hours per week as the maximum while allocating approximately ten percent for support learning activities. In sum, the total number of hours for two terms in one academic year should not exceed 1,600 hours. It should be made clear that the primary school tends to operate at 35 hours per week and the secondary school at 40 hours per week.

Satit Bilingual School of Rangsit University (SBS) has responded to the country's need for bilingual education by developing its own Unified Bilingual Curriculum. The school follows the English Program (EP) Curriculum guidelines as required by the Ministry of Education. The EP Curriculum has eight subject strands: *(1) Thai, (2) Mathematics, (3) Science, (4) Social Studies (History, Geography, Culture, Citizenship), (5) English, (6) Art, (7) Physical Education, and (8) Career and Technology.* SBS adds two more strands: *ICT Information Communication Technology and Foreign Language Mandarin.* It also offers Japanese as a foreign language major in grades 10-12 (Pholsward, 2007).

1.3.1. Band Division

EP: The Band is divided into four bands of:
Band 1: Primary 1-3 (Pratom 1-3)
Band 2: Primary 4-6 (Pratom 4-6)
Band 3: Secondary 1-3 (Matayom 1-3)
Band 4: Secondary 4-6 (Matayom 4-6)

SBS: The structure of the SBS curriculum also utilizes the Band division into four levels of: **Band 1 (P1-P3), Band 2 (P4-6), Band 3 (M1-M3), Band 4 (M4-M6)**

SBS: divided into 4 Bands:
Band 1: Primary 1-3 (Prathom 1-3)
Band 2: Primary 4-6 (Prathom 4-6)
Band 3: Secondary 1-3 (Matayom 7-9)
Band 4: Secondary 4-6 (Matayom 10-12)

1.3.2 Weight (time allocation)

The EP Curriculum contains four bands, eight subject strands, and weight of curriculum contents in 800-1,200 hours per academic year from the primary to the secondary level. SBS has followed the EP Curriculum regarding the number of bands. However, the school has modified in the number of subject strands from eight to ten by splitting Information Communication Technology (ICT) and Mandarin from the EP Curriculum subject strands of Career and Technology, and Foreign Language, respectively.

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1.3.3 The modified Contents that exceed the EP Curriculum

The Ministry of Education has provided broad guidelines for schools to develop and implement their own curricula to best fit the needs of students at each location and culture around the country. With this in mind, SBS has developed its own concept of seeing the future of Thai education in ways which included the essential characteristics of being bicultural and bilingual. The curriculum has expanded upon the Ministry of Education 8 subject strands into 10 subject strands which have added Mandarin and ICT. Mandarin is seen as the third most important language for Thais due to China's importance in the world's political, economic and financial spheres. Chinese immigrants have always been a part in the country's economic and financial development and will be seen as an important part of the population throughout the century. With globalization, English and Mandarin will continue to be important languages for learners to acquired verbally and in written forms. SBS, therefore, sees the importance of separating these two subjects for learners to become comfortably literate in their communication skills. ICT has also been given prime importance in the learning of all subjects. At SBS, ICT has become a main tool for learners to explore and to be literate in the use of ICT to do research individually or in group work. Furthermore, ICT and the usage of technology are seen as crucial tools of benefit to learners. The one-on-one policy has been developed for learners to become familiar with ICT and to have the ability to search the ICT world without fear.

The school sees the importance of Mandarin and ICT as two important areas of learning and thus have made Mandarin and ICT separate subject strands. SBS has regrouped he Ministry of Education's eight subject areas and added two additional subject strands to the curriculum.

EP: The Subjects have been divided into 8 subject strands:
1. Thai
2. Mathematics
3. Science
4. Social Studies, Religion and Culture
5. Health and Physical Education
6. Arts
7. Career and Technology
8. Foreign Languages

SBS: *10 subject strands consisting of:*
1. *Thai Language*
2. *Mathematics*
3. *Science*
4. *Social Studies*
5. *Arts*
6. *Health and Physical Education*
7. *Career*
8. *Information Communication Technology (ICT)*
9. *English*
10. *Foreign Language: Mandarin (SBS Curriculum 2004)*

The core subject strands with modified contents are:

1. MATHEMATICS

Mathematics is highly important to development of the human mind. It enables a person to acquire skills in creativity, logic, and systematic and methodical thinking. It allows one to carefully and thoroughly analyse various problems or situations, to anticipate, plan, make decisions, solve problems and accurately and appropriately apply mathematics in daily life. Mathematics serves as a tool for learning science, technology and other disciplines. It is therefore useful to one's life, enhances the quality of life and enables a person to live in harmony with others.
The learning area for mathematics is aimed at enabling all children and youths to continuously learn this subject in accord with their potentiality. The contents prescribed for all learners are as follow:

- **Numbers and Operations**: numerical concepts and sense of perception; real number system; properties of real numbers; operation of numbers; ratio; percentage; problem-solving involving numbers; and application of numbers in real life.

- **Measurement:** length; distance; weight; area; volume and capacity; money and time; measuring units; estimation for measurement; trigonometric ratio; problem-solving regarding measurement; and application of measurement in various situations.

- **Geometry**: geometric figures and properties of one-dimensional geometric figures; visualization of geometric models; geometric theories; and geometric transformation through translation, reflection and rotation.

- **Algebra**: pattern; relationship; function; sets and their operations; reasoning; expression; equation; equation system; inequality; graph; arithmetic order; geometric order; arithmetic series; and geometric series.

- **Data Analysis and Probability**: determining an issue; writing questions; determining methods of study; study; data collection, systematization and presentation; central tendency and data distribution; data analysis and interpretation; opinion polling; probability; application of statistical knowledge and probability; application of probability in explaining various situations as well as for facilitating decision-making in real life.

● **Mathematical Skills and Processes**: problem-solving through diverse methods; reasoning; communication; communication and presentation of mathematical concepts; linking mathematics with other disciplines; and attaining ability for creative thinking.

Italicized parts are contents that exceed the EP Curriculum

Band 1 (Prathom 1-3)

● Students will learn to use symbols correctly, including less than, greater than, equals. They will be able to round any positive integer less than 1000 to the nearest 10 or 100, recognize simple fractions that are several parts of a whole, and mixed numbers and recognize the equivalence of simple fractions.

● They will use know number facts and place value to add or subtract mentally, including any pair of two-digit whole numbers.

● They will know how to carry out column addition and subtraction of two integers less than 1000, and column addition of more than two such integers.

● *Learners will know by heart facts for the 2,3,4,5, and 10 multiplication tables and device quickly division facts corresponding to the 2,3,4,5, and 10 multiplication tables.*

● Will be able to find remainders after division

● They will know and use the relationships between similar familiar units of length, mass and capacity and be able to classify polygons, using criteria such as number of right angles, whether or not they are regular, symmetry properties. *Students will choose and use appropriate number operations and ways of calculating.*

Band 2 (Prathom 4-6)

● *Learners will learn to simplify fractions by cancelling all common factors and identify equivalent fractions.* They will recognize the equivalence of percentages, fractions and decimals and be able to extend mental methods of calculation to include decimals, fractions and percentages.

● They will learn to multiply and divide three-digit by two-digit whole numbers and extend this knowledge to multiplying and dividing decimals with one or two places by single-digit whole numbers.

● They will be enabled to break a complex calculation into simpler steps, *choosing and using appropriate efficient operations and methods as well as check a result by considering whether it is of the right magnitude*.

● Learners will know and use the order of operations and understand that algebraic operations follow the same conventions and order as arithmetic operations

● Able to plot the graphs of simple linear functions.

● Able to identify parallel and perpendicular lines and know the sum of angles at a point, on a straight line and in a triangle.

● Learn to convert one metric unit to another (e.g. grams to kilograms) and read and interpret scales on a range of measuring instruments.

● Learners will know how to compare two simple distributions using the range and one of the mode, median or mean as well as understand and use the

probability scale from 0 to1 and find and justify probabilities based on equally likely outcomes in simple contexts.

Band 3 (Matayom 1-3)

- *Learners will be able to compare Hindu-Arabic to other numerals including Roman numerals.*
- They will explore the use of number bases other than decimal. *They will learn the uses of these bases and the particular importance of the binary and hexadecimal systems and the reasons for their use in the computer industry.*
- *Learners will learn how to see that equations can be solved using graphs.*
- *They will have the ability to choose which method should be used for a particular system of inequalities.*
- Learners will be able to identify the three sides of a right triangle. They will gain a full understanding of the trigonometric functions, sine, cosine and tangent.
- *They will be able to solve real life problems by choosing the correct function for the problem and explain reasons for their choices.*
- They will be able to apply the sine rule to solve problems about triangles and find the area of a triangle using the sine.
- Learners will understand the use of factorials and how they enable us to calculate permutations and combinations easily.
- *Learners will present statistics effectively and be able to explain why a particular method of presentation was chosen.*
- They use various types of charts, graphs, and tables including compound and complex bar charts. They will calculate probability for dependent and independent events.

Band 4 (Matayom 4-6)

- Learners will be able to solve trigonometric equations containing composite functions. *They will see the proofs of trigonometric identities.*
- They will become familiar with the derivatives and integrals of composite trigonometric functions. They will understand secant, cosecant, cotangent and how they are used.
- Learners will know how to calculate with exponents and logarithms. They will carry out calculus of three dimensional vectors and their uses.
- They will be able to calculate base vectors and unit vectors.
- Learners will gain a good understanding of the additional and subtraction of vectors. They will be able to distinguish between coincident and parallel lines, and find an interest.
- *Learners will have a full understanding of probability including mutually exclusive and exhaustive events. They will be able to recognize the types of data they are dealing with and the different ways we can collect them.*
- *They will be able to analyze probability distributions and understand probability expectations.*
- *They will use normal and binomial distributions to do this. They will be familiar with the use of t-testing to analyze errors in their data. They will be able to*

present any type of data using the most suitable means and give a full analysis of the reliability of such data (Hands, 2009).

2. SOCIAL STUDIES

In addition to the EP Curriculum, the Social Studies curriculum at SBS incorporates the content from IGCSE and IB to facilitate learners with a wider perspective of the world. It also enables learners to become confident individuals in an international setting, possess analytical thinking skills through hands-on learning. Italicized parts are contents that exceed the EP Curriculum:

Band 1 (Prathom 1-3)

● **Economics**- introduce the basic concepts of varying occupations and income. Concepts of taxes and the sufficiency economy. Introduction to value of money and the concept of budgeting. This is related to students' ability to understand value of money and ensure a solid understanding of how to look after their money.
● **History-** introduce key periods of Thai history. Familiar with national symbols and their importance to Thai people. Firm understanding of family structures and expectations regarding their role in the family context.
● **Geography-** introduce local social structures and key figures in the local economy. Introduce environmental issues and how they affect lives. Introduce basic map skills and the basic requirements for reading a map.
● Study the basic precepts of Buddhist teaching, Buddha's life history, meditation techniques, religious ceremonies and rituals including important dates and ceremonies.
● Further understanding of economics in areas of consumption, banking and taxation.
● Study history including the community, school, local intelligence and key persons in the school.
● Understand how to conserve the environment as well as to use resource effectively.
● Learn about religion, morality, ethics and good citizenships.
● Study geographical characteristics and ecological systems.
● Study the democratic way of life, the right to freedom, the family, the community with an emphasis on structure and management on the basis of democracy.Banking systems, their role as consumers and producers.

Band 2 (Prathom 4-6)

Understand one's own religion and its teachings.

● **Economics**- learn about consumption, service industries, relations between various economic factors. Learn about the loan system and its effects on people's finance. Study natural resource optimality, the practical principles of cooperative systems and banking.Introduced the sufficiency economy and cooperative systems.
● **History-** focus on students' abilitiy to read and learn about important historical figures. Focus historical projects on the development of Pathumtani with

regard to ways of life and major traditions. Main settlement of people in Sukhothai, Ayudhya, Thonburi and Rattanakosin periods.Widen the scope of understanding of democratic systems.

● **Geography**-natural phenomena, tools and equipment used in geographical studies, effects of the natural environment on people's lives in the community, and procedures used to protect and sustain the environment of the local community. Effects of natural environmental destruction and existing solutions, demographic conditions and characteristics of the population in Thailand.

● Apply religious teaching to daily life. Contributors to society on their religious practice.

● The use of technology for modern production and practical principles of cooperative systems.

● Social and cultural context of local people in various parts of the country, activities supporting natural environmental conservation, immigration and its impact on local areas.

● Major concepts of the Thai constitution, standard values and cultural norms in various parts of the country.

● Emphasis on morality and ethical behavior for the good and harmony of life in society.

● How to conduct basic survey.

Band 3 (Matayom 1-3)

● **History-** Observation of human rights, developing a strong sense of good citizenship and social responsibility while retaining and appreciating one's own cultural values and heritage. Study and understand the cultural heritage of neighboring countries, showing toleration, and being able to live in harmony in the Southeast Asian community. Study the economic relationships among ASEAN countries and social issues arising from migration.

● Learn about the Industrial Revolution with comparison to Thailand. Western Imperialism in the 19th century and its effects on countries in Asia and Africa.

● **Geography**- cover population dynamics and impacts upon birth and death rates. Look at population structures and densities and the differences between urban and rural settlements. The problems of urbanization. Analyses of Thailand's geographical and economic data. Class discussion and project work involving geographical skills, covering plate tectonics, volcanoes and earthquakes. Marine processes including waves, transport, effects of wind, landforms, coral reefs, eco-systems and the relationships between environment and human activities.

● Understand the concept of resource scarcity and optimization. Study demand and supply, capital and benefit, trade-offs and possibilities, resource management and consumer behavior.

● For example, students are expected to analyze their own personal consumer behavior and work in small groups to analyze, in terms of cause and effect, a particular pattern of consumption of a selected community.

● **Economics-** sufficiency/agricultural reform as initiated by King Bhumibol. Micro and macro economics. The role of government fiscal policy on income and expenditure. Competitive advantages in production, and their applications for greater

understanding and competency in problem solving tasks. Cause and effects of food shortages and economic and political factors.

- **History**- Understand the history of major world religions, their basic teaching concepts, and key figures with their contributions. Data search to perceive the impacts of historical sources. World civilizations through the ages and their influence on the modern world. Project work or independent study on the history of the USA from the revolution, the civil war, the 1920s and the great depression, and the First World War. Students will be introduced to the problems of racism, revolution and their effects of industrialization on a western economy. Compared to life in Thai society. Also study Imperial China.

Band 4 (Matayom 4-6)

- **Economics**- business economics. Starting up a business, basic entrepreneurship, the idea of risk factors and risk prevention, layout, access loans and loan repayment, business proposals, receipts and record keeping and human resource management. Concept of skilled and unskilled labor and how countries manage these resources. Students will present a business proposal and design their own businesses in various projects.
- **History**- Students are to take Thailand as a focus of study in terms of its relations to the world outside and describe the present situation as a result or outcome of its historical relationship to its neighboring countries. Learn about the Cuban Missile Crisis and the wars in Vietnam.
- Learn about Colonialism and its effects in India, South Africa, Central and South America and Vietnam. An introduction to the history of Japan. Concepts of development, modernization and the importance of resource management in Japanese business/political policy.
- **Geography**- A case study will be selected which relates to Thailand. This could be a natural disaster or a presentation on local issues. Through such a project, basic geographical skills will be developed, such as how to undertake geographical enquiries, the identification of an issue, the formulation the design of work, the collection of data, analysis and interpretation. See how people in different geographical areas seek effective and cooperative means to consume and preserve the quality of their natural environment.
- **Economics**- international markets, topics of pricing and wages in various types of economy to meet the needs of society and the country's economic growth. Emphasis on the sufficiency economy and its appeal to the Thai population. Advantages and disadvantages of the use of technology to increase production. Topics of selective consumption, consumer protection and international finance and banking.

3. SCIENCE

Science at SBS meets the Ministry of Education Standards for learning. It uses a student-centered practical-based scientific approach, designed to maximize student interest and understanding of scientific techniques and principles, addressing issues through discussion, experiments, information searching, qualitative data and secondary sources, findings and observation. The Science curriculum at SBS is more defined in terms of the topics and type of experiments used in learners' daily

lives. It thus ensures that students can test their in-class knowledge from daily living. For example, in Band 1, students learn about movement. Students can relate their understanding of movement in the context of road safety. Moving onto Band 2, students will encounter the same topic, but relate it to a different personal context. health. Students will learn about the heart beat and how it is affected by exercise and relate this to what they already know about movement. In Band 3, coverage of the topic is expanded to encompass Forces and their effects. It is a prime objective is that the content will equip learners with necessary skills for future higher education both in Thailand and abroad. The Science Curriculum has added features from the IGCSE to ensure for learners the highest academic outcome. Learners should be able to carry out investigative processes, record information in a suitable format, communicate what is learned, and be able to use their acquired knowledge for positive applications in each of the following areas.

Italicized parts are contents that exceed the EP Curriculum:

Band 1 (Prathom 1-3)

- **Life and environment-** The learner should be able to investigate and observe the local environment, and understand: the relationship between living things and the environment; interrelationships between living things within eco-systems; *the importance of natural resources and their utilization at both local and international levels.*
- **Matter and Properties of Matter-** The learner should be able to understand: the properties of matter in various forms; *the relationship between properties, structures, and forces among particles of matter.*
- **Forces and Motion-** the learner should be able to understand: the nature of forces; *the concept of work and the relationship between force and work; the application of simple machines to reduce the force required for work.*
- **Energy-** Learner should be able to understand energy transformation, and *the interaction between matter and energy, and have an understanding of the effects of energy use on life and the environment. They should be able to use their acquired knowledge to make good choices in the use of energy.*
- **Processes that Shape the Earth-** Learners should be able to understand processes that occur on earth and the *relationships between different processes that cause climate change, topography, and shape of the surface of Earth. The student should develop a sense of individual responsibility for the Earth and its resources.*
- **Astronomy and Space-** Learners should be able to understand *the effects of the sun and moon on the environment and living things.*

Band 2 (Prathom4-6)

- **Life and Environment-** Exploration and observation of living things in each habitat and *discussion of relationship among groups of living things, and the relationship between the environment and life of the living things.*
- **Matter and Substance-** Exploration and observation as well as discussion of the properties of substances in solid, liquid and gaseous states. *Comparison and grouping of states by state or other criteria.*

- Experimentation and discussion of the separation of substances by sifting, filtration and sedimentation, distillation and paper chromatography. Discussion of how to choose the correct substances for daily use with safety precautions.

- **Space and Space Technology-** Observe, discuss and explain the relationships between the sun, the earth and the moon, the alternation of day and night, cardinal points, the rising and setting of stars, phases of the moon, solar and lunar eclipses. Search for information, *discuss and explain progress in space technology enabling man to learn about celestial bodies and make use of space technology.*

- Explain and describe current electricity, open and closed circuits. Build and compare series and parallel circuits.

- **Human Body-** State the various systems in the human body. Describe how the bodily systems work together. Explain the development of each stage in human life.

- **Life and Animals-** State the characteristics of some animals. State the organs of some animals and discuss a few of the important bodily systems and life cycles in some animals.

Band 3 (Matayom 1-3)

- Learn that cells are the basic units of life and are organized into tissues from which organs are made. Cell structure and differences between plant and animal cells.

- Learn how observations are made with a microscope and to understand how the structure of living things develops. Use a microscope safely and effectively. Make observations using a microscope and record the drawings. Compare and interpret information from microscopic observation.

- Introduce the importance of sampling in biological investigations. Investigation of growth of pollen tubes.

- **Cell-** Learn about human reproduction and consider how offspring are protected and nurtured. Consider and compare reproductive patterns in humans and other animals. Bodily change during puberty and adolescence, the menstrual cycle, growth and development of the reproductive organs. Present data through charts and graphs.

- **Environment and feeding relationships-** Learn how habitats vary, how plants and animals adapt to living in particular habitats. Adaptation for feeding. Make measurements of environmental changes and interpret these. Survey the variety of living things within a habitat. Investigate the activity of a small invertebrate.

- **Variation and classification-** explore variations within and between species. Investigate patterns of variation in living things and ways of representing and explaining the occurrence of variations. Frame questions of variation in living things and ways of representing and explaining the occurrence of variations to be answered using primary or secondary data. Draw conclusions from observations and explain these using scientific knowledge. Interpretation and analysis of visual information gathered from a variety of source**s.**

- **Acids and Alkalis-** Learn about acids and alkalis as classes of chemicals. Recognize hazards and use information sources to assess risks associated with acids and alkalis. Make and present qualitative observations.

- **Simple chemical reactions-**Learners are introduced to the idea that chemical change results in new substances that are different from the ones made. Explore simple chemical reactions of acids when a gas is made. Understand burning as a chemical reaction of gas, air and oxygen. Uses laboratory equipment effectively and taking action to control risks.

- **Solutions-** Knowledge of dissolving and separating the of components of a solution and relate this to particle theory. Make measurements of temperature and mass. Describe and interpret patterns in graphs and chromatograms. Investigate how a sample of pure salt can be obtained from a sample rock salt.

- **Energy Resources-** Concept of energy in the context of fuels as convenient and therefore valuable resources. Consolidate and extend ideas about energy for living things: food for people and sunlight for plants.

- **Electrical circuits-** Explain patterns in the measurement of current and voltage. Use the concept of resistance qualitatively. Build circuits in which the current flow is usefully controlled.

- **Forces and their effects-** Consolidate and build on the concept of force and its measurement. Identify the origin of friction, air resistance, up thrust and weight, and describe situations in which these forces act. Concept of speed.

- **The solar system and beyond-** Learn that planets and satellites are seen by reflecting light and that the Sun, as a star, emits light. Compare the sun with other stars.

- **Food and digestion-** Learn about different foods and how they can be combined to produce a balanced diet. How food is broken down by digestion: energy, growth and repair.

- **Respiration-** Learn how cells are supplied with the materials needed for respiration; how cells in animals and plants release energy. Learn about, and conduct tests concerning microbes and disease, ecological relationships, atoms and elements. Topics include compounds and mixtures, rocks and weathering, the rock cycle, heating and cooling, magnets and electromagnets; the concept of light, sound and hearing are also investigated and measured.

- Health related to human respiration, the functions of a skeleton, disease related to diet, exercise, smoking, drugs. Plants and photosynthesis, properties of metals are learned and investigated using qualitative data.

- The concept of environmental chemistry is introduced through field experience of investigating environmental changes using evidence from secondary sources. Making observations and measurements of temperature, mass and voltage.

Band 4 (Matayom 4-6)

- Learners will be divided into three sub-strands of (1) Elite Science, (2) Combined Math and (3) Science and General Science. It is envisaged that students from all three strands should be capable of meeting the IGCSE standards for science. All three strands will be taught science using a student-centered practical-based scientific approach, designed to maximize student interest and understanding of scientific techniques and principles (SBS Science Curriculum 2008).

General Physics

1. Length and time- use and describe the use of rules and measuring cylinders to determine a length or a volume.*Use and describe the use of clocks and devices for measuring an interval of time.*

2. Speed, velocity and acceleration- define and calculate speed.

Plot and interpret a speed/time graph or a distance/time graph.

Recognize from the shape of a speed/time graph when a body is (a) at rest (b) moving with constant speed (c) moving with changing speed.

Calculate the area under a speed/time graph to determine the distance travelled. State how acceleration is related to changing speed.

3. Mass and weight- show familiarity with the idea of the mass of a body. *Demonstrate understanding that weights may be compared using a balance.*

4. Density- describe and experiment to determine the density of a liquid and of a regularly shaped solid and make the necessary calculation.

5. Forces- state that a force may produce a change in size and shape of a body. Describe the ways in which a force may change the motion of a body.

Find the resultant of two or more forces acting at the same time.

Turning effect- describe the moment of a force as a measure of its turning effect and give everyday examples.

Conditions for equilibrium- state when there is no resultant force and no resultant turning effect, a system is in equilibrium.

Center of mass- perform and describe an experiment to determine the position of the center of mass of a plane lamina.Scalars and vectors

6. Energy, work and power

4. ENGLISH

The contents of the Unified English Curriculum (Satit Bilingual School of Rangsit University, 2005, Satit Bilingual School of Rangsit University, 2008) are:

Band 1 (Prathom 1-3)

Italicized parts are contents that exceed the EP Curriculum

● **Reading-** identify syllables in words. Use the organizational features of non-fiction texts, including captions, illustrations, contents, indexes and chapters, to find information. *Learn to recite and act out stories and poems.*

● Students should be exposed to stories and poems that are challenging in terms of length or vocabulary. *Use more than one strategy such as phonic, graphic, synthetic and contextual in reading unfamiliar words and establishing meaning.*

● **Writing-** Write extended texts with support. The connection between punctuation and sentence structure, annotation and emphasis.

● Use capital letters, full stops, question marks and commas. Identify reasons for misspellings.

● Spell words with common prefixes and inflectional endings.

● Students should be taught some of the grammatical features of written British English. The nature of nouns, verbs and pronouns. The range of readers for

writing should include teachers, other adults, children and the writers themselves. *Forms of writing include narratives, poems, notes, lists, captions, records, messages and instructions*. How ideas may be linked in sentences and how sequences of sentences fit together.

- Exposed to texts where the use of language benefits from being read and reread. Able to express opinions about major events or ideas in stories, poems and non-fiction. *Use language and actions to explore and convey situations, characters and emotions. Comment constructively*

- **Speaking and listening-** Able to extend ideas on light of discussion. Give reasons or opinions and actions.

- Recognize same sounds with different spellings and same spellings relating to different sounds. Same topics may contain information or present similar information in different ways.

- Identify patterns of rhythm, rhyme and sounds in poems and their effects.

- Use language and actions to explore and convey situations, characters and take part.

- Demonstrate confidence in speaking particularly where topics are interesting.

- *Perform in drama situations and be able to create and sustain roles individually and when working with others*. Talk about making plans, investigating, sharing ideas and experience, commenting and reporting.

- Students begin to demonstrate confidence in speaking, Awareness of the needs of listeners including relevant details. Beginning to become aware of more formal vocabulary or tone of voice required in some situations. Respond to a clear model of Standard English.

On completion of Band 1 (Prathom 3) learners will be able to:

- Understand, present and exchange information about themselves and their daily lives and environment in English.

- Speak, read and communicate in English and be able to talk about themselves, their families, school and their relationship with others. (300-450 concrete words).

- Use single words and simple sentences in their daily conversations.

Band 2 (Prathom 4-6)

Italicized parts are contents that exceed the EP Curriculum

- **Reading**- Make connections between different parts of texts, e.g., how stories begin and end. Consider arguments critically. Consider poetic forms. Evaluate different formats, layouts, presentations devices, e.g., tables, bullet points and icons. Evaluate ideas and themes that broaden perspective and extend thinking. Respond imaginatively. Read texts with greater accuracy and understanding.

- Learners will be taught to identify and comment on features of English words and sentences, using appropriate terminology.

- Demonstrate understanding of significant ideas, themes, and characters. Use influence and deduction.

● **Writing**- use layouts, presentations and organization effectively. Discuss and evaluate one's own and others' writings.

● Use of punctuation marks, commas and apostrophes. Revise and build on one's knowledge of words and spelling patterns.

● Use of appropriate terminology, vowels, consonants, homophones and syllables.

● Use different forms of writing, e.g. a letter to a friend and a report for display. The range of writing includes narratives, explanations, poems, play scripts, reports, opinions, instructions, reviews and commentaries.

● Word classes and grammatical functions of words, including nouns, verbs, adjectives, adverbs, pronouns, prepositions, conjunctions and articles. Begin to use grammatically complex sentences.

● Spelling, including that of polysyllabic words that conform to regular patterns. Full stops, capital letters and question marks are used correctly. Handwriting style is fluent, joined and legible.

● Check spelling using word banks, dictionaries and spell checkers. Learners will be taught to build on knowledge of words and spelling patterns. Write legibly in both joined and printed styles with increased fluency and speed.

● **Speaking and Listening**- remember and represent formal features of an argument, talk, reading, radio or television programs or films.

● Take up and sustain different roles, adapting them to suit the situations

● Know the difference between transcribed speech, direct speech and reported speech

● In discussion and group work, make contributions and ask questions that are responsive to others' ideas.

● Evaluate one's speech and reflect how it varies, identify features of language used for a specific purpose, e.g., persuade, instruct, compliment and entertain.

Band 3 (Matayom 1-3)

The range of materials includes plays, novels, short stories and poetry from the English and Thai literary heritage. Diaries, autobiographies, biographies and letters, newspapers and periodicals are some of the non-fiction texts used in Band 3.

Shakespeare, drama by major playwrights, fiction published before 1914, recent contemporary drama, fiction and poetry for young people and adults, drama, fiction and poetry by major writers from different (Thai) cultures and traditions.

● **Reading**- *analyze and discuss alternative interpretations, ambiguity and allusion.*

● How choices of form, layout and presentation contribute to effect e.g. fonts, captions, illustrations in printed text, sequencing, framing and soundtracks in moving image text.

● *How the nature and purpose of media products influence context and meaning e.g. front page news in newspapers.*

● Learners will be taught to draw on their knowledge of grammar and language to develop their understanding of texts, *selecting essential points and using*

inference and deduction where appropriate. They will be able to retrieve and collate information from a range of sources; and articulate personal and critical responses to poems, plays and novels, showing their romantic, structural and linguistic features.

- Read and *appreciate the scope and richness of complete novels, plays and poems.*
- Select and synthesize a range of information from a variety of sources.
- **Writing**- use imaginative vocabulary and varied linguistic and literacy techniques. Use a full range of punctuation marks correctly to signal sentence structure.
- Increase knowledge of regular patterns of spelling, word families, roots of words and derivations, including stem, prefix and inflection. Apply knowledge of word formation.
- Spell increasingly complex polysyllabic words that do not conform to regular patterns.
- Use different kinds of dictionary, thesaurus and spellchecker.
- Learners will be taught about the variations in written Standard English and how they differ in spoken language, to distinguish, varying degrees of formality, selecting appropriately for a task.
- Paragraph structure and how to form different types of paragraph.
- Student writing is confident and demonstrates appropriate choices of style in a range of forms. In narrative writing, characters and settings are developed and, in non-fiction, ideas are organized and coherent. Grammatical features and vocabulary are accurately and effectively used. *Spelling is correct, including that of complex irregular words. Work is legible and attractively presented.*
- Writing is varied and interesting; *convey meaning clearly in a range of forms for different readers.*
- Use formal and impersonal language and concise expression.
- *Reflect on the nature and significance of the subject matter.*
- Paragraphing and correct punctuation are used to make the sequence of events or ideas coherent and clear to the reader.
- **Speaking and Listening**-structure one's talk clearly so that listeners can follow one's line of thought.
- *Identify the major elements of what is being said both explicitly and implicitly. Use a variety of dramatic techniques to explore ideas, issues, texts and meanings.*
- Vary word choices including technical vocabulary, and sentence structure for difference audiences.
- Take different views into account and modify one's own views in the light of what others say. *Clarify and synthesize others' ideas, taking them forward and building on them to reach conclusions, negotiating consensus or agreeing to differ.*
- Taught to use the vocabulary, structures and grammar of spoken Standard English fluently and accurately in formal and informal situations.
- The importance of Standard English as the language of public communication in the countries of native speakers, international business and government and modern technology.
- The difference between speech and writing.
- Take active roles in discussion and group work, demonstrating sensitivity to others and respect for their ideas and opinions.

● Speak confidently in a wide range of contexts, including those of a formal nature. Engage the interest of the listener as one begins to vary one's expression and vocabulary.

● Show understanding of short narratives and extracts of spoken language which cover various past, present and future events. In discussion and group work identify and note the main points and specific details, including points of view. Learners will demonstrate that they have listened carefully through their comments, questions and follow up work.

● Understand spoken language including past, present and future events. Learners will identify the main points and specific details, including opinions.

Band 4 (Matayom 4-6)

● **Reading:** How techniques, structure, forms and styles vary.

● To compare texts, considering their style, theme and language and identifying connections and contrasts.

● Texts from different cultures and traditions. *Learners should understand the values and assumptions and contrasts.*

● **Writing**: Take account of how well the reader knows the topic.

● Students should be taught to use the full range of punctuation marks correctly to signal sentence structure and to help the reader.

● Students will increase their knowledge of regular patterns of spelling, word families, roots of words and derivations, including stem, prefix, suffix, and inflection.

● Learners will understand how and why texts have been influential; the characteristics of texts that are considered to be highly qualified.

● Develop their ideas and referring in detail to aspects of language, structure and presentation.

● Apply their knowledge of word formation.

● Spell increasingly complex polysyllabic *words that do not confirm to regular patterns.*

● Learners should be taught about the variations in *written Standard English and how they differ in spoken language, and to distinguish, varying degrees of formality, selecting appropriately for a task.*

● Learners should be taught to use the full range of punctuation marks correctly to signal sentence structure and to help the reader.

● Check their spelling for mistakes and use a dictionary when necessary.

● *Learners should be taught to use their writing for thinking and learning.*

● **Speaking and Listening**: *Learners maintain and develop their speech purposefully in a range of contexts.*

● They structure what they say clearly, *using apt vocabulary and appropriate annotation and emphasis.*

● They demonstrate confident use of Standard English in a range of situation, adapting as necessary to the situation.

● Learners take leading role in discussion and group work initiating discussion through the sensitive use of a variety of contributions.

- Able to summarize in detail, report, and explain extracts in follow work orally and in writing. They develop their independent listening by selecting from and responding to sources from a variety of media, including IC, television and DVDs.
- Exploring through discussion, hypothesizing, debating and analyzing (Jewitt, 2010).

5. HEALTH AND PHYSICAL EDUCATION

Health or health condition means well balanced physical, mental, social and intellectual or spiritual condition of human beings. Health, therefore, is an issue which is extremely important as it is essentially relevant to all dimensions of life. Each and every one must learn about health to attain right knowledge and understanding, to have appropriate attitude, morale and value as well as develop the skill in health practice until it becomes daily habit. Health learning and development will bear fruit in increasing quality of life in the society at large.

The learning objectives is to maintain good health, enhancing health promotion and maintaining quality of life of individuals, family and society

Learning substances

1. Human growth and development: learners will study about nature of growth and development of human beings, factors affecting growth; network and relationship in the functioning of systems in human body including how to take care of oneself to ensure balanced growth and development respective of age;

2. Life and family: learners will learn about the social values of oneself and one's own family; appropriate adjustment to changing situation of body, mind, temper, sex drive, build up and maintaining good relationship with other people; safe sex and essential skill in leading one's life;

3. Movement, exercise, playing game, Thai and international sport: learners will learn about movements in various forms, participate in physical exercise and sport, both in country and internationally, individually and in team; conform to rules, regulations order and agreement in physical and sport competition under good sporting spirit;

4. Promotion of health, capability and disease prevention: learners will learn about the principles and methods of selecting and consuming good food, good products and services as well as acquire means to enhance capability for healthy living and preventing both communicable and non-communicable diseases;

5. Safety living: learners will learn about preventive measures against various risk behaviors comprising those concerning health, accident, violence as well as danger from using narcotic and addicted substances including strategies for promoting safety living.

Band 1 (Prathom 1-3)

- acquire knowledge and understanding about human growth and development**,** factors affecting growth and development; strategies for building up good relationship in the family and peer groups;

- good consumption habit, resting and sleeping, sanity of whole body, playing and exercising;

- avoiding behaviors which might lead to narcotic drug consumption, sexual violation while knowing how to say no to involvement in bad deeds;

- capable of controlling body movements based upon age-based development, possess skills in basic movements and participate in physical exercises, activities for promoting physical competency for health and in game competition with fun and security;

- possess skill in selective consumption of food, toy and utensils which are beneficial for health; capable of avoiding and preventing oneself from accidents;

- behave well and appropriately when facing stress or health problems;

- behave in response of rules, regulations recommendations or other required processes and ready to help others pursuing the work until achieving success;

- act in line of individual rights and respect other people's rights in team working.

Band 2 (Prathom 4-6)

- understand the relationship among the various systems of human body and know how to take care of important organs within each system;

- understand the nature of changes, physically, mentally, emotionally and socially; sex drive of pre-adolescent and adolescent males and females and capable of adjusting and managing oneself effectively;

- understand and realize the value of living and living happily in a warm family;

- take pride and realize value of one's gender and taking appropriate care of the body;

- prevent and avoid risk factors affecting health and causing occurrences of diseases, accident, violence, addiction of narcotic drug and sexual violations;

- possess skill in basic body movements and self control in integrated movements;

- knowing the principles of movements and capable of selecting and attending physical exercise plan, game, folk play, Thai and international sports with fun and security; developing good sporting spirit by acting in accordance with rules, regulation, one's own right and responsibilities until achieving success in the responsive activity;

- plan and conduct regular physical exercise and capacity building activities as appropriate and responsive to needs;

- capable of appropriately managing emotion, stress and health problems;

- possess skill in searching data and information for health promotion.

Band 3 (Matayom 1-3)

- understand and realize the important of factor affecting growth and development in different stages of life;

- understand, accept and capable of adjusting oneself with changing conditions of body, mind, emotion, sex drive, gender equality; know how to build up

and maintain good relation with others; make sound decision and appropriate action in solving personal problems;

- making good choice of balanced diet which bears favorable effect upon individual growth and development;
- possess skill in evaluating influences of gender, friends, family' community and culture upon attitude and values concerning health and well being while capable of managing this appropriately;
- prevent and avoid risk factors upon health and occurrence of diseases, accident, drug usage, addicted substance and violence; know how to promote safety for oneself, family and community;
- participate in physical exercise, sport, recreational activities, activities for promoting physical strength for health by applying the mechanical skill for safety; taking regular exercise with pleasure and in accordance with skill

  and personal interest;
- realize the relationship between health behavior, disease prevention, healthy living, temper and stress management, physical exercise and sport and the attainment of healthy lifestyle;
- recognizing the value, potential and one's own self;
- act in accordance with rules, regulations, responsibility; respect individual right and the right of other people, actively participate in sport competition and working systematically with fun and pleasure under good team working principles and with strong determination and sporting spirit until achieving success;

Band 4 (Matayom 4-6)

- capable of maintaining good health, health promotion, disease prevention while effectively avoiding risk factors, risk behaviors, accident, usage of drug and addicted substances and violence under systematic planning;
- express love, concern and understanding of the relative influences of family, friends and society upon sexual behavior, ways of life and healthy living;
- undertaking regular physical exercise, sport, participate in recreational activities, capacity building activities, through correct application of the principle of mechanical skill development;
- express responsibility, actively participate and act in accordance with rules, regulations, rights under good safety principles in joining physical exercises and sport competition until attaining success as per personal and team objectives;
- express good conduct in watching game, playing game or join in any sport competition under good sporting spirit in all opportunity;
- analyze and evaluate individual health for the purpose of formulating appropriate and effective strategies for reducing risk, promoting health, preventing disease and managing temper and stress;
- using the process of public society to promote the strength, security and good living of the community.

6. MANDARIN

Mandarin is treated as the third language at SBS. Learning Mandarin as a third language enhances learners' primary language as well as cognitive development

and knowledge acquisition (SBS Curriculum 2005-06). The fundamental Chinese language is intended to provide learners with the ability to communicate fluently in Chinese after the completion of the program. Knowing Mandarin as a third language is an aid to retrieving information and knowledge from around world. Mandarin has become vital for Thai society as a means of global communication.

Upon the completion of the program learners are expected to:
- Use Mandarin effectively and competently
- Apply what they have learnt in a variety of situations.
- Acquire the knowledge, skills, and attitudes that eventually will help them develop intercultural competence with a particular focus on Chinese culture.
- Adopt appropriate strategies to learn and communicate more effectively and efficiently.

Each general outcome is broken down into specific outcomes achieved by each grade. All specific outcomes are interrelated and interdependent. The specific outcomes indicate the scope for each of the four general outcomes and further categorized by strands which show the progress in learning from the beginning to the end of the program.

Band 1 (Prathom 1-3)

Phonology- pronounces some simple words and phrases comprehensibly.
- Use intonation to express meaning
- Pronounce some commonly used consonants and vowels properly.
- Recognize the four tones.
Orthography
- Recognize and name some elements of the writing system.
- Relate common radicals to character formation.
- Be familiar with and use correct stroke order, identify the number of strokes and relate radicals to character formation.
- **Lexicon-** self, school, family, food, clothing, pets and other fields that of interest.
- Grammatical components-basic adjectives, nouns, negations, pronouns, verb; read basic characters, words, phrases, rhymes, simple texts and dialogues.
- **Oral communication-**understand simple sentences in guided situations, produce simple words, phrases and sentences in guided situations, engage in simple interaction, using short simple phrases.
- **Writing-**recognize and understand simple sentences in guided situations, derive meanings from visual and other forms of non-verbal communication in guided situations. Use of visual and other forms of non-verbal communication to express meaning in guided situations e.g. shape colors, facial expressions.
- **Apply to socio-cultural context-** imitate simple routine social interactions, use basic social expressions appropriate to the classroom, use appropriate oral forms of address for people frequently encountered, some common non-verbal behaviors in Chinese culture.
- Use simple social and effective strategies with guidance, to enhance language learning.

Band 2 (Prathom 4-6)

- **Phonology-** distinguish between consonants, vowels and syllable, us a variety of simple cognitive strategies, with guidance to enhance language.
- **Orthography- be** aware of simplified and traditional characters, copy familiar words, phrases and sentences, relate radicals to character formation, identify and recognize correct stroke order, recognize numbers and strokes, recognize single and combined forms of characters.
- **Lexicon-** hobbies, sports/games (cultural).

Band 3 (Matayom 1-3)

- **Grammatical components-** Interrogative forms of word questions, comparative structures of adjectives, present tense, future tense, past tense, modal particles. Understand simple sentence structures, recognize the function of punctuation.
- **Oral communication-** understand short, simple texts in guided situations, produce simple sentences in guided situations, engage in simple interactions, using simple sentences.
- **Writing-** understand short simple texts in guided situations, produce simple sentences in guided situations.
- **Socio-cultural context-** experiment with using some simple non-verbal means of communications, imitate interactions and respond using simple social interaction patterns e.g. requests, acceptance/refusal.

Band 4 (Matayom 4-6)

- Emphasis are given to recognition of single and some simple combination words, phrases, reading short sentences, short dialogues, and short texts with comprehension.
- Learners will recognize the relation between some common radicals and characters, familiar with correct stroke order in writing and identify number of strokes in Chinese characters.
- Learners will learn the appropriate grammatical components and appropriate sentence pattern. Learners are expected to construct simple sentences as they progress.
- Learners will learn some basic conversation skills in Chinese, such as introducing themselves, greetings, using polite expression to make personal request, talking about families and hobbies, food, asking about dates and day in Chinese, common social expressions, several common classroom commands as well as expressing their feeling in a very simple manner.
- Use phonics of Chinese characters as a tool. Intensive drills on sounds and tones, as well as a wide range of vocabulary.
- Various activities i.e. poster/making greeting cards/paper crafts/personal dictionary to develop learners' interest in learning Mandarin.

7. INFORMATION COMMUNICATION TECHNOLOGY(ICT)

The ICT Curriculum at SBS has been stressed as one major subject strand as opposed to the EP Curriculum of Career and Technology which combines Career with ICT. The ICT contents of the EP focuses on developing learners' basic knowledge and applying ICT to daily living and work. The ICT Curriculum at SBS, however, focuses on the technical function of ICT as well as knowing the analytical skills, for example, to write a program and present multimedia pages. The italicized words below indicate elements of the curriculum which exceed the EP Curriculum:

Band 1 (Prathom 1-3)

- **Designing and Technology-** Understands the necessity and sees the usefulness of designing and using technology in everyday life.
- Designs, constructs and develops simple things and machines to be used.
- Compares things and machines used in everyday life in terms of their usefulness and safety in regard to life and the environment.
- Has a good impression towards designing and applying the usefulness of technology.

Learning Standard:

- Understands the necessity and sees the usefulness of designing and using technology in everyday life.
- Designs, constructs and develops simple things and machines to be used.
- Compares things and machines used in everyday life in terms of their usefulness and safety in regard to life and the environment.
- Has a good impression towards designing and applying the usefulness of technology.
- **Technological Report-** Knows nearby sources of information, sees their usefulness and gathers interesting information from different trusted sources.
- Know the names and functions of the fundamental equipment that are principal components of a computer.

Band 2 (Prathom 4-6)

- Use the internet as a research tool: *Learners will be using the internet as part of their English studies*, and will need to know how to find specific information quickly.
- Microsoft Word-Stage 3: advance topics such as help, creating templates etc.
- Audio Editing: Having previously used the basics of audio-editing, learners will now be taken through Stereo mono, mixing sound files,

Excel: The basic page and data manipulation; creation of well laid out documents.

Learning Standards

     1. Analyzing data and asking questions using complex searches, using 'and', 'or' in their searches. *Carry out searches using two or more criteria, carry out complex searches to check hypotheses.*

     2. Multimedia presentation- use a multimedia authoring program to organize, *refine, and present a set of linked multimedia pages, which incorporate images, sounds and text.*

     3. Use a multimedia authoring package to assemble images, sound and text on a multimedia page.

     4. Use a multimedia package to organize, refine a set of linked multimedia pages, which incorporate images, sound and text; create pages which offer users a variety of options; present information that matches the needs of the audience.

     5. Introduction to spreadsheets- Use a spreadsheet to carry out calculations, produce a table of data, explore the effects of changing the data in a spreadsheet.

Band 3 (Matayom 1-3)

- **Components of a Computer System:**
- Define hardware, giving examples
- Define software, giving examples
- Describe the difference between hardware and software;
- Identify the main components of a general-purpose computer: central processing unit, main/internal memory, input devices, output devices and secondary/ backing storage.
- **Input and Output Devices**
- Identify the following devices: keyboards, pointing devices (including mouse, touch pad, tracker ball), video digitizers, remote controls, joysticks, magnetic strips, scanners, digital cameras, microphones, sensors, MIDI instruments;
- Identify suitable uses of the input devices in (1) above, stating the advantages and disadvantages of each.

- **Storage Devices and Media**
- Describe common backing storage media (including magnetic tape, CD-Rom, floppy disc and hard disc) and their associated device;
- Identify typical uses of the storage media in (1)
- Describe the comparative advantages and disadvantages of using different back-up storage media.
- **Computer Networks**
- Describe a modem and its purpose**.**
- State the difference between analogue data and digital data.
- Identify the advantages and disadvantages of using a common network environment such as the Internet**.**
- Describe what is meant by the terms user ID and password.
- **Data Types-** identify different data types, alphanumeric/text, numeric.
- **The Effects of Using IT-** *describe software copyright, hacking, viruses; explain the measures that must be taken in order to protect against hacking and viruses;* describe the effects of information technology on patterns of employment.

●   Learn about the ways in which IT is used and understand the range of IT applications, describe different methods of researching a situation, produce designs for documents, files, forms, reports and validation.

●   **Implementation and Documentation-** identify different methods of system implementation, identify suitable use of the methods, *state the need for evaluating a new system in terms of efficiency, appropriateness to the intended output, evaluate users responses to the results of testing the system.*

Band 4 (Matayom 4-6)

Prepare learners to meet the following challenges: The main focus is to consider how two aspects of the social significance of IT and the ethical considerations arising from IT, influence individuals, communities (including nations), institutions and organizations.
●   Understanding the uses of information systems,
●   Evaluating the consequences of those technologies on society.
●   Determining, evaluating and discussing the social significance of these technologies.
●   Discussing ethical considerations that arise from using information technology.
●   Predicting the changes most likely to emerge in the future.
Learners will study the following topics:
●   Information Technologies: Tools and Impacts
●   Networks and the Internet
●   Information Technology in the Information Age
●   Converging Information Technologies and the Future

8. CAREER

Career is adopted from the EP Curriculum prescribed by the Ministry of Education.

Band 1 (Prathom 1-3)

●   Acknowledge and understand the use of technology, basic foundation in design and the understanding of the environment. Able to and adapt technology as part of work with consideration to the environment, safety, evaluation.
Learn to use the technology to fit the local community appropriately and able to adapt to the everyday use.

Band 2 (Prathom 4-6)

●   Understand the importance and benefits of technology and understand the impact of technology in product design or process of design to meet the needs of the basic requirements of living.
●   Able to design, develop, evaluate others product design and compare products or method used from technology appropriately.
●   Good attitude towards technology in everyday living of social and environment.

Band 3 (Matayom 1-3)

- Understand and see the importance and benefit of technology as well as the process of technological development in products, pieces to meet the demand of daily living.
- Able to propose new ideas and concept, product development that is sustainable and self-sufficient and accept criticism of the design.
- Able to compare products or ways in which products were produced through modern technology.
- High consideration to the environment, culture, effectiveness and society.

Band 4 (Matayom 4-6)

- Understand the importance and benefits of modern technology and know ways to develop products, materials, for the daily living.
- Design new materials, products and testing method for development and alterations and positive evaluation process.
- Accept criticism from others and able to analyze the materials used in products or device with consideration of efficiency, culture, environment, and society.

9. ARTS

Arts program at SBS comprise of three subjects of Visual arts, Music, and Classical Dance.

Visual Arts

Band 1 (Prathom 1-3)

- Students explore hot to convey movement in their work. They explore dynamic activities such as sport, dance, drama and music as a starting point for making work in two dimensions. They look at how the idea of movement is shown in different kinds of art, such as photography, illustrations, cartoons, paintings, prints and experiment with different methods and techniques to show movement.
- Children investigate headwear and costume worn in different times and cultures, including theatre costumes. They use this as a starting point for designing and making a piece of headwear for a character in a story, using a range of textiles and other materials.
- Students explore the rural and/or urban landscape as a starting point for two-dimensional work. They record their observations through drawing and photography. They use shape, form, space, color, texture and pattern to develop and communicate their ideas in a painting. They consider the ideas, methods and approaches of artists who have responded to landscapes in different ways.

Band 2 (Prathom 4-6)

- Students explore familiar objects from different viewpoints as the starting point for their work. They develop their ideas by selecting and abstracting qualities of

objects to use as the basis for a painting. They learn about the ideas and approaches of the cubists and their influences and make connections with other artists who work from still life. They explore the use of the moving image to communicate ideas about particular genres or style of art. They analyze paintings, films, cartoons, illustrations, digital images, photographs and images from contemporary visual culture.

Band 3 (Matayom 1-3)

- Students learn how to represent ideas and values using the moving image They make connections between abstract expressionism, expressionism and pop art of the 1960s and contemporary moving images.
- They explore and use natural and other materials to construct a temporary, site specific work, which represents a shared view of their locality.
- They work in groups to make a collective response .
- They analyze examples of work from different times and cultures where ideas, beliefs and values are shared and communicated through art, craft and design.

Band 4 (Matayom 4-6)

- Students explore familiar objects from different viewpoints as the starting point for their work. They develop ideas by selecting and abstracting qualities of objects to use as the basis for a planning.
- They learn about the ideas and approaches of the cubists and their influences and make connections with other artists who work from still life.
- They explore the use of the moving image to communicate ideas about particular genres or styles of art.
- They analyze paintings, films, cartoons, illustrations, digital images, photographs and images from contemporary visual culture.

Music

Band 1 (Prathom 1-3)

- The unit develops children's ability to create simple rhythmic patterns and perform them rhythmically using notation as a support. Children extend their understanding of rhythmic patterns, and in particular, ostinato. They create their own patterns and play them separately and in combination with other patterns. They identify repeated patterns in different types of music.
- This unit develops children's ability to create, combine and perform rhythmic and melodic material as part of a class performance of a song. Children develop their understanding of how instruments can be used to accompany songs. They explore a variety of accomplishment devices, select appropriate phrases and patterns, and practice and rehearse towards a final class performance.

Band 2 (Prathom 4-6)

- The unit develops and demonstrates children's ability to take part in a class performance and play a two-part song, play instrumental accompaniments and

rehearse and develop musical and performance ideas with understanding of how to achieve a quality class performance.

- The song could be recorded by colleagues, parents, pupils, and this recording used as a means of teaching the song to the rest of the class.
- Provides opportunities for learners to develop and demonstrate the musical skills, knowledge and understanding achieved by Primary level 6. During the unit the learner will develop an understanding of the process of composing by creating and performing music in response to musical and non-musical stimuli.

Band 3 (Matayom 1-3)

- This unit develops student's ability to recognize, explore and make creative use of musical devices found in variation form. During this unit students explore how musical ideas can be changed to create different moods and effects. They will explore a range of music in variation form from different times, identifying the main features of the music and the musical devices used by composures.

Band 4 (Matayom 4-6)

- Develops student's ability to identify, explore, and make creative use of musical devices found in jazz. Students learn some basic approaches to improvisation. They develop blue scale motifs within a 12-bar blues, improvise using chord/scale relationships and apply that understanding by developing patterns in a diatonic sequence.
- They analyze and develop riffs aurally, use ICT as an aid to practice, and begin to understand the importance of improvisation to jazz genres.
- Develop student's ability to recognize, perform, and create African dance music with an understanding of musical conventions and processes
- Develop students ability to recognize and compose within the musical genre and overture. Learners learn how themes can be used.
- Learners identify structural and expressive features and refine, complete and notate compositions. They also appraise music critically, expressing and justifying their opinions, and appreciate hot the overture has been used in different times.

Learners will study the topics of:

- Principles of Voice Leading—Root position.
- Part-writing, harmonization and analysis of Secondary Dominants
- Rhythm: One and two pulse units, major scale Simple Meters, third, fourths, melodies, Tonic (I) in Major, fifths, sixths, octaves, melodies.
- Anacruses, further subdivision, ii, IV, melodies.
- Rhythm: Dots and ties, Minor Mode, melodies.

Classical Dance

Band 1 (Prathom 1-3)

- Students use creative drama to perform freely and transfer ideas, feelings, and stories.

● Show movement freely in the form of foundation dances. They show classical dance based on experience in free style. They express feeling, constructive, and positive opinions of other's performances, and develop an appreciation for classical dance.

Band 2 (Prathom 4-6)

● Students experiment in the use of performance techniques to perform free style dance, compose stories, show experiences, shadow plays, or masked performances. They understand and perform basic dance patterns, and perform classical dances based on experience and observation.
● Learners express feelings and constructive and positive opinions of other performances, analyze the patterns of various types of classical dance, and apply the understanding of classical dance and other performances to daily life.
● Learners understand the role of the experience of learning classical dance and creative drama for people and society. Appreciate and accept the skills in classical dance, relating to regional and national culture.

Band 3 (Matayom 1-3)

● Students use the imagination to communicate feelings and ideas by performing a play, and perform classical dance in various styles to reflect beauty. They select and adapt elements of classical dance to perform a stage play, and express feelings and opinions on the techniques of performances of styles of dance.
● Learners analyze and appreciate the beauty of performance and the value of classical dance communicating thoughts, they understand the importance of the moral in dramas and the role it plays in society, and apply the meaning of the classical dance to life.
● Learners investigate to understand the styles and techniques in performing classical dance and drama according to society's values and culture. They appreciate Thai culture and understand the value of classical dance relating to regional and national cultural heritage.

Band 4 (Matayom 4-6)

● Students analyze and interpret library work or play script using suitable dance patterns, and show the beauty of various styles of classical dance. They select and apply elements to develop skills in classical dance.
● Learners give opinions and criticize orally and in writing, based on an understanding of the element and enjoyment, and give opinions analyze and criticize the benefit of classical dance for self-development.
● Learners investigate to understand the development of Thai and international classical dance and drama in sociology and culture

10. THAI

In accordance with the MoE guidelines in learning Thai and restore the Thai language and culture, SBS Thai curriculum has kept the same curriculum content with no additive components.

Thai language is a national identity, a cultural heritage which essentially builds up unity and enhances the "THAINESS" in the personality of the Thai populace. It is the mechanism for communicating and establishing interpersonal relations essential for joint business undertaking, working and living together peacefully in a democratic society. It is also a tool for searching knowledge and experiences from the information technology to develop new knowledge, updating the analytical, criticizing and creative thinking to meet with social changes and advancements in Science and technology in as much as using the language in enhancing professional developments
for promoting economic security. Thai language also connotes the esthetic cultural heritages of our ancestors- an invaluable resource to be preserved and transferred to the younger generations.

Learning substances

1. Reading: pronunciation of words, sentences, reading different styles of prose and verse, contemplated reading to enhance understanding, analytical skill and accumulation of knowledge from reading to be used in daily living;

2. Writing: writing and spelling in line with orthography, writing for effective communication and publicity, writing in different forms such as composition, summary, report, imaginative writing, analytical and criticizing writing, creative writing, etc;

3. Listening, observing and speaking: listening and observing critically, expressing one's own opinion and feeling, speaking systematically and rationally, giving speeches in both formal and informal circumstances and communication for motivation;

4. Principles of usage: nature and theory of learning the Thai language, correct application in accordance with specific situation and person, composing verses of different types and study the influence of foreign languages upon Thai language;

5. Literature and literary works: analyzing literature and literary works to gather information on underlying concept and values of the written works and the joy of reading them. Learning and understanding the meaning of classical music and songs sung during the glorious Royal Barge floating ceremony, lullaby and folk songs created through indigenous wisdom of local people could help transferring the thinking, feeling, values, culture, tradition, ways of life of Thai people in the past including the appreciation of the beauty of the Thai language will create full delight and great pride of the invaluable cultural heritage sustained from the time of our ancestors up to the present time.

Key performance indicators of learners' development

Band 1 (Pratom 1-3)

● pronouncing words, rhyming words, phrase, short story and simple poems correctly and promptly; understand the meaning of the words and texts read; capable of raising rational questions, knowing the sequences of the story read and envisaging what will happen; summarizing knowledge or ideas gained from the story, doing what being told or explained based upon the story; understanding the meaning of data from the diagram, map or chart, reading books regularly and in good conduct of reading;

● possess the skill of neat handwriting in full sized alphabets; capable of simple descriptive writing, day diary, leave of absent letter to the teacher, account of experience including imaginative story under good writing conduct;

● telling details and important points of the story, raising questions giving answers, express ideas and feelings on what is listened and seen; communicating by telling experiences, giving advice or motivating others to follow suit, all in good conduct of listening, observing and speaking;

● spelling words and understanding their meaning, the difference between words and phrases, the function of words in a sentence; possessing the skill in using dictionary for finding the meaning of words; capable of writing simple sentence, rhyming verses or motto and knowing how to integrate standard Thai language and local dialects to meet with specific condition or circumstance;

● understand and capable of summarizing ideas from reading Thai literature or literary works to apply for use in daily living; capable of expressing ideas concerning what having read; knowing and appreciating folk songs and lullaby which are part of indigenous culture; capable of singing children's folk songs and reciting verses as per individual interest.

Band 2 (Prathom 4-6)

● reading the prose and poetry under good pronunciation practice and correct melody; explaining the direct and indirect meaning of words, sentences, messages, idioms; understanding the instructions and explanations written in the handbook and capable of elucidating between fictions and facts as well as capable of grasping the important points from the reading, applying the knowledge and ideas therein to solve the problem faced in daily living; reading in good manner, acquire the reading habit and realize the value of reading;

● possess the skill of neat handwriting, both full size and half size; spelling words and writing them down, making sentences, message and other clear and accurate communication materials; capable of applying diagrams, outline and conceptual framework to improve written works such as composition, summarizing issues, writing letters, filling in various forms, expressing feelings and ideas in words including creative writing in observant of good conduct in writing;

● speak out to express knowledge, opinions about things having heard or seen, give account or summarize matters learnt, post questions and answers in connection with the said experiences; capable of evaluating credibility upon hearing and seeing the commercials under rational judgment; speak clearly of any issue in

correct sequence, presenting report of what is read, heard, seen or discussed with skill in motivation as well as good conduct in observing and addressing issues;

- spelling words and understand the meaning of words, idioms, locutions, proverbs; knowing and understanding the type and function of words in the sentence, the type of sentence and usage of foreign language in Thai language; appropriate use of court language and polite wording; capable of writing sentences, composing poems and Thai classical verse of different types;

- understanding and realizing the value of Thai literature and literary works; reciting folk tales, singing folk songs and capable of applying what having read in daily living; learning the designated recitations by heart.

Band 3 (Matayom 1-3)

- reading prose and poetry in correct melody while understanding their direct and indirect meaning; capable of grasping the important points and details of the text read; providing opinions or contradicting points concerning the issues read; capable of writing down conceptual framework, laying out ideas, summarizing issues and writing reports of the thing read; capable of making rational and systematic analysis and criticism including evaluating credibility of the things read and the data inherent therein;

- good and easy to read handwriting, capable of selecting right wordings to meet with different circumstances of written works such as motto, proverb, blessings for different occasions, advertising messages, address, bio-data, summary, business letters, application form, etc; capable of making rational analysis and criticism, presenting knowledge, ideas or opposing ideas with sound reasoning; capable of writing research report and project proposal;

- providing opinions based upon sound analysis and criticism of the things heard and seen and apply the knowledge gained in daily living; capable of giving verbal report of research or issues under systematically studies; acquiring the art of public speaking and could give effective speeches in different occasions; capable of communicating for motivation while possessing good conduct in listening, observing and speaking in the public.

- fully understanding and making good use of court language, Pali and Sanskrit, words directly transferred from foreign languages, officially designated words; capable of analyzing the differences between wordings for speaking and writing, the variegated structure of the sentence and complex sentence, the nature of the official semi-official and unofficial language including the ability to compose different types of classical verses and poems.

- analyzing and criticizing issues in the Thai literature and literary works using the basic principle of literature review; knowing and understanding the significant characteristics of Thai literature, indigenous wisdom in language and folk tales in relation to learning history and Thai ways of life; capable of evaluating the value of the written arts and utilize the lessons learned in real life situation.

Band 4 (Matayom 4-6)

- reading the prose and poetry under good pronunciation practice and correct melody with full understanding; capable of explaining, translating and further

expanding the issues read; analyzing and criticizing issues, expressing reasonable contradictions and suggesting new ideas with sound reasoning; capable of predicting things to happen based upon the issues read, writing down the conceptual framework, laying out ideas, summarizing issues and writing report of the things read; capable of

making use of the knowledge gained in self development, improve learning and professional development in as much as applying the knowledge and ideas in solving problems which might occur in daily living; acquiring good conduct and reading habit;

● effectively communicating in different forms with best use of language as a tool to achieve the desired objectives; making summaries of the media of different forms and contents, writing essays which reflect creativity and eloquence; writing research report under good technical writing principles, utilizing information technology in referencing one's own product of different forms such as documentaries and entertaining articles as well as evaluating works of other writers with a view to further improve one's own writing.

● raising questions and give opinions concerning the issues having heard and seen; adhere to discretion in selecting issue to be heard and seen, analyzing objectives, underlying concept, nature of language usage, credibility of the issue and then apply it in daily living; acquire skill in public speaking both formally and informally by using the right language; capable of expressing one's own opinion, opposing issues, motivating others and promoting new ideas under sound reasoning, all in observance of good conduct in hearing, seeing and speaking.

● understanding the nature and influence of language and the characteristics of the Thai language; capable of using the words, phrases, and group of wording to form the desired sentence; capable of composing classical Thai verse and poem of different forms; using language appropriately as per specific situation; using correct court language and polite wordings; capable of analyzing the principle of Thai word formation, the influence of foreign language in Thai language and local dialects; analyzing and evaluating language usage in the written media and electronic media.

● analyzing and criticizing literature and literary works using the basic principle of literature review; realizing and understanding the key characteristics of Thai literature, indigenous wisdom in language and folk tales in relation with the learning in history and Thai ways of life; capable of evaluating the value of literature and usage of the lessons learned in real life situation.

I. Teaching Method (Four Practices in the Unified Curriculum)

The EP Curriculum has provided guidelines for teaching methodology as one of the following: (1) actual teaching situations, (2) teaching approach to self-learning, (3) support for group learning, and (4) stimulating learners' enthusiasm into exploring the environment (natural and man-made), all of which to be assimilated into personal practice and daily application. To complement and strengthen learners' thinking abilities and problem solving skills, SBS has brought in four more teaching learning practices: (1) Process-based Teaching Methodology, (2) Interactive Learning, (3) ICT Literacy Activities, and (4)Authentic Assessment. These four practices serve as academic, social, and cultural pillars for teachers to design effective lesson plans and devise learning activities followed by Authentic Assessment for learners. In putting

designed lesson plans and devised learning activities into action, teachers need to use two tools namely ICT and English language skills.

In implementing the Unified Curriculum, SBS has primarily practiced natural language acquisition through interactions between the teachers and students, and students with students, in teaching and learning activities. Students rely on auditory as well as visual reception without translation into the mother tongue. It should be noted that students are allowed to use the first and the second language simultaneously in the classroom and thus gradually take in or acquire the meaning of the second language. SBS has given great importance to four teaching practices: (1) Process-based teaching methodology, (2) Interactive learning activities, (3) ICT literacy, and (4) Authentic assessment. These practices are meant to support natural language acquisition as well as academic achievements.

1. Process-based teaching methodology

This method enables the teacher to observe students' personal learning processes. The teacher will not directly provide answers to given questions or solutions to targeted problem-learning tasks, but facilitate or support students in finding their own answers or solutions. The teacher will ask more questions if students still cannot find answers or solutions; this is to tap into their learning or thinking process. Once the teacher can identify the stumbling block in the thinking process, the teacher will assist students to remedy their own learning process to reach correct answers or plausible solutions. The teacher can also offer help or design activities that challenge students' analytical and critical thinking. This also enables students to voice their opinions and interact with teachers as well as other students (Satit Bilingual School of Rangsit University, 2010b).

2. Interactive Learning Activities

Interactive learning activities are determined by teaching points to allow interaction between teachers and students in the first place, and then between students and students. The teacher may use group or buddy techniques to solve the designated problem, and give opinions or logical conclusions. In so doing, students are equipped with social skills as well as techniques to learn from others. It also promotes natural language acquisition (Satit Bilingual School of Rangsit University, 2010b).

3. ICT Literacy

Computer literacy in students should be developed as a tool for learning and searching for new knowledge as well as gaining abilities in cyber-communication in today's ever-growing and changing world. Students are expected to demonstrate the ability to use ICT and have high levels of skill in using computers and mixed media in classroom activities or through formal evaluation measures such as electronic examinations (Satit Bilingual School of Rangsit University, 2010a). It is essential that teachers have ICT literacy or functional computer skills compatible with those of students. The teacher should be able to retrieve information electronically and present it as a display or shared file accessible to students. The concept of ICT literacy at SBS

is broadened to include both cognition, critical thinking and application of technical knowledge and skills. Therefore, ICT literacy serves as a means for both teachers and students to participate and be engaged in today's communication network (Satit Bilingual School of Rangsit University, 2010a).

4. Authentic Assessment

What students have learned should be assessed against targeted knowledge or performance according to specified teaching-learning objectives. Authentic assessment can take various forms, such as individual or group reports, group discussions, simulation, role play, interview tasks, exhibits, projects, take-home tests, as seen appropriate by the teacher regarding learning objectives. This type of assessment is achievement-based as outlined in each lesson plan. If it were the case that students cannot perform at the expected level, they will be allowed to repeat the given task. Such repeated task can support and strengthen their learning process. It is also for the teacher to find out whether students can achieve the identified objectives. The last stage of academic achievement assessment can utilize formal testing papers at mid-term or final examinations (Satit Bilingual School of Rangsit University, 2010b).

II. Learning Activities

The EP Curriculum has given guidelines for learning activities in all subject strands. They are classified as core learning activities in subject strands and extra-curricular activities or student support activities. The Unified Bilingual Curriculum has given emphasis on hands on learning activities with exposure to real life experience. In addition, the school has brought in activities that develop higher level creativity and independent thinking in the form of *individual project work, Information search and Exhibits via group work, academic and art competitions, including real-life exposure* to medical practice and service industry. This can be done because the school has been affiliated with the specialized faculties at Rangsit University and therefore permitted for access to specific real –life exposure.

Adopting the EP Curriculum prescribed by the Ministry of Education as the core foundation, SBS has integrated components from international curricula to upgrade and accelerate students' academic abilities and achievements. The EP Curriculum provides broad guidance that all subjects shall be divided into core and extra-curricular activities. The core subjects are aimed at promoting the humanities, the fundamental capacity required for thinking and working skills. The extra-curricular activities are required for self-development in accordance with individuals' growth (Ministry of Education, 2001).

In the light of this curriculum enhancement, SBS has systematically designed and implemented additional learning activities across all subject strands to benefit students' learning and to widen the scope of learning. Learning activities usually take the form of *individual or project work* on selected issues or cultural themes of student interest, *real-life exposure* or field trips such as Science camp for secondary level students to visit a natural habitat in Nakorn Rachasima, or to visit the medical practice

and service industry as affiliated with specialized faculties of Rangsit University i.e. Faculty of Medicine, Conservatory of Music, Faculty of Arts to name a few, *information search and Exhibits via group work* for particular festive events such as Christmas, Songkran or International Fair Day, speech or performance contests, communication skills, *academic and Art Competitions* on selected individual performances, campaigns on selected issues or themes, as well as involvement in community work or social contribution (SBS Curriculum, 2004).

SBS also organizes and arranges extra-curricular activities that support and enrich students' learning experience, as well as promote socialization and interpersonal relationships in the student community. Major activities include special classes dealing with arts, crafts, language and culture, ICT, and other subject areas of student interest. Included are club work, sports, field trips, cultural and national events, specific performance appraisal and special projects to assist the local community as well as other schools in Patumthani. Extracurricular activities are listed on the SBS annual calendar and parents are informed regularly of forthcoming events, especially those that require parents' permission for participation outside the school (Curriculum 2004).

The SBS concept of learning activities uses the interactive learning approach to support and promote learners' learning environment. The learning activities comprise classroom activities and extracurricular activities. As Poosara (2002) has stated, education should not be a matter only of classroom learning, but of extracurricular activities that will help learners gain wider a perspective on the wider world. Boontham (1996) has noted that extracurricular activities in which teachers and students have participated, in addition to classroom activities, will assist students in developing and supporting their experience and skills in the areas of physical, spiritual and social spheres. They will enable students to adjust and adapt effectively to a changing environment. Furthermore, extracurricular activities should not have credits or results in the formal evaluation (Boontham, 1996). The Key Learning activities implemented at SBS include:

The school has developed learning activities for use both inside the classroom and outside. *Examples of the latter, extracurricular activities, are annual musical performances (including Beauty and the Beast, The Lion King, Annie) which aim to enhance students' language abilities, musical skills and leadership abilities.* The performances are stressful but fulfilling for students in terms of time management and since it is a more-than-a-school-play concept, it requires great dedication to practice and become competent to perform without fear. Each year there are performances given to the wider public and proceeds from ticket sales are donated to a charitable foundation. Students will learn about giving of their own abilities, together with real life experiences, to practice their language abilities, and Arts (Music and dance). Each year the school's musical performance attracts audiences of well over 400 people, from within and outside. Students have become confident in themselves that their abilities to meet the demands of society and are able to give back to the overall community.

III. EVALUATION

SBS has followed the direction for evaluation as indicated in the EP Curriculum prescribed by the Ministry of Education. The school in particular has kept written tests as part of the requirements of the EP Curriculum. SBS has added three other evaluation criteria in support of the goal of life-long learning by using (1) Electronic examination to develop and sustain ICT skills, (2) Peer evaluation to develop a sense of responsibility and justice, and (3) Performance presentation to stimulate learner initiative and confidence.

The evaluation criteria of the UBC follows the rules and regulations prescribed by the Ministry of Education that total learning hours shall not be less than 80 percent. The Ministry of Education's EP Curriculum puts more stress on formal examinations which SBS has fulfilled and enhanced with four other evaluation criteria as mentioned. Furthermore, SBS's methods comprise evaluations both inside and outside the classroom on an ongoing basis known as Authentic Assessment. This is an assessment in a real-life situation. The assessment takes the form of discussing a report in front of the classroom or presenting issues or information to students or teachers in the classroom. The purpose is that the teacher should find out if students have achieved the objectives or not. The last stage of achievement assessment is formal testing through examinations (SBS Newsletter, 2010). Formal testing comprises a formal written Examination**,** accounting for approximately 70 percent, whilst the informal test comprise 30 percent. Types of formal testing include mid-term and final exams through formal examinations, ONET/ANET testing, IGCSE and IB mock tests. The *Electronic Examinations* are developed learners' ability in ICT literacy and standardize testing evaluation. The subjects found to have developed the this type of testing method are Thai, Social Studies, Mathematics and Career which are used to assess learners' performances as part of the formal evaluation process of mid-term and final examination. The informal testing method implemented at SBS includes *Performance Presentation* to stimulate learner initiative and confidence through observation by teachers and peers *and Peer evaluation* to develop a sense of responsibility and justice. Learners are aimed to develop a sense of social responsibility, justice, and recognizing their role in the society. Teachers monitor the process closely and have created a positive impact towards learners' confidence and thus promote leadership qualities.

Bilingual education or what the Ministry of Education termed the English Program (EP) Curriculum is currently on the rise with an active search for the right fit of the bilingual curriculum which takes into due consideration of the preservation of the Thai culture, heritage and overall Thai identify. As Thailand is inevitably a stakeholder in the highly competitive globalized society, language learning is part of the country's mission to produce well rounded 'lifelong learners' with good command of English to be more competitive in the borderless world. The Thai government has stipulated many orders for the design and implementation of an effective EP Program, both in government schools and those in the private sector. The EP curriculum acts as a guideline allowing considerable room for each educational institution to develop its own curriculum as appropriate for their learners. *However, some educational institutions have either lacked sufficient curriculum guidelines or resources to*

effectively develop and implement their own curricula to cater to the needs of its specified group of learners.

1. The Significance of Unified Bilingual Curriculum to Thai Students

The country is still striving towards a perfect fit between its culture, heritage and the overall concept of Thainess. The Ministry of Education's bilingual curriculum guidelines, dating back a decade ago, and the educational reform program, still amount to a significant challenge to find the correct path for curriculum development in Thailand. The educational reform of 2001 was unable to accommodate educational needs in various areas. From educational research over the past six years by the Educational Standard Council of Thailand and the Center of Educational Monitor and Evaluation, it was found that the Curriculum of 2001 had the strength of delegating powers in education to local authorities, and empowering and enabling education institutions to participate in curriculum development based on student-centered learning (MoE, 2008). On the other hand, the National Education Curriculum 2001 appeared weak in that its guidelines were unclear with respect to curriculum implementation and its results. The problem is deemed to stem from a misunderstanding of curriculum implementation in educational institutions. The evaluation process does not match the educational quality as well as the learner lacks quality in terms of learning technique and learner standards (MoE, 2008). Moreover, the Economic and Social Development Plan (B.E. 2550-2554) stated the necessity of changes in the quality of learners to possess moral, ethics and sufficiency in the physical, emotional and intellectual abilities (MoE, 2008).

The importance of bilingual education for Thai learners has undeniably grown with the emergence of globalization. However, a quality bilingual curriculum has yet materialized across the country with a uniform educational standard. The Ministry of Education has provided guidelines for each school to develop and implement its own curriculum. The pressure to develop and implement a strong bilingual curriculum is thus put on schools. There needs to be a strong curriculum development team, a budget, as well as effective communication to important stakeholders, such as parents, to ensure a firm understanding of the curriculum. Developing and implementing an effective bilingual curriculum is not an easy task for small schools.

The SBS Unified Bilingual Curriculum (UBC) essentially aims to add to the requirements prescribed by the Ministry of Education in order to be more responsive to the changing needs of current Thai learners, most particularly in terms of foreign language acquisition, namely English and Mandarin, Science, Mathematics and Social Studies. Another underlying principle is that curriculum reorientation is a continuing process which needs periodic evaluation and revision to meet emerging needs through continuous research. In general the UBC has defined the key areas whereby the EP curriculum has drawn out broadly for curriculum developers to implement in the school. UBC has stressed the importance of bilingual education as being the way forward for Thai learners.

2. Conclusion

The Curriculum Component Analysis Model applied to the English Program Curriculum (in short EP) and Unified Bilingual Curriculum (in short UBC) curricula offers a thorough basis of analysis for this research. The UBC provides the concepts and guiding example for schools to develop the most effective curriculum fit for each group of learners. Satit Bilingual School of Rangsit University has modified these components in the development its Unified Curriculum. From the findings of the study, it can be stated that Thai learners will gain greater benefits from the international contents modified in the UBC in the areas of analytical thinking skills, communication skills and language competency. The importance of acquiring more than one language through the natural acquisition approach is a prime success factor in delivering native-like proficiency for learners under the Unified Curriculum. Moreover, the four educational practices of Process-based teaching methodology, Interactive learning activities, ICT Literacy, and Authentic Assessment are meant to support natural language acquisition as well as academic achievements. The Unified Curriculum is aimed at enhancing learners' ability to develop their own educational strength in accordance with the country's "lifelong learning" goal.

In conclusion SBS Unified Bilingual Curriculum is believed to enhance learners' quality and academic achievements in school. With additions to the curriculum from international contents, learners will not only gain language proficiency as native speakers, but will also gain academic achievements according to the MOE standards. The next chapter will go on to state the methodology used in the research under the three in objectives. The contrast on the similarities and differences of the two selected bilingual schools will be observed under qualitative and quantitative approaches.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 INTRODUCTION

As stated in Chapter 1, there have been a growing need for bilingual education in Thailand. The trend towards bilingual education emerged with the country's 1999 educational reform which had as a priority the goal of equipping the future citizens of Thailand with analytical skills and to be creative thinkers and to understand that education should be a life-long activity. As a result, the Ministry of Education initiated the English Program (EP) Curriculum for implementation in schools that were deemed ready for such a new educational practice.

Those schools which adopted the EP Curriculum were given ample opportunities by the Ministry to modify the prescribed curriculum as they see believed appropriate for their learners. One possible alternative was to integrate some aspects of other well-established curricula with the view of internationalizing the content or to place more emphasis on core academic subjects such as mathematics and science, and to stress other areas such as foreign language competency, music, fine art, or cultural promotion.

Satit Bilingual School of Rangsit University (SBS) has been recognized as one of the schools leading the way in bilingual education. The school has modified the EP Curriculum with certain content of two international curricula: the International Baccalaureate (IB) and the International General Certificate of Secondary Education (IGCSE). Using English as the medium of instruction for major subject strands, the school aims to enhance students' academic achievements and their thinking skills in mathematics and science as well as equip them with Mandarin as the third language in the framework of linguistic and cultural mastery. SBS has attempted to approach the modification of the EP curriculum and its implementation in a professional manner. This present study aims to document that attempt and to contrast it with that of another bilingual school.

Following this brief introduction, the chapter outlines the methodology used in this research. There are seven sections: (i) Introduction; (ii) Objectives; (iii) Research Methodology; (iv) Data Collection Procedure; (v) Data Analysis; (vi) Significance of the Study; and (vii) Conclusion.

4.2 OBJECTIVES

1) To examine the curriculum as modified by Satit Bilingual School of Rangsit University and compare it to the EP curriculum prescribed by the Ministry of Education.

2) To compare the modified curriculum of Satit Bilingual School of Rangsit University with that of another bilingual school.

3) To survey SBS parents to obtain their perspective of the modified and integrated curriculum.

4.3 RESEARCH METHODOLOGY

4.3.1 Subjects

The subjects in this study are in three groups:

1) Staff of Satit Bilingual School of Rangsit University consisting of the School Director, the Academic Director, two Heads of Department (English and Mathematics) and two senior teachers. These subjects had knowledge of and experience and with the Unified Bilingual Curriculum implemented at Satit Bilingual School of Rangsit University.

2) Staff of a Selected Second Bilingual School consisting of the School Director, the Academic Director, the EP Program Director, and the Education District Office Director who has supervised curriculum implementation at Selected Second Bilingual School. These subjects had knowledge of and experience with the modified EP Curriculum implemented in that school.

3) Parents of Satit Bilingual School of Rangsit University. They were 126 parents of students in the primary school and 121 parents of students in the secondary school for a total of 247.

4.3.2. Instruments

Three instruments were used in this study:

4.3.2.1 Curriculum Component Analysis Model which deals with major components of a curriculum. They are (1) *Philosophy, (2) Objectives, (3) Contents, (4) Teaching methodology, (5) Learning activities, and (6) Evaluation*. This instrument was used in the analysis of similarities and differences between the EP Curriculum prescribed by the Ministry of Education and the Unified Bilingual Curriculum of Satit Bilingual School of Rangsit University.

4.3.2.2 Structured interviews were used to obtain information on the new curricula at Satit Bilingual School of Rangsit University and St. Joseph Bangna. The instrument consisted of 14 questions dealing with Philosophy, Objectives, Structure and Content, Teaching methodology, Learning activities, and Evaluation.

- **Philosophy**

1. **The Philosophy of your school is to "…..."** How do you implement this philosophy?

2. What are perceived limitations in the implementation process of the stated philosophy?

- **Objectives**

1. There are two main objectives at your school being……and what are the perceived limitations:

2. Objective 1 is **"…..."** How do you implement this objective?

3. What are perceived limitations of Objective 1 being implemented at your school?

4. Objective 2 is **"….."** How do you implement this objective?

5. What are perceived limitations of Objective 2 being implemented at your school?

- **Structure and Content**

1. What is your opinion on Band division into 3 stages in terms of learning development: Band 1 (P1-P6), Band 2 (M1-3), and Band 3 (M4-6)? How can they be effectively implemented at your school?

2. What is your opinion on the use of **ten subject strands** at your school?

3. What is your opinion on the use of the current structure in assigning **weight in terms of credit hours per subject strand** at your school? What is the implementation of the current structure at your school as you have perceived?

4. Are you aware of the **modified contents of the major strands at your school?**

- **Teaching Methodology**

1. At your school what are the four major practices as applied to teaching and learning and what are the perceived limitations?

- **Learning Activities**

1. There are four major learning activities at your school. What are the perceived limitations?

- **Evaluation**

1. There are four evaluation practices at your school and what are the perceived limitations?

4.3.2.3 Parent survey was designed to collect data on parents' perspective towards the Unified Bilingual Curriculum of Satit Bilingual School of Rangsit University. The survey consists of two parts: Part one collected background information of the parents: (i) Name and surname, (ii) child's level, (iii) Occupation, (iv) Educational background, and (v) the reason for selecting SBS. Part two contains 24 questions dealing with Philosophy, Objectives, Contents, Teaching methodology, Learning activities, and Evaluation. Parents are to give their reaction to the Unified Bilingual Curriculum in terms of satisfaction on a rating scale of 1 (low) to 5 (high).

At the end of the parent survey there is one open-ended question on additional comments parents may have for the researcher. The given questions are translated into Thai to avoid misinterpretations of the meanings the researcher would like to convey to parents. The translated version by the researcher is rechecked for connotative consistency by a specialist. The question items in the parent survey are:

- **Philosophy** ปรัชญา

1. You have knowledge of the school's Philosophy in **"Building leaders for tomorrow".**

ท่านรับทราบปรัชญาของโรงเรียนที่ว่า สร้างผู้นำในอนาคต　　　　1　　2　　3　　4　　5

2. You are satisfied with the Philosophy of the school "Building leaders for tomorrow".

ท่านมีความพึงพอใจกับปรัชญาของโรงเรียน คือ การสร้างผู้นำในอนาคตมากน้อยเพียงใด　　1　2　3　4　5

- **Objectives** วัตถุประสงค์

3. You are satisfied with the school's Objective 1, **"Learners shall be equipped with analytical thinking, social and communication skills."** ท่านมีความพึงพอใจกับวัตถุประสงค์หลัก

แรก ที่ว่าโรงเรียนสร้างให้นักเรียนมีทักษะของการคิดวิเคราะห์ ทักษะทางด้านการสื่อสารและสังคม

　　　　　　　　　　　　　　　　　　　　　　1　2　3　4　5

4. Your child has more **analytical thinking skills** when enrolled at SBS.

นักเรียนมีทักษะของการคิดวิเคราะห์เพิ่มมากขึ้นเมื่อมาเรียนที่โรงเรียนแห่งนี้　　1　2　3　4　5

5. You agree to the school's Objective 2 on learning language with the native speaker.

ท่านเห็นด้วยกับวัตถุประสงค์หลักที่ 2 ของโรงเรียนคือการเรียนภาษาจากเจ้าของภาษาโดยตรง　1　2　3　4　5

6. You are satisfied with school's objective 2 on **"developing natural language acquisition and sustain native like language competency".**

ท่านมีความพึงพอใจกับวัตถุประสงค์หลักที่ 2 ที่ระบุว่าการเรียนภาษาแบบเป็นธรรมชาติจากเจ้าของภาษาโดยตรง1 2 3 4 5

- **Content** เนื้อหาหลักสูตร

7. You agree to the use of 8 subject strands prescribed by the Ministry of Education.

ท่านเห็นด้วยกับการแบ่งเนื้อหาหลักสูตรเป็น **8** กลุ่มสาระวิชา ตามที่กระทรวงศึกษาธิการกำหนด 1　2　3　4　5

8. You agree to the use of **ten subject strands** provided by adding Mandarin and ICT as two more additional subject strands. ท่านเห็นด้วยกับรูปแบบการจัดการศึกษาเป็น **10** กลุ่มสาระวิชา ตามที่

โรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิตจัดขึ้น ในขณะที่กระทรวงศึกษาธิการมีรูปแบบการจัดการศึกษาเป็น **8** กลุ่มสาระวิชา

　　　　　　　　　　　　　　　　　　　1　　2　　3　　4　　5

9. You agree to the teaching assignments into 4 **Bands** at the school. ท่านเห็นด้วยกับการจัด

การศึกษาของโรงเรียนเป็น **4** ระดับ คือ Band 1 (ป.1-ป.3), Band 2 (ป.4-ป.6), Band 3 (ม.1-ม.3), Band 4 (ม.4- ม.6)

　　　　　　　　　　　　　　　　　　　1　　2　　3　　4　　5

10. You agree with the use of the current structure of the Unified Curriculum in **assigning weight in terms of credit hours** per subject strand.

ท่านเห็นด้วยกับการให้น้ำหนักการเรียนโดยใช้หน่วยกิจตามที่โรงเรียนกำหนด

                1 2 3   4   5

   11. You agree with **the modified contents** of the major strands in the Unified Curriculum.

ท่านเห็นด้วยที่โรงเรียนได้ทำหารผสมเนื้อหาหลักสูตรนานาชาติเข้าไปในทุกกลุ่มสาระวิชา

               1 2   3   4   5

- **Teaching Methodology** วิธีการสอน

12. You are satisfied with the school using the **Process-based teaching methodology**. ท่านพึงพอใจกับการเรียนการสอนที่เน้นกระบวนการของโรงเรียน

               1 2   3   4   5

13. You can perceive your child's development as a result of **Interactive learning activities** used at SBS.   ท่านเห็นพัฒนาการที่เปลี่ยนแปลงของนักเรียนกับวิธีการสอนแบบมีปฏิสัมพันธ์ของโรงเรียน

            1 2   3   4   5

14. You are satisfied with your child's ability to use **ICT** in his/her learning.

ท่านพึงพอใจกับทักษะการใช้เทคโนโลยีสารสนเทศในการเรียนรู้ของลูกของท่าน

               1 2   3   4   5

15. You are satisfied with teachers using ICT in all subject strands.

ท่านมีความพึงพอใจกับการที่ใช้ เทคโนโลยีสารสนเทศของครูในทุกสาระวิชา

               1 2   3   4   5

16. You are satisfied with **Authentic Assessment** used at SBS.

ท่านพึงพอใจกับการที่โรงเรียนใช้การประเมินนักเรียนตามสภาพจริง

               1 2   3   4   5

- **Learning Activities** กิจกรรมการเรียน

17. You are satisfied with **project work** used in subjects as appropriate.

ท่านพึงพอใจกับการทำโครงงานที่นักเรียนได้ทำในแต่ละรายวิชา

               1 2   3   4   5

18. Your child has an opportunity to do **Information search and work on Exhibits** as his/her learning activities. นักเรียนได้มีการค้นหาข้อมูลและจัดทำนิทรรศการอย่างเหมาะสม

               1 2   3   4   5

19. You agree to the frequency of internal and external **Competitions** for student at SBS.

 ท่านเห็นด้วยว่าทางโรงเรียนได้มีการจัดแข่งขันวิชาการทั้งภายในและภายนอกได้อย่างเหมาะสม 1 2 3   4   5

20. You are satisfied with **Real-life Exposure** arranged for students each level.

ท่านพึงพอใจกับการที่นักเรียนทุกระดับได้ไปศึกษาตามสภาพจริงนอกห้องเรียน   1 2 3   4   5

- **Evaluation** การประเมินผล

21. You are satisfied with the use of **Written tests** at SBS.

ท่านมีความพึงพอใจกับรูปแบบที่ใช้ที่โรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิต ในการออกข้อสอบแบบข้อเขียน 1 2 3 4 5

22. You are satisfied with the use of **Electronic Examination** implement at SBS.

ท่านมีความพึงพอใจกับการทำข้อสอบโดยผ่านระบบคอมพิวเตอร์ 1 2 3 4 5

23. You are satisfied with the use of **Performance Presentation** as a method of evaluation implemented at SBS.

ท่านมีความพึงพอใจกับการการประเมินผล โดยให้นักเรียนนำเสนอผลงาน 1 2 3 4 5

24. You agree to the use of **Peer Evaluation** to help assess students' performance.

ท่านเห็นด้วยกับการให้เพื่อนมีส่วนร่วมในการประเมินนักเรียน 1 2 3 4 5

Your comments (if any) ความเห็นอื่นๆ (หากมี)…………

4.4 DATA COLLECTION PROCEDURES

The research procedures are in three parts:

(i) analyzing the EP Curriculum and the Unified Bilingual Curriculum using the Component Analysis Model,

(ii) analyzing the curriculum of the two selected bilingual schools, that is, Satit Bilingual School of Rangsit University and St. Joseph, Bangna, with regards to six areas as indicated in Section 4.3.2, and

(iii) parents' perspectives toward the Unified Bilingual Curriculum at Satit Bilingual School of Rangsit University. The details of data collection procedure are as follows:

4.4.1 Data on similarities and differences of the EP Curriculum and the Unified Bilingual Curriculum are analyzed with the use of Curriculum Component Analysis Model. The researcher studied details of eight subject strands in the EP Curriculum and those of ten subject strands in the Unified Bilingual Curriculum. The Curriculum Component Analysis Model provides a framework for an analysis of six components namely Philosophy, Objectives, Contents, Teaching methodology, Learning activities, and Evaluation.

4.4.2 Data on curriculum implementation of the two selected bilingual schools, that is, the Satit Bilingual School of Rangsit University and the Selected Second Bilingual School. were collected using structured interviews. At Satit Bilingual School of Rangsit University, the researcher interviewed five subjects: The School Director, the Academic Director, two Heads of Departments (English and Mathematics), two senior teachers. As for the Selected Second Bilingual School, the researcher interviewed the School Director, the Academic Director, the EP Program Director, and Education District Office Director. In collecting data from staff of the two schools, the researcher took notes as well as recorded conversation as permitted by the subjects. It should be noted that structured interview used at Satit Bilingual School of Rangsit University was conducted on an individual basis, whereas the same

instrument used with the staff at Selected Second Bilingual School. was on a group basis. As for the Education District Office Director, the researcher made an appointment to interview for data on curriculum modification at Selected Second Bilingual School.

4.4.3 Data on parents' responses were collected by the researcher using the parent survey instrument. The instrument was distributed to primary and secondary school parents with assistance from homeroom teachers.

4.5 DATA ANALYSIS

Obtained data were analyzed according to the use of each instrument as follows:

4.5.1 Curriculum Component Analysis Model

Data obtained from Curriculum Component Analysis were analyzed and reported in six areas, namely Philosophy, Objectives, Contents, Teaching methodology, Learning activities, and Evaluation. In each area, the researcher gave a brief description of each curriculum component as used by the EP Curriculum and the Unified Bilingual Curriculum. The researcher highlighted in italics the parts identified as curriculum modification.

4.5.2 Structured Interview

Data on curriculum implementation were obtained from structured interview with the staff of both schools. The subjects' responses were noted and tape recorded with their permission. The analyzed data were reported in a brief summary of each component.

4.5.3 Parent Survey

Data obtained from the parent survey were analyzed in terms of frequency and percentage of responses. The researcher also asked the subjects to fill in their comments at the end of the survey instrument.

4.6 SIGNIFICANCE OF THE STUDY

As shown in Chapter 1, Satit Bilingual School of Rangsit University (SBS) has modified the prescribed EP Curriculum. The modified bilingual curriculum includes content from two international curricula: the International General Certificate of Secondary Education (IGCSE) and the International Baccalaureate (IB). It is important to understand that the Ministry of Education allows schools to modify up to 30 percent of the prescribed curriculum. This present study attempts to compare the EP curriculum with the modified curriculum of SBS using the Curriculum Component Analysis instrument.

In this study, data was obtained from major stakeholders, that is, the school executives, heads of departments, and leading teachers in each of the two schools. It is hoped that this research can lead to the development of guidelines for bilingual schools which decide to adopt modifications to their bilingual curricula as seen to be appropriate for a particular school and its students.

4.7 CONCLUSION

This chapter has provided information on research methodology, data collection procedures, and data analysis. It should be noted that data obtained from Curriculum Component Analysis Model have already been presented in Chapter 3. The rest of the data collected by the other two types of instruments will be reported in the next chapter on curriculum implementation.

CHAPTER 5

RESULTS OF THE STUDY

5.1 INTRODUCTION

The chapter will present data collected from two key stakeholders of the two selected bilingual schools: (1) executives of the Satit Bilingual School of Rangsit University, and (2) the executives at Selected Second Bilingual School, and (3) parents of the Satit Bilingual School of Rangsit University. This is to investigate the modified curriculum implementation according to the following objectives:

- To investigate implementation of the modified bilingual curriculum of Satit Bilingual School of Rangsit University in contrast with another bilingual school.
- To secure information on parents' perspective of the implementation of the modified bilingual curriculum of Satit Bilingual School of Rangsit University.

There consists of two sets of data collected to observe the modification of the curriculum implementation. The first set was the data obtained from the executives and teachers at the Satit Bilingual School of Rangsit University and Selected Second Bilingual School. through the structured interview. The findings will be reported according to the areas of *Philosophy, Objectives, Contents, Teaching methodology, Learning activities, and Evaluation.* The second set of data was from the parent survey of the primary and secondary levels grades 3, 6, 9, and 12 at the Satit Bilingual School of Rangsit University. The findings will be reported according to the areas of *Philosophy, Objectives, Structure, Teaching methodology, Learning activities, and Evaluation.*

5.2 THE ANALYSIS OF BILINGUAL CURRICULA OF THE TWO SELECTED BILINGUAL CURRICULA APPEAR IN THE FOLLOWING TANGIBLE COMPARISON

The instrument consists of 14 questions dealing with Philosophy, Objectives, Structure, Teaching methodology, Learning activities, and Evaluation. Each area contains 1-5 questions.

The researcher interviewed five subjects: The School Director, the Academic Director, two Heads of Departments (English and Mathematics), two senior teachers (one native speaker and one Thai teacher).

At the beginning of data collection, the researcher aimed to secure information from all ten subject strands, however, without a complete understanding in the Unified Bilingual Curriculum, some teachers were ruled out in the process. It should be noted that in selecting the key informants at Satit Bilingual School of Rangsit University, the Heads of Departments and senior teachers required to have a thorough understanding of the Unified Bilingual Curriculum in order to provide valid and credible information. Hence, it was required that teachers and heads of departments who have work with the school for more than six years were selected.

As for Selected Second Bilingual School, the researcher interviewed the School Director, the Academic Adviser to the EP Program, two senior teachers in the Foreign Languages Department, and the Education District Office Director. In collecting data from staff of the two schools, the researcher took notes as well as recorded conversations as permitted by the interviewees. It should be noted that structured interview used at Satit Bilingual School of Rangsit University was conducted on an individual basis, whereas the same instrument used at the Selected Second Bilingual School was on a group basis. As for the Education District Office Director, the researcher made an appointment to interview the Director for data on curriculum modification at the Selected Second Bilingual School.

5.2.1 Philosophy

The question was regarding how the school implemented its Philosophy and what are the limitations of such implementation.

SBS: Philosophy is to *"build leaders for tomorrow"* for the country.

The School Director: the underlying philosophy has been made clear to every level of the management as well as teachers in the school. However, in achieving the goal, teachers must work towards the same directions. Full cooperation must be reached to successfully implement Philosophy. The School Director has set a five-year plan announced in the academic meeting utilizing the teacher's training period as time to brainstorm and conclude on what shall be the school five year plan and academic directions. The procedure is done to ensure full cooperation from all levels of the school from the homeroom teachers, Heads of Bands, Heads of Departments, Coordinators, Deputy Directors and all administrative functions. By creating a milestone is achieved combined with a medium and long-term plan is made to all stakeholders including parents either through formal parents meetings, letters and all public announcements and newsletters at the school.

Limitations are seen to be time consuming to prove the Philosophy. Limitations do exist in the implementation process of the Philosophy especially the philosophy of creating leaders is a long-term investments with long term outcome. Graduates are the outcome to ensure the effectiveness or ineffectiveness of the

implementation. SBS has produced two batch of graduates all of which were academically qualified to enter into national and international accepted universities.

The Academic Director: The school offers a wide range of complementary activities and programs to enhance leadership and social responsibilities among students while promoting their capabilities for becoming effective and qualified leaders of tomorrow. Some of the activities includes election and function of the Student Council, active participation in social functions, play or staged in a multicultural context and end of year performance. These activities are aimed to develop student's self confidence, respect of one self and others in the society, needed moral and ethical qualities of the leaders for tomorrow.

Along the way both subjects agreed that the communication process and mutual understanding of all stakeholders have caused disturbances especially during the first few years of the school's inception. Since no results were proven or have graduated parents were the main concern parties which raised question regarding the quality of the school curriculum, managements and so forth. However, with strong determination and quality teachers and managements who were firm believers of the school, the obstacle was passed with satisfactory results.

The Heads of the English Department: Teach to the best of his ability, enforce the school rules, and set a good example on leadership to the students. He sees limitation lies within the administrative function from a teacher's standpoint

The Heads of the Mathematics Department: He regularly stress to students the importance of leadership and try to instill in them the importance of accepting responsibility. Through project works which is believed to promote leadership qualities. Limitations lies in some students who perform well but does not want to take the responsibility or the leadership role.

Senior teacher (native speaker): At SBS, it is aimed to provide learners with knowledge and skills to deal with challenges of the future. She provides learners with independent learning skills so that they are able to turn problems into opportunities thus, promote leadership qualities. Limitations lie in the implementation because it is a gradual process which is built upon over the years. However, as new students are admitted every year, it is possible that they may miss out on some of the key stages of the process.

Senior teacher (Thai): She arranges the classes in ways that learners learn to take leadership roles and responsibilities in the teaching methodology and learning activities. The limitations lies within the limited time period given. Some other teachers may not all perform the same method of teaching to achieve the Philosophy of the school.

Selected Second Bilingual School : the Philosophy which is *"to support and develop learners to have good mental and physical health in music, arts and sports"*.

The school's Philosophy can be easily seen in academic outcome in Physical health, music and arts. The school has also set a wide range of activities focusing on the implementation of this Philosophy such as the Music in the Garden to showcase the musical performance of students. Other types of activities include, morning meditation to promote mental health, singing contests, and sports (volleyball, hockey, basketball, chairball and Taekwando). The school management said that the ultimate goal is the academic quality and ONET achievements which they are very proud of. However, with physical activities some barriers exists in the space available and as an all girl school, most of the students prefer in-door activities.

The main differences seen from the two schools in terms of the Philosophy and its implementation lies in how the parents and other stakeholders measure the results. Obviously the selected school's Philosophy can be more easily measured from the number of activities, plays and events conducted each term. However, at SBS the goal in building a leader can be harder to measure of how a leader is characterized as. Both schools have focused and agreed that for the philosophy to be effectively implemented, teachers need to have a clear definition and understands the method of how to carry on to students and parents. Obviously parents has been commonly reiterated by both school managements concerning their positive and negative impacts towards the implementation of the curriculum.

5.2.2 Objectives

SBS: *Objective 1 of the school is that, "learners shall be equipped with analytical thinking, social and communication skills"* and what are the perceived limitations.

The School Director: The school director and the Academic Director at SBS agreed that learners at the school are proven and seen to possess analytical thinking, social and communication skills after enrolment. The objective which can be easily measured from the learners studying at the school for as less as one semester. Students are seen to be more outspoken, eager to ask questions, compete in raising their hands in class. The school emphasize on promoting an interactive learning environment through various academic activities both in and outside of classrooms through the student-centered approach.

Teachers act as facilitators in the classroom which enable learners to expand their analytical thinking skills. Furthermore, The School Director has added various activities which promote analytical, social and communication skills for learners such as, the morning speech in the morning assembly and "I am the best in" session conducted every Friday of the month allowing students' opportunity to take pride in making presentations in front of parents, teachers and peers. These activities are found to enhance self-confidence of students in as much as active participation from parents. It could be said that students at SBS are prone to public speaking with high self-esteem. Through various types of activities at the school to meet the said objective, SBS students are found to be more outgoing than those in many Thai schools. To sum up, the school has promoted active learning environment in ways of speaking out, involving peers in the projects and acting on stage or in front of the public in school events and community-based activities.

Concerning the limitation, the School Director viewed that being a bilingual school, there are naturally some problems at the very beginning resulting from the fact that students and staff coming from different culture and orientation such as individualism and collectivism viewpoints. However, through the "natural assimilation" approach of both languages and culture in the primary and secondary schools, they gradually adjust themselves and achieve a more balance growth at the end.

Since the aforementioned objective is a rather new concept for the conventional Thai family to see their children more active in conversation and expressing opinion rather than adhering to the traditional Thai way of passive interaction, collaborations need to be sought from parents to understand and agree with the objective in order to achieve the highest possible outcome. Teachers also need additional training about new approaches to educate learners in ways that they will help promote the latter's analytical thinking as well as social and communication skills. Human Resource Department should be responsible for providing orientation training to new teachers about the objectives to ensure their active cooperation.

The Academic Director: the Academic Director has added that all of SBS's learning activities have addressed the communication and social skills needed for everyday use and for learners to be equipped with throughout their academic years. "Social and communication skills as well as analytical thinking skills are enhanced in every subject". The school environment is of one that promote self-learning, analytical thinking and new discoveries on the SBS campus and with its affiliation, Rangsit University. SBS's learners have ample opportunity to visit facilities at the university as part of their learning process. "This is a value added compliment for students at SBS". Some of the facilities include the pathological laboratories, multimedia buildings, musical theatre.

The Academic Director mentioned that some teachers are not adequately exposed to innovative teaching and learning methodology and thus need further training and continuing education which could be done periodically. Cultural orientation and training were recommended for both Thais and expatriate to increase their understanding about the nature of Thai students and how to positively communicate with both learners and teachers from different cultures. However, the bilingual culture at the school has made students more adaptive to the different cultures.

The Heads of Modern Languages Department: the informant have stressed upon teaching learners to communicate in English and to ask the questions. However, limitations lies in some recruitment of native speakers and too few hours in English as well as a feeling that colleagues are not attempting the same.

The Heads of Mathematics: The informants implemented the objective through encouraging group work as much as possible. Setting a mutual task where they need to depend on each other to achieve the goal. Limitations lies in some students who leaves everything to the rest of the group.

Senior teacher (native speaker): The informants implemented the objective in ways that learners take an active role in all areas of learning. They are expected to solve problems from an early age (grade 1) and to identify weaknesses. Learners are also encouraged to organize their ideas and share with others. They are also taught to respect ideas of others. Limitations lies in teacher's turnover and that not every teacher teach according to the same objective.

Senior teacher (Thai): The informant uses what she termed 'cooperative learning' in her class which is believed to promote analytical thinking skills and communicative skills. Learners will know how to communicate with peers and take responsibilities in their given task. Limitations lies in the hours provided for her class.

Selected Second Bilingual School: The main objective is to *"educate learners through adopting the child-centered approach"*. The school focuses upon teachers' training and in-service trainings which are conducted many times per term and also during school breaks. There are other modes of monitoring such as classroom observations during which it was stated that the performances of expatriates are more receptive and qualified than Thai teachers. The main objective of the observations is to make sure that the teachers do teach in line with the school's main objective of being child-centered. The limitation lies in some conventional Thai teachers who are accustomed to teacher-centered and lecture-based approach which often create boredom and even fear for some learners. The management do believes that Thai teachers cannot successfully teach learners to have analytical thinking skills as expatriate teachers and the former needs to receive regular training and orientation to ensure the attainment of the objective.

Both schools carry similar objective of teachers being facilitators in the classroom and seen the importance for learners to possess analytical thinking skills to meet with new challenges in the today's society. The tangible comparison of the of the students' analytical skills between the two schools are yet to be investigated and might be indulged in a separate study. However both schools objectives of learner centered education have been similarly implemented. From my personal observation, it was proven that learners from the schools which adopt the child-centered or student-centered have a more comfortable school life than those from the traditional lecture-based teaching institutions. Once learners become comfortable at their own pace, they will be eager to learn more. The obvious example is that learners at both schools enjoy their time in school compared to the Thai schools which do not focus on learner's happiness in studying.

SBS: Objective 2 *"Develop natural language acquisition and sustain native-like language competency"*.

School Director: Language learning at SBS are conducted by native speakers which is believed to create the best language learning input when compared to non-native speakers. Native speakers are capable of teaching their language as well as naturally introducing their respective culture and heritage to the learners in the form of activities and real life exposure during festivals and national holidays whereby non-natives cannot. The tools used to achieve this objective as expressed by the School

Director include activities organized to promote language learning throughout the year such as the Spelling Bee Contest, Annual Musical performance which is a musical play performed in English, English speaking day, etc. It was also reiterated that SBS chose to employ only native speakers to teach English. This has been the school policy from the beginning and has proven to be effective for this group of learners.

Academic Director: since language learning could be best for the "native-like" output in the early years of 3 to 10 years of age, the school, therefore, emphasizes on this to ensure that students attain native-like accents and cultural orientation through the native speakers. Language learning at the school follows the immersion guidelines of 90 percent in Kindergarten, 70 percent of L2 in Primary level and eventually a 50/50 in the secondary level. The school stressed that all the subjects are to be taught in English except the subjects requiring Thai contents such as Thai and some topics within Social Studies and Career. The subjects viewed that the school has effectively implemented the language learning policy for learners to be bilingual individuals.

The school has conducted researches assisted by the Faculty of Education throughout its curriculum implementation, the finding of such studies reaffirmed that the learners who had studied two years at the school become native like in their communicative skills. The Academic Director has added that the teaching materials are English-based in all subjects except Thai. It was noted that the speed of acquiring English in learners are not similar in all subject to different background and individual attention is needed in some cases. This has been made known to parents to ensure close cooperation between home and school to ensure students' progress in learning English. Both subjects are aware of the natural language acquisition method used on learners at SBS and believe that languages are best lernt from the mother tongue. However, language learning should be actively supported by parents as learning ability and acquisition could speed up at a more satisfactory pace. As advised by the School Director, "Parents need to be well involved and informed not to place high pressure on their child if the speed of learning is not as high as their peers, but look for ways to make favorable contributions towards language learning at home and in their daily living".

The school also plans to arrange supportive activities for parents and children to be involved positively in the total learning process to overcome obstacles of parents not understanding the whole situation and placing negative feedbacks towards the school. School has initiated many activities conducive to language learning such as public speaking competition, technical exhibitions with English as the communication medium as well as other interesting activities for learners to promote language learning at school.

Some limitations were noted in the areas of Human resource requirements for effective implementation of bilingual curriculum. The ultimate goal is for every teaching staff to be bilingual and knowledgeable about both cultures without discrimination. However, as the country is facing a sharp turn in producing qualified teachers, it has not been an easy ride in finding qualified teachers who accept the innovative curriculum like SBS and ones that are bilingual. This has been somewhat

problematic in the past about having both staffs accept and understand the school's Unified Bilingual Curriculum.

Head of Modern Languages: The informant aim for IGCSE level English and allow no spoken Thai in class and as a policy in the department. Limitations lie in finding qualified native speakers and not sufficient time in the English subject.

Head of Mathematics: Language is promoted in the department to be spoken naturally without translation. If a student asks a question in Thai, he will repeat the question in English and reply in ways that he will speak to another native speaker. Limitations lies in that some teachers tend to simplify their language and students will mimic this.

Senior teacher (native speaker): The informant feels that it is important for every teacher at the school to use English as a medium of instruction whenever possible but always in lessons taught by native speakers. This ensures that the learners are immersed in the target language and that they use it with confidence. In grade 1, English only policy was introduced and increase confidence through numerous speaking activities. Limitations were found to which a language is used in classroom which is up to every teacher. There are many different expectations in the school, whilst some teachers insist on 'English only', others do not.

Senior teacher (Thai): The subjects taught in English were not translated and try to use English as a medium throughout the day even outside of class. Some limitations lie in ways which a certain number of teachers do not see the importance of this objective.

Selected Second Bilingual School has the objective that *"learners shall be equipped with analytical thinking skills".* To measure students' performance, the school has conducted formal examinations both mid-term and final. These are 100 percent essay questions in the subjects of Science and Mathematics and the Academic Director said that all the exam questions were constructed to promote students' analytical thinking skills and the responses will reflect the level of attainment of this specific objective. In implementing this objective there were additional requirements mainly from expatriate teachers in the form of assignments that are conducive to trigger analytical learning such as having students analyze a newspaper article or bringing a picture of a disabled child and help raise funds to help. English camp and Science Day do help promote this type of learning as well.

As stated by the management, the barriers lie in parents who are accustomed to comparing notes between the implementation of the Thai curriculum and the EP curriculum. The school management naturally does not want to create undesirable feedback from parents. They are careful not to create unwanted atmosphere whereby the parents may not like, such as their children be too outspoken. Therefore it could be said that the analytical thinking activities are kept at a minimal. Thai teachers, in particular, are often times too traditional to capture the importance of this objective and thus leaving the expatriate teachers to do this part.

A further study should be made to gather information about attitudes and perspectives of parent groups at each school to formulate appropriate approaches to make them understand and move along with the school. If this process is successful, teachers, the management and, most importantly, learners will receive a full output with maximum results.

From a further interview with the District Supervisor, it was indicated that the school previously supported the teaching and learning to enhance full analytical thinking skills whereby the expatriate teachers were responsible for delivering the process in class while Thai teachers assumed the role of observers to see that the learning processes were in accordance with the lesson plan. The school arranged needed training for teachers on a peer to peer basis whereby experienced teachers will be a role model or trainers in external training sessions. However, at the matayom level there were no Thai teachers paired with an expatriate. There is an academic committee to oversee the teaching and learning activities in the school at all levels.

5.2.3 Contents

SBS: **5.2.3.1 The Band Division**

This question seeks answers in how the Band division can be effectively implemented at SBS in terms of learning development.

School Director: To ensure positive implementation and evaluation process of each Band, the school appoints four Head of Bands in the primary and secondary level being two native speakers and two Thais as well as one Coordinator in each school. Heads of Departments also oversees the whole curriculum development and implementation all across 12 levels. The division is observed to be effective in terms of coordination, implementation and evaluation of the curriculum. The arrangements based upon the aforementioned division have resulted in continuing coordination in the implementation process of all levels. The continuity of contents in each subject has been satisfactory monitored and resulted in a comprehensive and continuous development of learners and a smooth transition to the new level. On the whole, the subjects agreed with the current Band division at SBS. They viewed that with proven effective results it will be acceptable by the school and parents as well as the MoE. The ratio between teacher/students and teacher/heads did contribute towards an effective evaluation. No limitations were reported.

Academic Director: asserts that, "the school is allowed to develop and implement the best formula that fits our learners". Hence, whichever method is suitable for that school, like SBS or the learning community, that method should be adopted and supported by the MoE. No limitations were reported.

Head of Modern Languages: Does not have strong opinion as the informant found that the method works well in the department and no limitations were reported.

Head of Mathematics: The informants also agreed that the system works well and the curriculum builds upon the background of what learners previously learned.

Senior teacher (native speaker): views it is an effective way of organizing the school. It also makes managing the teaching and learning more effective whilst ensuring that teachers are well informed. However, it should be stressed upon positive communication.

Senior teacher (Thai): agrees that Band should be divided as Band 1 (grades 1-3), Band 2 (grades 4-6), Band 3 (grades 7-9), and Band 4 (grades 10-12).

Selected Second Bilingual School: it was reported that the Band was divided according to the EP Curriculum with no limitations reported.

5.2.3.2 The current use of ten subject strands rather than eight prescribed by the EP Curriculum.

School Director: With the emphasis on these subjects, the school requires a large amount of budget to invest in learning equipments in adding ICT infrastructure, state of the art facilities, uptodate teaching materials and ICT facilities as essential tools to achieve the goal. The school's five year plan did cover the budgets required to invest in these facilities as well as the required teacher's training in order to obtain the highest standard of teaching and learning environment. Limitations lie in the traditional teachers and parents who are against the revised subject strands. Some teachers are used to the conventional teaching style and educational theory that is based upon textbooks, homework and memorization.

For some parents, "A school without homework, memorization or textbooks are viewed as weak in academics". In some cases, if a child likes the school, parents may hold that teachers are not teaching enough in class. Many teachers who used to teach in accordance with the Thai curriculum still hold that it is more appropriate to have the conventional Band division like that which the MoE has previously classified.

Continuous training and reorientation need to be gradually provided to enable these teachers to change their traditional beliefs to move on to meet the new challenges of global educational development. The School Director has proposed the concept of *"team teaching"* which may be an effective tool for teachers to emulate new approaches from their peers and move forward with the rest of the teaching team leaving no one behind. It is envisaged that teachers of every subject will undertake the new approaches, share similar views of education and fully accept the subject strand division. Hopefully they will give up the old beliefs and move forward as active members of team teaching.

Academic Director: In general it could be said that both subjects have followed the school 10 subject strand division and believed that the incremental components has been added to cater for increasing needs of today learners. As having reiterated, the school's ICT curriculum reflects a more in-depth exploration of the

contents than that of the MoE with more emphasis on hands-on experimental approach in real life situation. Mandarin with its growing demand has become a necessity for learners to make their future careers more promising, most particularly in business transactions with China. The curriculum content has thus focused on communication skills for everyday use. It is believed that all of the subjects which have been pin-pointed will enhance the competitive advantage of learners and enable them to become academically equipped and well-balanced individuals who are ready to face the challenges of the tomorrow's world.

Furthermore, just as teachers require continuous training, parents, as important stakeholders, should also be educated and reoriented to fully understand the new context of education as well as curriculum development and implementation in schools. Parents, as much as teachers, could be part of their children's teaching and learning process. Under proper guidance and continuing support, parents could be one of the active facilitators helping their own children and contributing towards the future success of their schools.

Some limitations are seen in parents demanding that the school remove Mandarin not as a mandatory subject but as a normal pass and fail subject. "This is due to the children not getting good grades in Mandarin," said the Academic Director. Educating parents seems to be the solution of many   problems faced by the school.

Head of Modern Languages: the informant views that it is a reasonable to have ten subject strands however, English needs to be made number one priority for students to become bilingual.

Head of Mathematics: the informant viewed that it is a good overall education for learners with no found limitations.

Senior teacher (native speaker): It is an effective way of the curriculum and more effective when taught by all subject teachers in the secondary level.

Senior teacher (Thai): agrees of separating ICT and Mandarin. Learners will become more literate in ICT but Mandarin needs to be stressed upon in the primary level (more than one hour per week).

5.2.3.3 The opinion on the use of current structure of the Unified Bilingual Curriculum in assigning weight (time allocation).

School Director: While the Ministry of Education uses the teaching hours to monitor the learner's ability, at SBS we have exceeded the minimum requirements of teaching hours prescribed for both levels. The School Director expressed that total teaching hours per subject at SBS are found to be more than those of many other Thai and EP schools.

Academic Director: However, the Academic Director recalls that SBS has exceeded the minimum requirements by the MoE. "We implement more than the MoE 30/SBS 35 in the primary level and MoE 35 and SBS 37 at the secondary level. While

the MoE requires 1000 hours at SBS we adopt the 1020 hours. We are moving along to have 40 hours all across the levels but at this point it will be too much for the primary learners. At Matayom there is at least "35-40 hours" already which is sufficient for these learners. Moreover, the content of each subject taught at the school is more in-depth requires higher conceptual or thinking abilities on the part of learners. "Science, for example, in the Matayom level its coverage encompasses both the Thai and IGCSE curricula". Learners, in other words, learn multiple and bilingual curricula at the same time. It is interesting to note that SBS learners do not have any reaction against this but are willing to accept more contents and are very enthusiastic in learning.

Head of Modern Languages: the informant viewed that it is the same as the EP Curriculum. Parent would like it to be better than normal Thai government EP schools.

Head of Mathematics: does not have sufficient knowledge on the question.

Senior teacher (native speaker): does not have knowledge on the implementation of the question.

Senior teacher (Thai): reported to be satisfied with the time allocation which exceeds the requirements of the EP Curriculum.

Selected Second Bilingual School: both the management and the District Supervisor agreed that the school practices according to what the MoE has prescribed in terms of the teaching hours. However at primary level additional subjects requiring more teaching hours are added to the normal MoE timetable, making 1000 hours/year for primary. Secondary level of 1200 hours

5.2.3.4 Modified contents in the major subject strands in the UBC.

The School Director: and the Academic Director at SBS are aware of the modified contents and made sure that they have been integrated into the all subject strands from the Primary level. The school managed to meet all the requirements of MoE, "parents should not worry or raise question whether or not their children could enter into universities in the country". The School Director added that, "the contents taught at SBS covers all areas prescribed by the MoE with additional contents of the IGCSE and IB thus equip students with more in-depth learning, both vertically and horizontally. Through this approach students will be familiar with bilingual and international contents in their learning process. Apart from widening their horizon, they will have more choices to choose upon graduation and on to their future career paths". It will also equip learners with technical and social prerequisites needed to become responsible global citizens while maintaining their own identity. the Academic Director: is assured that the Unified Curriculum has not left out any contents of the MoE curriculum whereby parents could rest assured that their children receive the highest input in terms of academic contents. "In each Band, Prathom 1-3 students will learn more with native speakers than Thais while the Unified Bilingual Curriculum requires learning from the native content providers. For Thai teachers,

they will teach Social Studies, Thai and Art (Thai). We teach Thai and English contents parallel to one another but according to the immersion guidelines the percentage of language input is higher in lower primary level". When learners move up to the secondary level, they will be capable of learning 50/50 Thai and International contents from both set of staffs.

Limitations are often seen in the coordination among Thais and expatriate teachers. It is rather hard for both sets of staff to be culturally aware of how to communicate and collaborate with one another. This problem is more obvious at the higher level of the school. Expatriate staffs do not mingle with the Thais and often have different viewpoints and opinions regarding the implementation of the curriculum contents. However, with a firm policy support of the Unified Bilingual Curriculum and strong Heads of Departments and leaders at each school including team building activities, the relationship will be more positive. The school has conducted cultural orientation trainings for its staff but it still take some more time and dedication in the profession that all teachers will come to terms with their differences and agree to thrive together to achieve the common goal of producing quality graduates.

Furthermore, parents frequently expressed concern about their children not receiving sufficient academic contents to be capable for college admission in Thai universities if they choose to do that. This is a common problem found at both schools.

Academic Director: The Academic Director reported that, "we need to educate and reassure parents along the way to appreciate and have full confidence in the strength of bilingual education and the invaluable contents curriculum". Once parents are concern about their child not getting good grades or not having enough time spent on academic performances, learners may become distracted, discouraged when parents put pressure on them to leave and go in the other direction to concentrate solely in academic performances in the traditional Thai system and leaving out the objectives of having analytical thinking, natural acquisitions of foreign language, so on and so forth which the international curricula aims to do.

Head of Modern Languages: The informant was aware of the modified contents for English but not for the subjects. In English we aim higher than the minimum curriculum requirements and aim for IGCSE standard. No limitations were reported.

Head of Mathematics: the Mathematics works well with the Unified Bilingual Curriculum in its implementation. The requirements of the Ministry of Education was fulfilled where Thai teachers emphasizes on this and expatriate teachers place emphasis on IGCSE and IB contents.

Senior teacher (native speaker): SBS has modified the Thai EP Curriculum and parts of the international curricula in an effort to exceed the learning expectations at the other Thai schools. Although the curriculum was well done, but pressures from parents. The school needs to set up learning units to ensure that most targets are met.

Senior teacher (Thai): the informant is aware of the modified contents but fear that the contents in the secondary level may not be sufficient for graduates to enter into Thai national universities.

Selected Second Bilingual School :

At the other selected school, the management confirmed during the structured interview that so far the school has not modified any curriculum content and strictly abides to the requirements stipulated by the Ministry of Education. The executives mentioned that parents at the school are very critical to have all the contents in accordance to the MoE directions. Parents often compare the academic performances of their children to those of the ones enrolled in the Thai program and often question our variegated activities for fearing that their children may not have enough time for the MoE designated contents and strong academic programs. "All of the parents here wish that their children will be able to enroll in top Thai universities under the Thai program, therefore, they often monitor our activities and compare notes with the Thai side".

The researcher further interviewed the District Supervisor to gain more in-depth information about the curriculum of the school. It was noted that in current situation of high competition among private EP schools, the information obtained from the interview may not reflect full picture nor totally truthful . With the support of the Faculty of Education of Rangsit University, a more thorough detail were explained by the District Supervisor in regards to the contents of the school curriculum. The school has added some additional contents specific of Samutprakran province while strictly adhered to the MoE designated curriculum as major guidelines. The provision being used is MoE/ 51 which the school has translated it into English. The school teaching staffs teach in accordance with the slightly modified contents. The expatriate teachers at the school focus more on the process of teaching than on the mere subject content. It was revealed, however, that the parents dislike the method of teaching and the school had to explain the reasons to them. Finally it was clarified that the contents were slightly modified. To satisfy parents, the school has to use after school hours for following up and conduct intensive tutorial classes on Thai contents such as in Science, Mathematics and English grammar. Another interesting point was that since the inception of the school there has been only two students actually expelled from the school.

5.2.4 Teaching Methods

5.2.4.1 SBS: Process-based teaching methodology

School Director and Academic Director: This is done in every subject at the school. On the whole, learners have produced favorable outcomes and most parents at the school understand and favor the teaching method. Parents noticed changes in their children with this type of teaching approach that their children become more opinionated at home and are not scared to ask questions, they are more critical and becomes more involved in their environment with appreciation in one or more creative activities and sports. Teacher's often use this process during activities

or events which are conducive for learners to express their opinions or render active participation such as Chinese New Year for Mandarin class or current critical political social events for the specific time period. In addition, the School Director mentions that the process-based teaching methodology is implemented in the form of "hands-on learning activities" such as the project works, presentations and real life experiments. However, there are some teachers who adhere to the traditional method of lecture and writing on the blackboard that need to be trained and reoriented their views either through formal trainings or field study to be familiarized with this learning process. Team teaching can also help in this matter. Both informants agree that training is needed for teachers to make sure that they be on the same grounds. We need to set similar standard practices for every class in ways that parents would not bother to choose which homeroom they want their child to be in.

Head of Modern Languges: The informant reported that "we use British English ESL textbooks which have long placed emphasis on process bases learning. This works if taught by a native with experience. Limitations include lack of experienced native speakers and other subjects using old fashioned teaching methods."

Head of Mathematics: the informant reported to using the methodology regulary as part of the department policy through project work and allowing learners to discover new things for themselves. Limitations lies in the time it tend to consume.

Senior teacher (native speaker): Process-based learning is used to ensure that learners are involved in all aspects of their learning. An example implemented in class would be through group projects where learners have to make models of animals in their natural habitats. They are able to use the information learned and know where to access new information to add to their project from the internet or books. Limitations may be the time and the amount of resources needed.

Senior teacher (Thai): the informant implemented the teaching method through the project work assigned to learners usually through group projects. For the end of the term project, it is also combined with other subjects and integrate it into a school event such as setting up booths to let learners sale products made and study areas of mathematics and career.

Teacher's function is to introduce new learning points in the form of interactive learning activities which will prompt learners to respond or perform accordingly through interacting with their peers or the teacher. Teachers are to facilitate and support students' learning process in a positive teaching-learning environment.

5.2.4.2 Interactive Learning Activities.

School Director: SBS carries out interactive learning activities throughout the school. Learners are actively involved in the learning process both inside and outside of the classrooms. There are many activities for each subject strands throughout the year for all grade levels. SBS places strong emphasis on building up partnership and cooperation among learners and based on this positive relationship

learners are keen to be more intact in class, more interested in learning, thus creating active social network in school. The School Director mentioned that "SBS has a good two-way communication between students and teachers which has been successfully put in place by former managements". This relationship has led to a very active involvement for all activities at school. Teachers are accustomed to formulating interactive learning activities and effectively implemented them. The activities at school are planned by Heads of Departments and supported by the school management. "Our students are happy learners who are ready to interact physically, mentally and socially with peers, teachers, parents and the general public under the principle of good conduct".

Academic Director: The Academic Director holds that SBS have more frequent events and extensive opportunities for students than those of other schools all of which are interactive learning activities such as Musical, academic and non-academic competitions, annual Broadway-like play, cultural performances, etc. SBS Fair encourages students to attain real life opportunity to be business organizers responsible for arranging booths, games and setting stages for shows and plays. Beyond the Horizon allows learners to find out what they really want to be or their desirable study program at the university level. The competitive advantage of the school is that it has the support of many faculties at Rangsit university namely the Faculty of Education, the Conservatory of Music, the Faculty of Arts to bring to life what is expected in college". Moreover, the school offers interactive learning environment and enable learners to explore nature on their own interest such as the Ecological pond. Hence, learners like to arrive early and find exciting things and new discoveries at school.

Head of Modern Languages: In English a lot of our teaching based on British ESL principles and our textbooks which makes our lessons very interactive. Limitations would be the non-British teachers who cannot grasp this and the teachers in all subjects who resort to an old fashioned lecture based method.

Head of Mathematics: Most teachers use this teaching methodology in almost every lesson. He often ask students to write reviews sheets for each other. One limitation reported was that some students are extremely shy and does not much interaction.

Senior teacher (native speaker): Interactive learning activities are used in different ways in different grades and subject areas but towards the same objective of trying to involve learners as much as possible and interact with them. In English classes, the learners take part in role play activities and group presentations. In Science lessons, the learners learn new topics by examining for example, 'float and sink', make a boat and take it to a nearby lake. However, this is used in varying degree in different classes.

Senior teacher (Thai): it is implemented in classrooms by having learners answer questions with his/her own ideas.

Selected Second Bilingual School: they have created the *"Project Work"* as their teaching methodology which is essentially an integral part of the interactive learning activities at SBS. The school has assigned project works for each subject such as creating shampoo for Science class whereby children can search for information in the internet and formulate projects. However, questions are raised by parents about the rationale of this approach. The management said that, "since project implementation is time consuming, this is a critical point for parents who are in favor of strong a academic contents for their children. At times when they see their children searching the internet they may think that the kids are playing games".

The main difference between the two schools are that SBS has successfully involved all stakeholders- parents, teachers, students and community- to be part of the learning activities. From my own observation, parents at SBS accept that this approach or this type of learning activities are appropriate for their child's total learning process and are supportive for many activities. While at St. Joseph, parents' mindset is more traditional and they are in favor of concentrating the teaching and learning in line with the Thai curriculum contents while having a negative attitude towards the integrated curriculum which the school tries to provide. To solve this problem, a parent satisfaction survey may throw light on their needs, their goal for their children enrolment in college and some basic information on their family background could benefit the school's forward planning. Knowing the consumers or target group can help the organization to develop the product package which in this case may mean the curriculum and learning activities to best fit this type of learners and families. This is not to say that if the survey results state that parents want their child to be enrolled in a school with strong Thai contents, want lot of homework, not too much extra-curricula activities etc, this means that perhaps they may have placed their child at the wrong place. SBS has tried to involve parents to be productive associates at the school through well planned parents' activities such as rallys or classes designed for parents. This can be enhanced with a brief education and orientation on the bilingual curriculum, the school direction and the perceived benefits for the children.

5.2.4.3. How is ICT Literacy implemented at SBS and what are perceived limitations.

School Director: The School Director has reported that ICT has been effectively implemented at the school from early beginning through screening teachers to make sure that they are ICT literate from the recruitment interview. "Since ICT is part of the four main teaching methodologies at the school we require all our teaching staff to be, to a certain extent, literate in ICT".

Limitations are found in finding qualified manpower in this field. As known, ICT is a highly paid profession thus only a few studied ICT to become a teacher. Most of the graduates would rather work in a multimillion software company.

Academic Director: Electronic examinations have been put in place at the school from Primary 4 level onwards to the secondary level for certain subjects such as Thai, Social Studies, ICT and Career. Learners spend approximately 2 periods per week of ICT class in both levels. However, every subject is required to integrate ICT

as part of the teaching tools which include multimedia presentations, power point presentations and other computer graphic applications etc. Learners have increasing interest in ICT and the internet. There are no boundaries when it comes to internet searches. In short, learners at SBS are ICT literate and although some teachers could not grasp its rapid growth, there are continuing plan and trainings for them to expedite the achievement of the goal of becoming an ICT school.

This has been a barrier for SBS to achieve its goal within the designated time frame. Since the importance of ICT has been stressed by governments through the Education Act as well as in many government publications, there should be provisions to support them in the education sector. SBS has provided scholarships in this field and plan to invest in funding qualified teaching staff to study the programs which promote highly specialized skills such as Science and ICT. Overall, teachers at the school are ICT literate and capable of using ICT as a tool in teaching but their capacity may differ depending on their expertise and professional competency.

Head of Modern Languages: The learners have two ICT lessons a week and may use a computer in a few of their other classes. Thus lack of opportunity is the key limitation.

Head of Mathematics: ICT literacy is encouraged in every area at SBS through project work and research assignments. Some students use the internet for every task and forget about textbooks was reported as a limitation.

Senior teacher (native speaker): ICT is taught as a subject twice a week in lower primary where learners learn the necessary skills. ICT is also integrated into lessons by using the teachers computer in the classroom for online reading, lessons, or visual purposes in Science classes. The ICT labs are frequently used and are sometimes not available. The computers in the classrooms are a great asset to teachers.

Senior teacher (Thai): the informant uses e-learning to teach the subjects of Social Studies and teach learners how to be ICT literate.

Selected Second Bilingual School: The selected school's teaching method is the *"whole small whole approach"* is what the school termed their innovative teaching method. This approach is clarified that during class time teachers explain to all students as a whole of a big topic during class time. Then the class is split into small groups according to individual interests and expertise. As a group, students will consider what they want to discuss with group members and proceed the group work as decided. Upon completion, the groups present their findings to the whole class following by comments and exchange of ideas. There were no obvious limitations found with the method.

According to the Advisor the content is sometimes too difficult for students learning English as a second language could fully understand thus may make the small group sessions less effective. Also in Thai culture, in the process of group formation, students tend to stick to their friends rather than choosing the issue of their true interest. On the whole, students at the school are viewed as a second language

learners not as bilingual students. This is different from what SBS's main teaching method which involved learning language from the mother tongue or as an L2 with the ultimate goal of being bilingual. The management states that the MoE has restricted the school not to develop and teach as a bilingual school. EP is developed to teach English language as ESL and not bilingualism.

5.2.5 Authentic Assessment

The measurement and evaluation of students' progress and academic achievements will be based on target performances or designated learning outcomes. They may vary from individual or group reports, small exhibits, simulations, skill demonstrations, competitions to project works as pertinent to specified learning objectives. The teachers also need to include conventional examination techniques as required by the Ministry of Education.

School Director: There are both formal and informal assessments at SBS. The formal ones include mid-term and final examinations while the informal ones feature many forms of assessment, from exhibits, reports, presentations to group works. Through these, learners are evaluated more often after which teachers can help improve their performance and indicate the content that individual students need to improve. "We know what learners need to improve and adjust it accordingly before the time of formal examination", said the Academic Director.

Academic Director: Authentic assessments are carried out in every subject throughout the term. Teachers are required to conduct assessments and report the outcomes of each learner before the term end. This enable the school to review and adjust learners needs. As for parents, they naturally want to keep track of their child performance at school during the term and make remedial actions in due course, not to wait till mid-term or final which may be too late. This could be an input that they look forward with anticipation to be informed. This method has been effectively implemented and proven to be an effective tool for teachers and administrators hence receiving full cooperation from all staff. However, such activities require extra hours of work for teachers some of whom may be unhappy to do so.

Head of Modern Languages: learners are required to communicate in English with native speakers of English. That is authentic assessment i.e. a real situation where the subject is used. Limitations are clearly the lack of opportunity or will for teachers to create real situations in which to assess learners.

Head of Mathematics: it is implemented regularly by all teachers through project work. Limitations are that not sufficient integrated projects.

Senior teacher (native speaker): it is implemented at SBS so that teachers are able to grade a learner on a range of accomplishments. Teachers implement this in a variety of ways such as, 'show and tell', classroom discussions, group work, role play, portfolios and projects. Limitations would be down to how a teacher view assessment for formal closed testing methods.

Senior teacher (Thai): implemented in ways to evaluate students in-class performances and project work. It is beneficial to assist in students' learning before to the formal evaluation of mid-term and final examination. This allows the teachers to observe students' behaviors as well.

Selected Second Bilingual School: Holistic Approach

The school is said to have adopted the so called Holistic teaching approach or teaching all related subjects according to one main theme set up by the school academic committee. For example, an ASEAN day theme was set as one of the major events of the school during which the teaching and learning of every subject must relate its contents on ways which contribute towards this main theme. The departments take turns in being the leader of such theme or event. The projects, exhibits or performances are jointly presented at the event through the use of ICT or in the form of CD programs. There were no limitations seen by the management in adopting this teaching method as teaching staff has no problem working as a team to accomplish such goal. Students take pride in their involvements and project presentations at these events which are open for parents and the general public.

5.2.6 Learning Activities

5.2.6.1 Project Work

School Director: reported that, "the formulation of the topic of the project and its implementation are based upon the body of knowledge learnt in that specific subject and its relevance to daily living of learners". It should be noted that many projects at SBS relate to the importance of being a good citizen in the society as well as consciousness and readiness to contribute to the world environment such as the Green School Project which promotes students to "reuse, reduce and recycle". SBS emphasizes on the importance of project work and implemented all across the school curriculum in all subject strands. SBS provides ample areas and space for students' projects to be displayed on campus in the exhibition hall of the administrative buildings, canteen, in the school boards as well as road shows out of school through the marketing department. Other PR spaces constitute the school website, materials of different forms for extensive publicity and many instances on the newspapers.

Project work is perceived by learners as attractive and joyful learning activity which occurs both inside and outside of classrooms. Budgetary supports are allocated to each department and school projects to make them feasible with extensive publicity. Learners undertake project works with their creativity, hands-on experience and usage of modern ICT facilities and peers participation during which all concerned party are happy with their joint endeavor. The limitations are different between the two schools. At SBS there were no obstacles mentioned from parents regarding the dissatisfaction of having project works as part of the learning activities.

Academic Director: Project works are actively implemented at SBS through integrating it in every subject in order to enhance learner's hands-on experiences. Project works can be both individual and group functions for every subject.

Limitations are the time consumed and that some teachers feel that it is additional work. Another limitation of project works at SBS, were on the coordination of the teaching staffs and among Thais and expatriates especially in the secondary school. Many times teachers view that projects works are extra work load for them. This notion needs to be made clear for all that teacher is not simply a profession responsible only to fulfill the designated teaching hours.

Head of Modern Languages: does not feel that many teacher across the school adopts the project work but felt no limitations.

Head of Mathematics: Students does a lot of projects at SBS. In the Mathematics department, it is a policy to ask students to design board games for probability study. However, at times students feels overwhelmed with too many projects.

Senior teacher (native speaker): Project work is implemented throughout the lower grade levels. These can be individual homework tasks or in class pair work or group work tasks. These are used to strengthen the learning process, to increase vocabulary and to improve creativity. Limitations lies in some teachers undervalue the use of projects or have other preferred teaching method.

Senior teacher (Thai): has been implemented through projects and activities in the upper primary level as part of Social Studies, Career, and Mathematics.

Selected Second Bilingual School: Project Work

Selected Second Bilingual School viewed project work as an important learning activity. The Science department takes the lead in making projects one of which is under the theme of making products such as shampoo and detergents for sale during Science Day at the school. Learners, on average, are enthusiastic to learn and eager to see their project displayed on the school boards and publications.

However, at the other selected school, complaints from parents such as project works consume too much time and may hamper the in-class teaching and learning contents. Internet search by children in the process of project formulation also raised complaints from parents as they may worry that their kids will play games rather than work.

5.2.6.2 Information Search and Exhibit

School Director: Information Search and Exhibit are part of the learning process and one of the four learning activities where learners are free to explore the issue based on their personal perception and viewpoint. The School Director explained the method how information search and exhibit is done at SBS, that "teachers assign a topic on Math or Science according to the lesson plan and allow students to explore and imagine what they want to research". This is an enjoyable creative learning activity at SBS which students, parents and teachers all agree upon. Sometimes learners can perform well with the search than the teachers admitted the School Director in the interview. Research conducted in the subjects could be

enhanced by allowing more out of class exploration and field research outside of the school. The school could make students take pride of their work by displaying them in the community or made known to the general public. There were very few limitations seen. Learners love to go out of the classroom to do research, expanding their horizon and seek new ideas based on the original sources either through the natural environment, the internet or the local habitat which trigger their imaginations.

Academic Director: This will produce students to become "lifelong learners" and well-equipped with essential tools to conduct their researches. "Students are smart in finding ways to seek information from various sources. Besides the library, students are encouraged to use ICT as a tool to search google or Wikipedia. Our students know best which information is available at what sources," added the Academic Director. Since they were in kindergarten, students have developed the habit of not basing their belief on what is heard but learn to find out the truth from reliable sources. This makes them rely on themselves first rather than depending on other people.

Heads of Modern Languages: implemented with no limitations reported.

Head of Mathematics: the informant uses this type of learning activity on a regular basis. An example, "Famous Mathematicians for Maths Week". Teachers need to stress that information search cut and paste from a website is not acceptable.

Senior teacher (native speaker): learners are taught to search for information from early primary levels. They are encouraged to use the internet to complete guided tasks. They are also introduced to a whole range of places to learn new things. The work is then displayed to encourage learners to take pride in their learning. No perceived limitations was reported.

Selected Second Bilingual School: It could be concluded that the information search and exhibits at the school are encouraged at all levels. However, the intensity essentially varies depending upon teachers and their specialization in the subject under investigation, together with the readiness of learner at each level. A common problem stated is that some teachers still rely on conventional teaching and learning and not accustomed to the ICT usage. ICT training may be one of the most urgent needs for the school to ensure minimal requirement of ICT skill for teachers at all levels such as the Microsoft applications. In short, continuing education is needed for teachers to move forward with the school and attain the same level of literacy to cater for learning activities that the school prescribed.

5.2.6.3 Competition

SBS

School Director: The School Director added that the school prepared and promoted students for competitions to gain insight of what it is like outside of the school grounds, what other schools have learnt and their readiness to compete with others. The Departmental heads are assigned to prepare learners for competitions in

each subject strand including Science, Mathematics, Thai, English, Physical Education, cheerleading, singing and arts. "Outstanding awards obtained was the ONET achievements, AFS and Science and English from Petchyodmongkut.

Competitive capability is desirable by SBS as it is designated that the schools have high academic achievements when compared to competitors. There are wide varieties of competition, both nationally and internationally. However as the school had undertaken progressive steps and following up of contents in class were more organized, students have participated in various competitions locally, nationally and internationally and many of them received prestigious achievement awards. Since the beginning, the pioneers who play the leading role in organizing and tutoring of students were Thai teachers who often devoted their free time to do this. SBS students have obtained many academic, sport and recreation competition awards including AFS, ONET, Petchyodmongkut, Cheerleading, musical performances and plays, to name a few.

Academic Director: At SBS the competition according to the Academic Director, "has been more formally organized than those undertaken in the past few years". This may be because at the outset teachers were not aware of the importance of these competitions especially expatriate teachers who felt that "competitions were time consuming and may disturb the continuity of the lesson". "Public speaking contests for example are one of the many highlights for the school whereby our students performed with native-like accents," stated the Academic Director.

Head of Modern Languages: competitions implemented in the school but is not fully aware of external competitions.

Head of Mathematics: Competition is strongly encouraged at SBS inside the classrooms and during the academic year. The positive aspect outweighs the negative in which some students could feel bad about not winning.

Senior teacher (native speaker): Competitions at SBS is implemented to promote learning. IN grade 1, there are quizzes once a term in all key kubject areas where learners compete in terms to increase confidence and to demonstrate their learning. The school also competes external academic competitions. No limitations were reported.

Senior teacher (Thai): is responsible to oversee the external competitions and sees a positive aspects with no major limitations.

Selected Second Bilingual School
The other selected school were proud of their students' achievements in similar fields as well as other extra curricular activities such as Sudoku, drawing, speech contests at Kasetsart University. Parents are very supportive of such competitions, both internally and externally and cooperative in sending their children to these competitions. Parents view that winning these competitions especially those of high esteem not only give high academic credibility to their children but also highlight the effectiveness of the school's academic curriculum. From the interview at both

schools it seemed that Thai teachers are more receptive to the competitions and understanding that students needed to be taken out of classrooms. They are found to be more actively preparing and tutoring as well as searching for reading materials than the expatriate teachers. The other selected school states that they are in full support of competitions and have a special calendar designed for the competition with due dates and subject areas.

5.2.6.4. Real-life Exposure

Activities for real life exposure are designed to promote learners' self learning ability and hands-on experiences which could trigger their imagination, creativity and nurture them to become life-long learners. Real-life exposure can be grouped into subjects, grade levels, internal and external learning for SBS and the other school

SBS

School Director: The school arranges to have excursion programs twice a year for every level. In the secondary level, there are other excursions for each subject to explore the natural context of the scientifically based learning such as the Science trip for the upper secondary students. These activities provide students with the chance to learn from their own experiences. The places are selected by the Heads of Departments and assignments were given prior to the trip.

Academic Director: SBS also offer learners ample opportunity to act as young entrepreneurs in arranging booths at the School Fair or events like exhibition whereby students have to take care of their own business model, of what they want to produce and sell. Proceeds are donated to charitable foundations to provoke the sense of social responsibility. Students thus have a chance to exercise the real-life management skills and learn how to contribute to the society in which they are a part of. Another good example for both schools is in the Art subject where students are taken to field trips at temples to draw pictures illustrated what they have seen in the environment e.g. trip to Wat Makam in Patumthani. The exposure also helps enhanced learners' awareness of invaluable cultural heritage and needs for conservation while having a chance to appreciate rural living in that area. "Field work and excursions are organized not only for the purpose of information collection", stated the Academic Director, "but to widen the perspective of teachers and students as well. This is a chance to develop them to become observant of the environment of their motherland". Field trips are also undertaken at Petchaburi province to observe historical sites and ruins. Another example is to observe a natural rain forest as part of the Science subject.

Limitations lie with teachers at SBS where it was voiced that some teachers were inactive and felt it was additional work for them. To cater for this, teachers need to be reoriented to accept their changing role and responsibilities. Teachers need to learn that being a teacher is a profession which requires attention and dedication towards creating manpower for the country. Educating teachers as part of the

curriculum implementation process could enhance their understanding about the new role and responsibility of teachers.

Heads of Modern Languages: real-life exposure were encouraged throughout the curriculum however, it is time consuming.

Head of Mathematics: it is implemented in the form of field trips for Science and Social Studies in the secondary school. One limitation was reported that sometimes these trips are seen as a holiday for learners and the learning is ignored by some students.

Senior teacher (native speaker): Learners are introduced to real life exposure through a thematic approach. For example, when learners learn about "my family", the children also learn about where does my family come from? Then the children are assigned an area in Thailand to study based on the information they have provided. They have to research the sights, food, and dress of that region. Every year events are planned for people in the community. Charity is encouraged for those in need such as raising money for homeless children. Limitations are found with some teachers feeling pressured by parents to complete courses of study and thus have less time for real-life exposure.

Senior teacher (Thai): implemented through field trips and experience the natural habitats and daily lives of local farmers in the upper primary levels. No reported limitations.

Selected Second Bilingual School

At the other selected school, real-life exposures are organized once a year for every level with all expenses paid together with the tuition fees. Some of the places for field trips and excursions include Ayudhya temples, Children's Museum, Samutsakorn, Sky Museum and Muang Boran. Teachers are assigned tasks prior to the trip and learners are expected to report on their findings afterwards. No limitations were found with regards to this type of learning activity.

From general observation, both schools noticed that many activities are conducted in real life situations thus provoking real life learning and management skills. The schools provide funding and support for this type of development as well as on campus learning such as a visit to the ecological pond as part of science learning to study animal and plants in their natural habitats. However, this type of learning is quite time consuming and requires good organization from every departmental heads and teachers. Perhaps a more structured guidelines need to be formulated as guidance for a more structured learning from the primary up to the secondary level with regards to field trips, excursions, departmental activities and school events.

5.2.7 Evaluation

The evaluation process of both school fulfilled the basic requirements of the Ministry of Education. Both schools have their formal and informal evaluation process which consists of the following:

5.2.7.1 Written Tests

SBS:

School Director: The formal examination technique of written exam assessment is implemented at SBS through mid-term and final examinations. The two scores collected determine a large sum of the total score. The school also stresses upon the authentic assessment process which are beyond the MoE's requirements. These scores are collected by means of quizzes, reports and observations. SBS believes that the informal tests will give learners regular feedback, allow time to adjust themselves before the final examinations. Written exams tend to put pressure upon learners and may cause unfavorable responses like sickness, stress and other psychological effects leading to inability to perform. SBS believes that written tests are ways to familiarize their learners to become acquainted with the national testing method required by the MoE in each critical stages of Pratom 6 and Matayom 6.

Limitations was reported to be the bilingual competency of its staff. Since the Unified Bilingual Curriculum requires to teach both Thai and international contents in most subjects, the Heads of Departments do require the bilingual competency of the teaching staff in reading Thai or English. This has caused some problems and as a corrective measure language trainings are to be conducted for some teachers who do not possess bilingual competency. All examinations, after reviewing by the departmental heads, will be forwarded for perusal by the examination committee before implementing.

Academic Director: viewed that multiple choice questions are there to "familiarize learners with the entrance type examination that the MoE has adopted". However multiple choice questions being used contain questions that require analytical thinking skills rather than memorization. The specifications are controlled and monitored by the Heads of Departments at both schools with an examination committee to screen them prior to the mid-term and final examinations. This approach contributes to the learners' analytical thinking process. Exams questions are thus formulated and submitted to HOD for screening to ensure its validity. Such screening is required to maintain a standard examination process without which teachers may provide questions that only relate to their own personal views. An example of examination specifications provided at SBS comprise of:

Primary Level:
Mathematics: essay 100 percent
Science: 80 percent multiple choice and 20 percent essay
Arts: 100 percent multiple choice
ICT: 80 percent multiple choice and 20 percent essay
Mandarin: 50 percent multiple choice and 50 percent essay
Career: 80 percent multiple choice and 20 percent essay

Secondary level:
Science: Essay 100 percent
English: essay 100 percent
Music: 100 percent essay

Mandarin: 50/50 essay and multiple choice
Mathematics: essay 100 percent
Career: 80 percent multiple choice and 20 percent essay
Health: 50/50 essay and multiple choices.

At the other selected school the exam specifications appear as follows:

Multiple choice/yes and no/ essay in every subjects except the essay questions contribute the highest percentage of 70 percent overall, 100 percent in Social Studies, English and in Science in both the primary and secondary levels.

Head of Modern Languages:

Head of Mathematics: implemented all through the academic year in every subjects. However, written tests can overwhelm students.

Senior teacher (native speaker): written tests are given four times a year. The young learners are given adequate study material, however, some may feel the pressure as it is a new experience for them. The written tests at SBS are given on paper and made formal. The limited literacy skills of some of the lower level learners could be taken as a limitation.

Senior teacher (Thai): implemented as part of the Ministry of Education's requirements. Considering the aspects of contents on both memorization, and analytical thinking skills in the exam specifications.

5.2.7.2 Electronic Examination

SBS

School Director: SBS is one the first schools to adopt the electronic testing method in learners as young as Band 2 (Pratom 4). This has fulfilled its objective that the school will equip learners with ICT for the modern world. Electronic examinations are to familiarize learners with the use of ICT including how to handle ICT with good ethical and moral practices. As the MoE has stated, ICT usage is part of our daily routine, therefore, learners should learn the pros and cons of this technology, its advantages and how it can be misused. Electronic examination is an effective tool for evaluation and assessment that can avoid bias of the grader or the inflation of grade results as essay questions can.

Another objective for the e-exam testing is to have learners become acquainted with the national entrance testing system which are all multiple choice questions as well as language proficiency testing which requires ICT e.g. IELTS, TOFEL, TOEIC.

Academic Director: SBS has developed the electronic examination in 2005 and effectively implemented it all across the school from Band 2 onwards in the subjects of Mathematics, Social Studies, Thai and parts of Career and ICT. Since the year 2010 many Heads of Departments have grown accustomed to and seen the benefits of electronic examination and since then e-exam has been effectively

implemented as part of the school policy. The benefits of electronic examination are reported to be its standardized test questions and grading system and more extensive ICT literacy development and usage among teachers and learners. Both managements at SBS underscore the e-exam implementation despite teachers' complaints from previous years. "Teachers now are more receptive of the school e-exam system whereby the school has reinvented it to be a more secured system to prevent exam leakage," said the Academic Director. At first, some teachers had negative attitude on usage of electronic examination as it was new for them but after they see their peers using it and have more standardized testing method, they have realized the benefits and now agree upon using it. Furthermore, since ICT literacy has been proclaimed as one of the school's teaching methodologies, teachers accepted that it is beneficial for themselves and their students. "Adopting e-exam will familiarize students with an appropriate method of ICT use, ethics and guiding principles in taking exams through modern day technology. "It could be said that SBS takes the lead in implementing the e-examination," said the School Director. E-exam's implementation commenced in Pratom 4 when learners are more ICT literated. There were no significant limitations since students start learning ICT from kindergarten.

Head of Modern Languages: can only be implemented in some subjects not for English as it requires learners writing skills as an evaluation criteria.

Head of Mathematics: views that it is not suitable for Mathematics that needs learners to show process.

Senior teacher (native speaker): Senior teacher (Thai): implemented electronic examinations in Social Studies and History. Limitations lies in finding to correct computer software to implement this without weaknesses.

Selected Second Bilingual School (Report)

Report is used as one of the evaluation criteria at school. Report is to be assigned in every subject and it is measured by the teacher in charge of the subject. Learners search information about the subject or assignment through the internet. Therefore, ICT became a necessity for students at the school. Students conduct research, discuss findings and report results as part of their assignments. Hence, the similar evaluation criteria of the two schools are based on the ICT knowledge which is required by the learners. Class project and group projects at the school in subjects such as Social Studies have also relied on internet searches for the findings and sources of information. Teacher assigned topics such as research on European countries and its significance towards western civilization and students were required to report in front of class through Microsoft power point or equivalent.

It could be concluded that both schools realized the importance of ICT literacy on young learners. ICT literacy at SBS are conducted through a more micro level of in class assignments, electronic examinations, ethical and morale of ICT usage, and research through usage of modern technology. The other selected school relied on ICT as a tool in conducting research but not for other evaluation or testing purposes like the case of SBS. It will take a massive amount of money to be spent on

the school IT infrastructure and facilities in order to become an e-school. This is a difficult phase for parents, teachers, students and shareholders to come to terms and agree that ICT, as expensive as it is in investment, we need to choose whether it is fit for this group of learners and make decision in due course.

5.2.7.3 Peer Evaluation

School Director: At SBS, peer evaluation has been used among students to evaluate one another. The purpose is for students learning to accept criticism or graded by friends as they may face in the society. The procedure is done through comment panels for informal project evaluation or in class presentation. As this procedure can be sensitive for students, it was done through close supervision by the teacher of that subject. Open criticism is rather sensitive in Thai culture, this is why it was done in an informal fashion with caution. Students learn to treat themselves and their peers with respect during the process. This method not applied throughout the school but informally in some classes wherever feasible and appropriate.

Limitations of this type of assessment lies in the teachers who fear that it will affect their students' feelings and impair relationship among peers. Therefore, this method was not adopted widely at school.

Academic Director: Peer evaluation was seen as part of informal project evaluations but no formal results were collected at the other school. "Students sometimes select their own project to work on and it will be evaluated by teachers, peers, parents and group members themselves" noted the Academic Director.

The subject is still not assured that this process should be adopted for every subject. The obstacles lies in the students readiness to be criticized as well as concerns by parents who do not want their child to be criticized. The guiding principles and scope of activities may need to be more elaborated in greater and clearer details including some specific notion such as age and level of class that students can participate due to emotional readiness.

Head of Modern Languages/Head of Mathematics: often implemented for projects and presentations. It has to be closely monitored by the teacher to acquire constructive criticism.

Senior teacher (native speaker): it is implemented in variety of ways. In grade 1 for example, we ask children to grade their peers performance in "Show and Tell" activities. The learners take it very seriously and often give fair and deserved grades. They also peer evaluate creative writing tasks, although sometimes close friend are biased.

Senior teacher (Thai): it is implemented with authentic assessment inside and outside of classrooms. Learners are graded for their behavior, analytical thinking skills and creativity.

Class Participation

Participation is the method used to evaluate students at the selected school. The management mentioned that *"Class Participation"* comprised of *10 percent* of the total evaluation score. Teachers are able to set up their own evaluation criteria for their group of learners and no obvious limitations were found in using this approach. Point system is adopted for each student and this may be made up of class participation and attendance.

Selected Second Bilingual School

The evaluation criteria of the other selected school is more conventional while the SBS evaluation criteria is seen to be more innovative. However, the result lies in the learners' outcome and whether both schools have effectively implemented their approach according to the guiding principles of assessment. Without a clear picture of this evaluation process, its implementation may not be effective and standardized all across the school. Therefore, a formal system and governing policy needs to be set in place for teachers to practice under standardized method and ways which will avoid bias in evaluating students' performances.

5.2.7.4 Performance Presentation

SBS

School Director and the Academic Director: *Both agrees on the evaluation criteria of Performance Presentation that* SBS students are prone to this type of assessment criteria. The school promotes various types of project works and research, both formally and informally, for the learners to gain more insight in issue and topic of importance in the curriculum or specific needs of today's society. Students at the school are accustomed to speaking out and presenting their work in front of the class and the school as a whole. No limitations were found with this method.

Head of Modern Languages and Head of Mathematics: agreed that students present work to teachers and peers as part of the requirement in most subjects at SBS. The only limitations lies in the time constraint.

Senior teacher (native speaker): Learners are encouraged to present their posters, projects, and creative writing tasks. This develops good communication skills and allows them to take a degree of pride in their work. The learners gain confidence in their work and thus complete their work in high standard. Limitations lies in that some learners lack sufficient language skills at the beginning of the year. Also parental involvement of homework tasks were completed without input from learners and parents become very competitive.

Senior teacher (Thai): Incorporates ethics and morale into the performance presentation. No limitations were reported.

Selected Second Bilingual School : Portfolio

At the other selected school, "portfolio" or student's record of works were collected and compiled throughout their days in school as individual student's Portfolio. Informal peer evaluation was also used to assess their performance. Learners take pride in their work records and when they complete each level they will have a portfolio or personal files to look back upon. No limitations were reported.

Table 5.1 The Comparative Table of Similarities and Differences of the Two Selected Schools

SBS	Selected Second Bilingual School
1. Philosophy *"Building Leaders for Tomorrow"* • Effectively implemented however it is a long-term concept to prove. • Subject contents are geared towards learning to become good leaders of tomorrow's world with morale, good governance and ethics. • Teaching staff are aware of their responsibility in delivering this Philosophy. • Reaffirmed through staff meetings and formal trainings of the school as well as in all school's announcements and PR materials.	**1. Philosophy** *"To support and develop students to have good mental and physical health, appreciation in music, arts and sports".* • Stresses on the ultimate goal of good education and ethics with continuing teacher's monitoring meetings. • Utilize complementary activities to support students' balanced development e.g. Music in the garden at the end of the month along with morning exercise twice a week as well as meditation. • Limitations are observed in sports due to being a girl school with limited space.
2. Objectives **2.1 Learners shall be equipped with analytical thinking, social and communication skills.** • Teachers teaches according to this objective in every subject. • SBS learners are proven to be competent in analytical, social and communication skills. They are eager to ask questions, provide their ideas in the appropriate manner.	**2. Objective** **2.1 Educate learners through the child-centered approach.** • This is done through regular teacher trainings conducting 3-4 times per year and during term breaks. Minor limitations are observed in some teachers and their connotations what learner centered means. The school also accepts external training from Israel and again the limitations lies with Thai teachers and Thai parents who are not bilingual.

Table 5.1 The Comparative Table of Similarities and Differences of the Two Selected
Schools (cont.)

SBS	Selected Second Bilingual School
• Various activities are supportive to the objective such as the Annual Musical Performance. • Teaching method and evaluation criteria do reflect this objective. • Limitations lies with the staff which some do not adhere to new approaches in teaching and learning process.	
2.2 Develop natural language acquisition and sustain native like language competency. • Placed high emphasis on recruiting only native speakers which is believed to best provide the highest input of L2. • Continuing monitoring and research are enhanced along with curriculum implementation. • Learners also learn western culture and etiquette along with learning language while preserving Thainess. • Effectively implemented in every stage of learning.	**2.2 Learners shall be equipped with analytical thinking skills**. • Examination questions in all subjects reflect and promote analytical thinking. Examination screening committees are appointed to oversee the process whereby most of the examination questions are essay based. • Limitations lies with the Thai parents who lack understanding of why learners should have to have analytical thinking skills.
3. Contents **3.1 Band Division** • *Adding one Band to the Three Band Division* directed by the MoE to cater for specific requirements of the curriculum. • Seen to be effective for this group of learners in terms of evaluation assessment and academic performance and development of learners.	**3. Contents** **3.1 Band Division** • *Strictly follow the MoE's guidelines of Three Band Division*. • Implement according to the MoE's guidelines and requirements. The curriculum totally conforms with the EP's and translated into English. This does meet the needs of parents, almost 100 percent of which would like to see their children enrolled in Thai universities in the Thai programs.

Table 5.1   The Comparative Table of Similarities and Differences of the Two Selected
Schools (cont.)

SBS	Selected Second Bilingual School
3.2 Subjects • *Ten strands* adding Mandarin and ICT.	**3.2 Subjects** • Based on the MOE requirements of *eight strands*. In favor the MoE's guidelines and see no limitations in implementation. Parents understand better when the implementation does not differ from the MoE's restrictions. If the school defers from official standard there is a risk of parents removing their child from the school. • Parent is one of the main concerns for the school and is a key stakeholder. The school conducts a parent survey once a term to investigate parent's satisfaction.
3.3 Weight • **Use credit system from primary to secondary level.** • **Modified Contents** • Unified Curriculum • Added components of IGCSE and IB to the EP Curriculum	**3.3 Weight** • Done according to the MOE's guidelines for Thai schools. However, as seen by the Educational Supervisor of Samutprakan, there were some enhancement in the contents which stresses upon learning activities and teaching method being implemented by the expatriate teachers.
	4. Student Centered • **Student Centered** is taught in every subject and requires project work to be presented such as in Academic Day, Science Day, English role play, drama. There are two teachers; one Thai and one expatriate. • **Project Approach** is implemented through various projects done by each Department and total school such as the ASEAN Day. Limitations lie in the lack of some contents that Thai parents wanted add them on to total teaching.

Table 5.1 The Comparative Table of Similarities and Differences of the Two Selected
Schools (cont.)

SBS	Selected Second Bilingual School
	4. Student Centered • **Whole-Small-Whole Approach** splits whole class into small groups subject to their interest, after group works the students assemble once again in whole class to present what they have learned in the groups to their peers for discussion and share views.
5. Authentic Assessment **5.1 Information Search and Exhibits** • Done in class and outside of classroom through various school events and exhibitions. • School has provided space for student exhibits. • Students have access to information through self-research and e-learning in many subjects at school.	**5. Authentic Assessment** **5.1 Information Search and Exhibits** • Some parents do not agree with this approach as they feel searching on the internet cannot justify learning from textbooks. • Many exhibits are displayed during school academic events. • Focus around central theme for all such as ASEAN Day for extensive exhibitions and displayed of student's works across bands.
5.3 Real-life Exposure • Done *twice a year* for every level. • Additional excursions for each Band depending on the theme and subject e.g., Science trip in the upper secondary school to study the natural habitat of plants and animals.	**5.3 Real-life Exposure** • Done *once a year* focusing on cultural field trips. Learners are taken to places like temples, Muang Boran, etc. Teachers made assignments prior to the trip and require learners to report their works after the trip.

Table 5.1   The Comparative Table of Similarities and Differences of the Two Selected
Schools (cont.)

SBS	Selected Second Bilingual School
5.4 Project Work • Promoted in every subject to enhance students' hands-on learning activity. • SBS encourages project work in groups to create social and communication skills as well as enhancing relationship among peers. • Display channels include websites, newsletters, newspapers and other PR materials supported by the school.	**5.4 Project Work** • Science is the most obvious type of project works at the school. There are many projects to display in different occasions. • Time is a matter for parents as they want their children to learn more contents. Promoting internet searches are often a factor creating dissatisfaction among parents for fearing that their children will play games **on line.**
6. Evaluation **6.1 Written Test** • Through mainly formal testing of mid-term and final exams as required by the MoE. • Other complementary tests includes weekly tests, quizzes and student's reports. • Some teachers are unable to formulate good examination questions. • An examination screening committee was appointed to screen exams that have been approved by the Heads of Departments.	**6. Evaluation** **6.1 Written Test** • Focus on formal mid-term and final examinations which contain multiple choice and yes/no questions. Essay type usually comprises of 70% of all subjects with 100% essay format for Social Studies, English and Science.
6.2 Electronic Examination • SBS is one of the pioneers to promote electronic exams. • Implemented from Band 2 onwards and proven to be successful. • Good preparation for the entrance examination. • Controllable in terms of exam score inflation and standardize questions.	**6.2 Report** • Required in every subject. Students made research reports in the area of individual interest e.g. in Social Studies they may report on European countries.

Table 5.1 The Comparative Table of Similarities and Differences of the Two Selected
Schools (cont.)

SBS	Selected Second Bilingual School
6.3 Peer Evaluation • Informally done in class as a panel to assess individual or group projects or presentations. • Thai culture is quite sensitive to criticism and they tend to do it personally. Open criticism needs good guidance from adult/teacher. • Learners, being part of the society, should learn and how to act and react towards criticism and to evaluate themselves accordingly.	**6.3 Participation (classroom)** • Consists of 10% of total evaluation depending on teacher responsible for each subject to develop their own criteria.
6.4 Performance Presentation • Implemented throughout all grade levels and successfully seen in many school events. • Students create a business model and learn how to manage it as part of the presentation at school fairs. • Learners could practice public speaking and leadership skills in real life situation. • So far learners have least problem and are accustomed to speak out, expressing their ideas and project results in front of the public while possessing high social and communication skills	**6.4 Performance Presentation (Portfolio)** • Students have their own portfolio in every subject. Students select their own project and receive evaluation from teachers, peers, parents as well as themselves.

5.3 PARENTS' PERSPECTIVE

Parent survey is to collect data on parents' perspective towards the Unified Bilingual Curriculum at Satit Bilingual School of Rangsit University. The survey consists of two parts: Part one is to collect the subjects' variables: (i) Name and surname, (ii) child's level, (iii) Occupation, (iv) Educational background, and (v) the reason for selecting SBS. Part two contains 24 questions dealing with Philosophy, Objectives, Contents, Teaching methodology, Learning activities, and Evaluation. Parents are to give their reaction to the Unified Bilingual Curriculum in terms of satisfaction on a rating scale of 1 (low) to 5 (high). At the end of the parent survey there is one open-ended question on additional comments parents may have for the researcher. The given questions are translated into Thai to avoid misinterpretations of the meanings the researcher would like to convey to parents. The translated version by the researcher is rechecked for connotative consistency by a specialist. The question items in the parent survey are:

The respondents consist of selected parents whose children have enrolled in the four bands which are considered the critical stages of Primary 3, Primary 6, Secondary level 3 and Secondary level 6. A questionnaire was carefully constructed to cover all required information and tested with the selected group for validity. The questionnaires were distributed to the 247 selected subjects via the homeroom teachers of and a sum of 216 subjects had filled in the questionnaire and sent it back. Then the questionnaires were tallied according to the survey questions and put in the computerized application of SPSS and formulated in a table format.

The results of the Parent's Perspective Survey will depend on the school performance in relating to parent's expectations, and whether parents interpret any deviations between the two. In general, satisfaction of the consumers in the implementation of the curriculum is taken to mean that it meets with or exceeds their expectations while their disappointment connotes that their expectations were not met. If the outcomes or the school performance falls short, parents will be unsatisfied and vice versa if the performance meets their expectations, parents will be satisfied (Kotler and Keller, 2009). Assessment of parent's perspective depends on many factors but the one observed here will be based upon the school's curriculum development and implementation. The school has many stakeholders including teachers, staff, investors, shareholders, and increasing their satisfaction of the educational organization may mean hitting the correct target for future development of the school. Ultimately, the school must operate on its philosophy that educational goal is achieved and parent satisfaction is high. Therefore the school needs to deliver acceptable level of satisfaction to this group of stakeholder in general (Kotler and Keller, 2009). It is imperative that the school must regularly monitor the parent's satisfaction which will lead to achieving students' retention and more promising future for the school. Moreover, once noticed any complaints or dissatisfaction, corrective measures through adjustments of the strategic plan, curriculum contents or teaching and learning process must be undertaken accordingly. In marketing terms, it is easier and more desirable to retain old customers than continuously seeking new ones. One key point to customer retention is to measure customer satisfaction and keep them satisfied. An interesting

point to explore is on how to continuously have the customers or parents kept up with education innovations inherent in the curriculum with better understanding of the new goal of bilingual education as a whole.

It has been found that the majority of parents at SBS (63.9%) made up of a Business owners, with 6.9% and 5.6% homemakers and civic servants respectively. The educational background of the majority of parents (67.6%) is Bachelor's degree, with 29.6% and 2.8% Masters Degree and Doctorate degree respectively. Parents have access to the school information from various sources ranging from the media (37.5%), friends (31.5%), family (17.6%) and website (13.4%). There are more students enrolled in the primary than secondary school of 54.2% and 45.8% respectively.

Table 5.2 Demographic Profile of Respondents

Demographic Profile	Frequency	Percentile
Child's level		
Primary	117	54.2
Secondary	99	45.8
Parents' Occupation		
Corporate Employee	49	22.7
Business Owner	138	63.9
Civil Servant	12	5.6
Academic	2	0.9
Homemakers	15	6.9
Parents' Education		
Bachelor's Degree	146	67.6
Master's Degree	64	29.6
Doctorate	6	2.8
Information Source about the School		
Friends	68	31.5
Family	38	17.6
Media	81	37.5
Internet Website	29	13.4
Total	216	100

1. Philosophy

The subjects have made the knowledge of SBS philosophy of "Building leaders for tomorrow" known to 67.18% of parents with Master Degree and 83.33% of those with Doctorate Degree. Parents who are satisfied with the school's Philosophy are 62.5% Masters Degree graduates and 58.21% of those with Bachelor degree. A 34.53 percentile of the Bachelors Degree had no comment on the Philosophy while 17.74% had no comment on this question due to insufficient understanding of such.

It can be observed that a higher percentile of parents with Master Degree has higher level of understanding and satisfaction with the school philosophy. Parents with Bachelor's Degree have a lower level of understanding about the implementation of the philosophy with majority in the secondary school. Parents of the lower percentile have made no comments as to why they are least satisfied with the implementation of the philosophy. A question for further investigation is the linkage between parent's educational background and parents' knowledge and satisfaction of the school's philosophy.

Table 5.3 Frequency of Parents reported to understand SBS Philosophy

Parents' Educational Level	Number of Parents who answered the Questions	Number who understand SBS Philosophy	Percentile
Doctorate	6	5	83.33%
Master's Degree	64	43	67.18%
Bachelor's Degree	146	59	40.41%

Table 5.4 Frequency of Parents reported to satisfied SBS Philosophy

Parents' Educational Level	Number of Parents who answered the Questions	Number who satisfied SBS Philosophy	Percentile
Doctorate	6	5	83.33%
Master's Degree	64	40	62.5%
Bachelor's Degree	146	85	58.21%

2. Objectives

The school objective that *"learners shall be equipped with analytical thinking skills"* are well *satisfied* by both group of parents with Bachelor and Master's Degree and higher of 62.32 and 76.56 percentile respectively. Parents without any comments are more in the Bachelor Degree level (28.05%) than those in Master Degree level (14.51%).

The child possesses a higher analytical thinking skills once enrolled at the school are agreed by parents with Bachelor Degree at 55.47% and 67.18% for those with Master degree respectively. While parents with Doctorate and Master Degree agree more on *learning language with native speakers and towards the school's objective of natural language acquisition* at 100% and 89.06% respectively, A smaller percentile of 70.54% of parents with Bachelor Degree agree with the above notions.

Table 5.5 Frequency of Parents reported to satisfied SBS Objective

Parents' Educational Level	Number of Parents who answered the Questions	Number who satisfied SBS Objective	Percentile
Doctorate	6	5	83.33%
Master's Degree	64	49	76.56%
Bachelor's Degree	146	91	62.32%

Table 5.6 Frequency of Parents reported to agree to Analytical thinking skills

Parents' Educational Level	Number of Parents who answered the Questions	Number who agree to Analytical thinking skills	Percentile
Doctorate	6	5	83.33%
Master's Degree	64	43	67.18%
Bachelor's Degree	146	81	55.47%

Table 5.7 Frequency of Parents reported to agree to learning language with native speakers and towards the school's objective of natural language acquisition

Parents' Educational Level	Number of Parents who answered the Questions	Number who agree to learning language with native speakers and towards the school's objective of natural language acquisition	Percentile
Doctorate	6	6	100%
Master's Degree	64	57	89.0%
Bachelor's Degree	146	103	70.54%

The table below showed that the implementation of SBS's objectives were significant with the students' level of education where primary parents were more satisfied with the school's objectives than the secondary parents. One way analysis of variance was conducted with Students' Level of Education (Primary or Secondary Schools) as independent variable and Parents' Satisfaction with the objectives Unified Bilingual Curriculum as dependent variable. Levene's test was not insignificant, $F(1,173) = 0.555$, $p>0.05$. The assumption of homogeneity of variance was not violated. Parents whose children are in primary school , $M = 4.137$, $SD= 0.583$, were found to display significantly higher mean rating of Satisfaction with the objectives of Unified Bilingual Education than did parents whose children are in the secondary school, $M = 3.842$, $SD= 0.654$, $F(1,173) = 9.820$, $p<0.05$.

Table 5.8 The implementation of SBS's objectives were significant with the students' level of education where primary parents were more satisfied with the school's objectives than the secondary parents.

Students' Level of Education	N	Mean	Std. Deviation	Minimum	Maximum
Primary School	102	4.137	0.583	2.75	5.00
Secondary School	73	3.842	0.654	2.25	5.00
Levene's Statistic = 0.555		df.1= 1		df.2 = 173	Sig. =0.457
ANOVA	df. (Between Group) 1	df. (Within Group) 173		F = 9.820	Sig. = 0.002

3. Contents

A large percentile (68.75%) of parents agrees with the *use of eight subject strands* prescribed by the Ministry of Education compared to 31.25% who disagrees with it. Parents with Master Degree express their agreement more than those with Bachelor degree at 68.75% and 66.43% respectively.

Regarding the attitude of parents towards the SBS vision *of adding Mandarin and ICT as additional subject strand* 57.87% of the total population agree with this. Of these represented 83.33% of those with Doctorate Degree, 65.62% of those with Master Degree and 53.42% Bachelors, resulting in a higher percentile in the group with Master Degree and above. This may be construed that while parents want their children to fulfill the requirements prescribed by the Ministry of Education, they still view that the two additional subject strands are mutually important for the children's future and career.

Parents who agree with the teaching assignments in the *4 bands* at SBS being Band 1 (P1-3), Band 2 (P4-6), Band 3 (M1-3) and Band 4 (M4-6). The highest percentile of the parents as a whole who strongly agree with the method is 100% while only 24.07% disagrees. This may be said that parents who have their children enrolled at the school wish to have them learnt the contents prescribed by the Ministry of Education in order to fulfill the requirements for further studies upon graduation. The majority of parents are of Thai nationals and wish to have their children grew up in a Thai culture and are in favor of the Thai educational contents.

Furthermore, it should be noted that parents with Master Degree agreed with the *modified contents of the major strands* in the SBS Unified Curriculum with a high percentile of 89.06% more than those with Bachelor Degree 73.97%. Therefore, while parents agree with the use of the MoE guidelines and want their children to fulfill the MoE requirements, they are more satisfied with the school Unified Curriculum and wishes that the school also fulfills the basic requirements prescribed by the MoE and added on the additional subject strands of ICT and Mandarin.

While 58.37 percent of parents agree with the *current structure of the Unified Curriculum in assigning weight in terms of credit hours per subject strand* around 41.66 percent has neither agree nor disagree. Furthermore, it is an interesting observation that a higher percentile of parents at 89.72 percent with the bachelor's degree ?which is higher than the parents with the masters degree.

Parents who agree with the modified contents of the major subject strands in the Unified Curriculum comprise of the high percentage of those with Master Degree (51.87%) and 57.53% of those with Bachelor Degree, resulting in a total of 86.30 percent of parents who agrees and strongly agrees with the modified contents.

Hence, it can be concluded that while parents want to have the study contents conformed with those of EP Curriculum prescribed by the MoE either to ensure continuing studies of their children in the country or their ability to get good scores on the National Tests, they are happy with the modified contents of the Unified

Curriculum and implemented by the school. Parents with high educational background of Master Degree or higher tend to have more understanding of the modified contents than those with bachelors degree. It may be beneficial for the school to develop orientation sessions or seminars to see that parents are better informed about the school contents.

Table 5.9 Frequency of Parents reported to agree with the use of eight subject strands

Parents' Educational Level	Number of Parents who answered the Questions	Number who agree with the use of eight subject strands	Percentile
Doctorate	6	4	66.66%
Master's Degree	64	44	68.75%
Bachelor's Degree	146	97	66.43%

Table 5.10 Frequency of Parents reported to agree with the use of ten subject strands (adding Mandarin and ICT)

Parents' Educational Level	Number of Parents who answered the Questions	Number who agree with the use of ten subject strands (adding Mandarin and ICT)	Percentile
Doctorate	6	5	83.33%
Master's Degree	64	42	65.62%
Bachelor's Degree	146	78	53.42%

Table 5.11 Frequency of Parents reported to agree with the modified contents of the major strands

Parents' Educational Level	Number of Parents who answered the Questions	Number who agree with the modified contents of the major strands	Percentile
Doctorate	6	5	83.33%
Master's Degree	64	57	89.06%
Bachelor's Degree	146	108	73.97%

Table 5.12 Frequency of Parents reported to agree with the current structure of the Unified Curriculum is assigning weight in terms of credit hours per subject strands.

Parents' Educational Level	Number of Parents who answered the Questions	Number who agree with the current structure of the Unified Curriculum is assigning weight in terms of credit hours per subject strands	Percentile
Doctorate	6	5	83.33%
Master's Degree	64	52	81.25%
Bachelor's Degree	146	131	89.72%

Table 5.13 Frequency of Parents reported to agree with the modified contents of the major subject strands.

Parents' Educational Level	Number of Parents who answered the Questions	Number who agree with the modified contents of the major subject strands.	Percentile
Doctorate	6	4	66.66%
Master's Degree	64	37	57.81%
Bachelor's Degree	146	84	57.53%

The table showed a one-way analysis of variance was conducted with Students' level of Education (Primary or Secondary Schools) as independent variable and Parents' Satisfaction with Contents used in the Unified Bilingual Curriculum as dependent variable. Levene's test was insignificant, $F_{(1,173)} = 0.931$, $p>0.05$. The assumption of homogeneity of variance was not violated. Parents whose children are in primary school, M= 3.947, SD = 0.586, were found to display significantly higher mean rating of their satisfaction with the contents of SBS's Unified Bilingual Curriculum than did parents whose children are in secondary school, M = 3.687, SD = 0.557.

Table 5.14 A one-way analysis of variance was conducted with Students' level of Education (Primary or Secondary Schools) as independent variable and Parents' Satisfaction with Contents used in the Unified Bilingual Curriculum as dependent variable

Students' Level of Education	N	Mean	Std. Deviation	Minimum	Maximum
Primary School	102	3.947	0.586	2.80	5.00
Secondary School	73	3.687	0.557	1.80	5.00
Levene's Statistic = 0.931		df.1= 1	df.2 = 173		Sig. =0.331
ANOVA	df. (Between Group) 1	df. (Within Group) 173	F = 8.684		Sig. = 0.004

4. Teaching Method

Parents who are more satisfied with the school's process-based teaching methodology are within the group of Master Degree graduates (68.75%) while 54.79% of those with Bachelor Degree are satisfied. In the latter group 36.59% did not make any comment regarding this issue. An overall percentile of 59.72 agrees with the school's process-based teaching while 40.27% disagrees and strongly disagrees. In addition, 88.33% of parents with similar educational background of Master Degree saw changes in their children's development as a result of the school's interactive learning activities of 83.33 while 56.84% of those with Bachelor Degree saw developments in their children.

ICT literacy is SBS teaching method to be inserted in every subject. Learners and teachers must be competent in ICT usage. The study summarized that parents who are more satisfied with the School's teaching methodology of ICT literacy lie more in those with higher educational background at (62.5%) for those with Master Degree and 57.37% of those with Bachelor Degree. Parents who disagree and strongly disagrees consists of 40.27% of the respondents. Furthermore, the school's *authentic assessment* or evaluation other than the formal evaluation process of mid-term and final exams are in place for the maximum benefit of learners. Parents who agree and strongly agrees with this comprise 76.85% of respondents while 23.14% disagrees or has no opinion. With this issue there was no obvious distinction or causal relationship between the educational background of parents with bachelors (74.65%) and masters (79.68%). Parents in general are satisfied with the implementation of ICT literacy at the school.

Table 5.15 Frequency of Parents reported to satisfied with the school's process-based
teaching methodology

Parents' Educational Level	Number of Parents who answered the Questions	Number who satisfied with the school's process-based teaching methodology	Percentile
Doctorate	6	4	66.66%
Master's Degree	64	44	68.75%
Bachelor's Degree	146	80	54.79%

Table 5.16 Frequency of Parents reported to satisfied with the school's teaching
methodology of ICT literacy

Parents' Educational Level	Number of Parents who answered the Questions	Number who satisfied with the school's teaching methodology of ICT literacy	Percentile
Doctorate	6	5	83.33%
Master's Degree	64	40	62.5%
Bachelor's Degree	146	75	51.37%

Table 5.17 Frequency of Parents reported to disagree with the school's teaching
methodology of ICT literacy

Parents' Educational Level	Number of Parents who answered the Questions	Number who disagree with the school's teaching methodology of ICT literacy	Percentile
Doctorate	6	1	16.66%
Master's Degree	64	24	37.5%
Bachelor's Degree	146	71	48.63%

The table below showed that there was a significant correlation in the teaching methodology implemented at SBS. Parents whose children is in the primary school were more satisfied than parents whose children are in the secondary school. A one-way analysis of variance was conducted with Students' level of Education (Primary or Secondary Schools) as independent variable and Parents' Satisfaction with Method of Teaching of SBS's Bilingual Curriculum as dependent variable. Levene's test was insignificant, $F(1,173) = 0.931$, p>0.05. The assumption of homogeneity of variance was not violated. Parents whose children are in primary school, M= 3.947, SD = 0.586, were found to display significantly higher mean rating of their satisfaction with method of teaching of SBS's Unified Bilingual Curriculum than did parents whose children are in secondary school, M = 3.687, SD = 0.557.

Table 5.18 A significant correlation in the teaching methodology implemented at SBS. Parents whose children is in the primary school were more satisfied than parents whose children are in the secondary school.

Students' Level of Education	N	Mean	Std. Deviation	Minimum	Maximum
Primary School	102	3.947	0.586	2.80	5.00
Secondary School	73	3.687	0.557	1.80	5.00
Levene's Statistic = 0.931		df.1= 1	df.2 = 173		Sig. =0.331
ANOVA	df. (Between Group) 1	df. (Within Group) 173	F = 8.684		Sig. = 0.004

5. Learning Activities

The Project Work which is treated as a learning activity by the school have a satisfaction rate by the total population of parents at 51.85% while 48.14% neither agree or disagree. More opportunity for parents to observe the implementation process of this particular learning activity may be essential as parents expressed. concern that teachers may have not effectively implemented this approach as they have not seen much project works at school. However only a small percentile of 48.14 were highly dissatisfied which needs to be further investigated in greater detail in future research. With the aspect of the ample opportunity for *Information Search and Exhibit* as a learning activity, parents who neither agree nor disagree consist of 63.42 percent while 44.90 agrees. Of the latter group 50% constitute parents with masters degree and 41.78% of those with Bachelor Degree.

SBS *Competition* as part of the learning activity is seen to have high frequency of the arrangements and exposure for learners, more by the Bachelor Degree than the Master's Degree parents at 77.39% and 37.5% respectively. Again a large number of parents responded to this question as neither agrees nor disagrees at 34.25% while 65.74% agrees and strongly agrees respectively. It could, therefore, be

summarized that while parents believe that Competition is a beneficial learning activity for learners, they did not see a significant arrangements or management from the school. With *Real life Exposure* there is not much difference in parents' attitude and their educational background. Of all subjects, 64.35% are satisfied with the approach, 30.5% highly satisfied and a small number of 35.64% were dissatisfied.

Table 5.19 Frequency of Parents reported to disagree with the information search and exhibit

Parents' Educational Level	Number of Parents who answered the Questions	Number who disagree with the information search and exhibit	Percentile
Doctorate	6	3	50%
Master's Degree	64	32	50%
Bachelor's Degree	146	70	41.78%

Table 5.20 Frequency of Parents reported to agree with the SBS competition

Parents' Educational Level	Number of Parents who answered the Questions	Number who agree with the SBS competition	Percentile
Doctorate	6	2	33.33%
Master's Degree	64	24	37.5%
Bachelor's Degree	146	113	77.39%

6. Evaluation

Evaluation procedure can become a tricky issue to observe by non-academic persons. Therefore, the researcher has stressed on the exam type which parents could relate to namely written tests, electronic examination, performance presentation and peer evaluation. The results indicated that parents have highest satisfaction in the school's Performance Presentation and least with the Peer Evaluation while 33.33 percent of parents have neither agreed nor disagreed with the process.

Based upon the results, it can be said that parents are highly satisfied with the children's performance presentations during the school's various events both within class and in the school's facilities for exhibition . Peer Evaluation were least favorable among parents as traditional Thai culture has been sensitive towards criticism. Around

77.08% of parents with higher educational background tends to agree with Performance Presentation. It should be noted that from the total subjects, 77.08% of parents with higher educational background agrees to the concept of Peer Evaluation, the same level as of formal Written Tests. It could be said that parents with higher educational background are more receptive in the case that their children are to be evaluated by peers.

Table 5.21 Frequency of Parents reported to agree with performance presentation

Parents' Educational Level	Number of Parents who answered the Questions	Number who agree with performance presentation	Percentile
Doctorate	6	3	33.33%
Master's Degree	64	28	43.75%
Bachelor's Degree	146	74	50.68%

The table below showed the results that the implementation of the evaluation was more satisfied by parents in the primary than secondary level. A one way analysis of variance was conducted with Students' Level of Education (Primary or Secondary Schools) as independent variable and Parents' overall Satisfaction with the Evaluation implementation as dependent variable. Levene's Test was insignificant, $F(1,173) = 1.902$, $p>0.05$. Parents whose children in primary school, M= 3.925, SD = 0.660, were found to display significantly higher mean rating of their satisfaction the evaluation than did parents whose children in secondary school, M = 3.493, SD = 0.588

Table 5.22 The results that the implementation of the evaluation was more satisfied by parents in the primary than secondary level

Students' Level of Education	N	Mean	Std. Deviation	Minimum	Maximum
Primary School	102	3.925	0.660	2.667	5.00
Secondary School	73	3.493	0.588	2.333	5.00
Levene's Statistic = 1.902		df1= 1		df.2 = 173	Sig. =0.170
ANOVA	df. (Between Group) 1	df. (Within Group) 173	F = 19.911		Sig. = 0.000

Table 5.23 Parent's Comments

Comments (Total 216)	Amount
• **No Comments**	**188**
• **Quality of teaching staff (native speakers)**	**2**
• **Examination contents**	**2**
• **Curriculum implementation**	**2**
• **Creative thinking and ICT literacy**	**2**
• **Curriculum that stresses too much on Project work and reports**	**2**
• **Philosophy on leadership should add the need to be good followers**	**2**
Quality of teaching and learning	**1**
• **Some questions cannot be answered by parents**	**1**
• **Should not bring in GAT and PAT scores in analyzing students performance**	**1**
• **School has continuous development and improvements**	**1**
• **Does not stress much on contents**	**2**
• **Wants students to speak English at all times in school compound and in class**	**2**
• **Would like to have students expressed themselves and participated at all times**	**1**
• **School ICT is not effective in communicating with teachers**	**1**
• **Wants more PE and sports**	**2**
• **Wants to see more activities**	**1**
• **Wants to see more discipline in students**	**1**
• **Would like to see more condensed contents in English and Science**	**1**
• **Wants teachers to take good care of students**	**2**
Academic quality	**1**
• **Wants students to participate more in the media e.g. TV, radio etc.**	**1**

Based on responses from the parent survey, out of the total 216 questionnaires collected, 188 respondents gave no comments whereas the remaining 28 had provided feedbacks. Major feedbacks were on the academic quality and contents learned in school. Parents wanted the school to focus more on academic contents in as much as in Thai schools. It was also expressed that English should be the only language to be used at school to enhance student's acquisition. Some parents wish to see more condensed academic contents in the key areas of Science, ICT and English grammar. Some of their comments and complaints connote the lack of full understanding on the curriculum by parents which can lead to misperception of the academic contents and quality. These parents are worried that the school emphasized on a large extent on added contents and corresponding activities which take time and may impair the teaching and learning of contents which are required either from the Ministry of Education or from Thai curriculum. A few however, wishes to see more innovative activities and learners exposure. Some comment on the quality of expatriate teachers and wishes that the homeroom teachers will take better care of their children in terms of homework and follow up on assignments. Based on the parent's comments, efforts should be made by the school to create mutual understanding as well as a two way communication between parent and school through the homeroom teacher which is closest to their children. Parents orientation and meetings should be adjusted in ways that will create a more thorough understanding of the school curriculum and ways in which parents can help their children be better in school. This requires time and effort from both parties to make it possible.

5.4 CONCLUSION

The two data collected structured interview of the executives and staff at the Satit Bilingual School of Rangsit University and Selected Second Bilingual School were analyzed and presented in its similarities and differences in the areas of Philosophy, Objectives, Contents, Teaching methodology, Learning activities and Evaluation. Tables were formulated and presented. The next chapter will conclude the findings and report on the limitations and possibilities of future research.

CHAPTER 6

CONCLUSION

6.1 INTRODUCTION

Chapter 6 presents major findings of the Study in the three areas according to the study objectives. They are: (1) Curriculum development as modified by Satit Bilingual School of Rangsit University in the framework of the EP Curriculum, (2) Curriculum implementation in two bilingual schools, namely Satit Bilingual School of Rangsit University and Selected Second Bilingual School, and (3) Parents' reaction to the Unified Bilingual Curriculum implemented at Satit Bilingual School of Rangsit University. It should be noted that the modified part as allowed by the Ministry of Education should not exceed 30 percent of the given curriculum contents. The overall report on major findings in the three areas will be briefly discussed with reference to earlier studies given in Chapters 1 and 2.

In closing the study, the researcher has identified limitations of the study as stemming from limited access in data collection. Recommendations on future research based on the results of the study are also given.

6.2 CURRICULUM COMPONENT ANALYSIS

This section gives a summary of major points regarding similarities and differences between the EP Curriculum prescribed by the Ministry of Education and the Unified Bilingual Curriculum at Satit Bilingual School of Rangsit University. The summary deals with six components in the Curriculum Component Analysis Model as follows:

6.2.1 Philosophy

The Unified Bilingual Curriculum has adopted the Philosophy of the EP Curriculum with an emphasis on preserving the stability and unity of the nation as well as a focus on *learners being supported and facilitated to become life-long learners.* However, the Unified Bilingual Curriculum has highlighted the significance of human resource development at a high level, specified in the school mission in *building leaders for tomorrow*. That is to say, the Unified Bilingual Curriculum does not only aim at academic achievements of learners but also communication and social skills to develop a strong sense of leadership and responsibility as a Thai and world citizen.

6.2.2 Objectives

The objectives of the EP Curriculum "*learners should see his/her self-worth with disciplined adherence to Buddhist teaching and moral and ethical values as a way of life,*" have been kept in the Unified Bilingual Curriculum. Both curricula seek creativity for new knowledge through reading, writing and conducting research. Learners shall be ready to acquire international knowledge and be able to adapt to new technology and environment through communication and appropriate management skills. Learners should master comprehensive knowledge in the areas of Mathematics, Science and Physical education as well as understanding the concept of balance living. Learners should understand the Thai history, and take pride of being Thai citizen in a democratic society with reverence to the King. Learners should preserve the Thai identity in their language, culture, history, natural resources, and environment.

The Unified Bilingual Curriculum has particularly stressed upon the learners' knowledge to be equipped with analytical thinking skills, communication skills and providing a learner centered environment through hands on learning activities. Emphasis is placed on learners to become bilingual and bicultural through the process of natural language acquisition. It should be noted that research in bilingual education has been of prime importance at SBS. This is to make sure that bilingual education practitioners can make sound and practical teaching and learning decision on the basis of research into specific areas under investigation, not by experiential perception or speculation.

6.2.3 Content

The EP Curriculum contains four bands, eight subject strands, and weight of curriculum contents in 800-1,200 hours per academic year from the primary to the secondary level. SBS has followed the EP Curriculum regarding the number of bands. However, the school has modified in the number of subject strands from eight to ten by splitting Information Communication Technology (ICT) and Mandarin from the EP Curriculum subject strands of Career and Technology, and Foreign Language, respectively.

As for the number of hours as reflecting weight of curriculum contents, the EP Curriculum assigns 1,200-1,500 hours per academic year. SBS has assigned the number of hours at 40 hours per week as the maximum while allocating approximately ten percent for support learning activities. In sum, the total number of hours for two terms in one academic year should not exceed 1,600 hours. It should be made clear that the primary school tends to operate at 35 hours per week and the secondary school at 40 hours per week.

6.2.4 Teaching Methodology

The EP Curriculum has provided guidelines for teaching methodology as one of the following: (1) actual teaching situations, (2) teaching approach to self-learning, (3) support for group learning, and (4) stimulating learners' enthusiasm into exploring the environment (natural and man-made), all of which to be assimilated into personal

ation

subject strand. The obtained data deals with (1) Philosophy, (2) Objectives, (3) Contents, (4) Teaching methodology, (5) Learning activities, and (6) Evaluation.

6.3.1 Philosophy

Satit Bilingual School of Rangsit University put a heavy emphasis on how to build leaders for the country. This has definitely stemmed from the founder's vision that the school should have its mission on grooming and developing smart and ethical citizens for the country's well-being. Selected Second Bilingual School has a more aesthetic goal on *supporting and developing learners to have good mental and physical health in music, arts and sports*. It can be seen that both schools in fact, shared a common goal in building high quality citizen for Thailand.

6.3.2 Objectives

SBS aims at promoting an interactive learning environment for learners through various academic activities both inside and outside of classrooms through a student-centered approach. The school has pursued its goal in equipping learners with analytical thinking, social and communication skills by means of the four major practices (1) Process-based Teaching Methodology, (2) Interactive Learning, (3) ICT Literacy Activities, and (4)Authentic Assessment. Selected Second Bilingual School has implemented its curriculum objectives with in-service training for teaching staff to fully understand the child-centered approach. In addition, Selected Second Bilingual School has assessed its attained objectives by means of formal mid-term and final examinations.

6.3.3 Contents

Both schools have followed the pattern of four-band division in the EP Curriculum as prescribed by the Ministry of Education. In implementing the modified Bilingual curriculum, expatriate teachers at SBS have found it beneficial to learners and therefore willing to follow the modified contents in ten subject strands. In contrast Thai teachers have a tendency hold on to the Thai Curriculum rather than the EP Curriculum.

Selected Second Bilingual School has strictly follow the guidelines given by the EP Curriculum to be able to cope with parents who meticulously check whether the school has deviated from the main path as specified by the Ministry of Education. The school executives have decided to give a balanced in its curriculum implementation by taking all parents' concerns into consideration.

6.3.4 Teaching Methodology

Teachers at Satit Bilingual School of Rangsit University have claimed a good understanding of the role of teachers as a facilitator and give emphasis on the learners' centered approach to teaching in the classroom. Besides they have enjoyed interactive learning activities and creativity shown by their students. Selected Second Bilingual

School has been in the same direction regarding teaching methodology that signifies the importance of learners as the center to be supported by the teacher.

SBS aims at promoting an interactive learning environment for learners through various academic activities both inside and outside of classrooms through a student-centered approach. The school has pursued its goal in equipping learners with analytical thinking, social and communication skills by means of the four major practices (1) Process-based Teaching Methodology, (2) Interactive Learning, (3) ICT Literacy Activities, and (4) Authentic Assessment. Selected Second Bilingual School has implemented its curriculum objectives with in-service training for teaching staff to fully understand the child-centered approach. In addition, Selected Second Bilingual School has assessed its attained objectives by means of formal mid-term and final examinations.

Teaching staff in both schools reported no difficulties in devising learning activities for their students. The majority of teachers assign individual and group projects and assist group members that need help or further assistance in completing the assigned task. Teachers in both schools have found good support from the school executives in creating or working on specific learning activities designed for students at particular grades. Some teachers have somewhat complained about extra workload from additional learning activities.

6.3.5 Evaluation

Teachers at both schools have followed guidelines for evaluation as prescribed by the Ministry of Education. It should be noted that, teachers at SBS pointed out that peer evaluation should be closely monitored by the teacher. As for electronic examination, SBS teachers have found it difficult to monitor and too demanding on their ICT literacy.

6.4 PARENTS' PERSPECTIVES

It has been found that there is an impact of parents' educational level on their perspective of the implementation of the Unified Bilingual Curriculum. Parents with Master's Degree and higher are in support of the curriculum components being implemented at SBS. Responses of parents at the Primary and Secondary school level indicate a high level of satisfaction with the Philosophy and the Learning activities of the curriculum.

6.5 MAJOR FINDINGS AS RELATED TO EARLIER STUDIES

6.5.1 Curriculum Development

The Unified Bilingual Curriculum has adopted the Philosophy of the EP Curriculum with an emphasis on preserving the stability and unity of the nation as well as a focus on *learners being supported and facilitated to become life-long learners.* This Philosophy is taken from Thailand Education Act 1999, Thailand Education Act 2001. The statement of this Philosophy has been made in various government releases and publications stating bilingual education to be part of the country's educational reform. One of the main objectives of the bilingual curriculum is to preserve the country's culture and heritage, and to promote human development in accordance with the objective of Thailand's Education Act of creating "lifelong learners." In addition, the curriculum objectives of the Unified Bilingual Curriculum indicate that learners should preserve the Thai identity in their language, culture, history, natural resources, and environment. (Office of the National Education Commission, 1999 (B.E. 2542)).

Satit Bilingual of Rangsit University has modified in the number of subject strands from eight to ten by splitting Information Communication Technology (ICT) and Mandarin from the EP Curriculum subject strands of Career and Technology, and Foreign Language, respectively. The purpose is to design the curriculum contents as seen fit to Thai bilingual learners as suggested by Ornstein A. and Hunkins (2004) that one kind of curriculum may be more suitable for one school than another. That is the reason why SBS has modified the curriculum to meet with the needs of specific groups of learners.

The Unified Bilingual Curriculum has given emphasis on hands on learning activities with exposure to real life experience. In addition, the school has brought in activities that develop higher level creativity and independent thinking in the form of individual project work, Information search and Exhibits via group work, academic and art competitions, including real-life exposure to medical practice and service industry. Such activities and educational practices requires good understanding and commitment of teachers and students to make curriculum development a success as stated by Morgan (1999).

SBS has followed the direction for evaluation as indicated in the EP Curriculum prescribed by the Ministry of Education. The school in particular has kept written tests as part of the requirements of the EP Curriculum. SBS has added three other evaluation criteria in support of the goal of life-long learning by using (1) Electronic examination to develop and sustain ICT skills, (2) Peer evaluation to develop a sense of responsibility and justice, and (3) Performance presentation to stimulate learner initiative and confidence. It is important for the school to help parents understand criteria of evaluation used by the school. This point is highlighted by Lovelock (2001) that understanding customer perspective or customer expectation [i.e., parents in this study] are of prime importance.

6.5.2 Curriculum Implementation

Curriculum implementation at Satit Bilingual School of Rangsit University has taken stakeholders into account, primarily teachers and parents. A good understanding of the goal and justification of teaching practices and learning activities need a certain degree of acceptance from these two major stakeholders to make curriculum implementation a success. This point is clearly stated by Ornstein and Hunkins (2004) that effective curriculum implementation is a two-way street, or a two-way communication channel, both formal and informal [to major stakeholders].

6.5.3 Parents' Perspective

Undoubtedly, there has been an impact of communication on parents' perspective of the curriculum used in a particular school. In the study, it has been found that there is relationship between parents' educational level and their perspective of the implementation of the Unified Bilingual Curriculum. Parents with Master's Degree and higher are in support of the curriculum components being implemented at SBS. Responses of parents at the Primary and Secondary school level indicate a high level of satisfaction with the Philosophy and the Learning activities of the curriculum. In this specific context, the school has considered parent relations as a tool to convey action on curriculum implementation across to parents for their good understanding and required support. This point is clearly stated by Ornstein and Hunkins (2004) that curriculum developers must seek the best mode of communication that is both lateral and horizontal, involving good human relation practices, to ensure that the message gets delivered to all concerned groups without distortion. Moreover, (Sneddon, 2000) asserted that parental input into their children's literacy development is a strong factor in their becoming effective bilingual learners. Quite a few researchers have concluded that there exists a positive correlation or linkage between parents' support in school and students' educational attainment (Hickey, 2007; Karnes, 1975; Delgado-Gaiten and Trueba, 1991; Delgado-Gaiten, 1990; Jackson, 1974).

Limitations of the Study

In conducting this study, the researcher experienced limitations in the data collection process in the part of structured interview conducted with the subjects in both bilingual schools. Some informant subjects appeared reluctant to give information on curriculum development and implementation, perhaps for fear of leaking the school's intellectual property or a possible counter effect on their current position. This was seen clearly in the case of Selected Second Bilingual School where the school executives did not want to volunteer information on curriculum modification, though such modification being confirmed by the District Officer Director concerned. The second limitation seemed to lie in the criteria for subject selection at Satit Bilingual School of Rangsit University. The researcher expected the subject informants be experienced teachers with at least five years' employment with the school. The reason for such a criteria has stemmed from the fact that the selected subjects be not valid if not with a sufficient number of years in implementing the

Unified Bilingual Curriculum. This requirement has resulted a smaller number of participating subjects at SBS than earlier expected.

6.6 RECOMMENDATIONS FOR FUTURE RESEACH

From major findings of the study in three areas (1) Curriculum development, (2) curriculum implementation, and (3) Parents' perspective, the researcher would like to recommend future research as follows:

6.6.1 In the area of curriculum development, there is a need to further explore the weight (credit hours) in each subject strand to strike a good balance in teaching practices and learning activities. In addition, five major curriculum components of Science, Mathematics, Social Studies, Thai, and Foreign Language [English] should be investigated for a reasonable proportion among and between these components.

6.6.2 In the area of curriculum implementation, there is an urgent need for classroom based research to make sure that the modified curriculum be suitably and relevantly implemented at the classroom level. It is also important to look into proper channels of communication between the school and parents to ensure and acceptable degree of curriculum understanding on the parents part. With good understanding from such an important stakeholder as the parent group, the school can make a steady progress of its modified curriculum or any innovative educational practice.

6.6.3 In the area of parents' perspective, the school needs to look for ways to provide information on any educational innovation the school wishes to implement. This has to be done consistently and on a gradual basis. Research into this area should be carried out to ensure a positive relationship and support between the school and parents.

6.7 CONCLUSION

This chapter reports findings of the study in light of the earlier studies concerning curriculum development, curriculum implementation, and parents' perspective toward the modified curriculum at Satit Bilingual of Rangsit University. The researcher has identified limitations of the study as well as recommended future researches as related to the three areas aforementioned.

In closing, the researcher would like to pinpoint that the results of the study have reaffirmed that Satit Bilingual School of Rangsit University be on the right track in putting into action four major teaching and learning practices, namely (1) Process-based teaching methodology, (2) Interactive learning activities, (3) ICT literacy, and (4) Authentic assessment. It can be claimed with least doubt that these four pillars can serve as powerful tools to develop and strengthen learners' academic thinking abilities as well as socio-cultural skills for personal adjustments. Learners at Satit Bilingual School of Rangsit University are to become part of the leading force of Thai society and the four pillars are strongly believed by practitioners at the school to be able to realize the ultimate goal on building leadership. All these have been derived from the

empirical data obtained from the subject informants in the study and thus cleared away to a certain extent scepticism about the power and the validity of the Unified Bilingual Curriculum.

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APPENDIX

APPENDIX A

EXAMPLE STRUCTURE INTERVIEW

Dissertation Title: Bilingual Curriculum Development and Implementation in Thailand : A Case Study of Satit Bilingual School of Rangsit University

Researcher: Apiramon Ourairat

Academic Year 2010

Instrument: Structured Interview

Objective: The purpose of this instrument is for the researcher to interview school executives, mainly School Director, Academic Director, Heads of Subject Departments, or Senior Teachers, for information on how they implement their school curriculum in the areas of (1) Philosophy, (2) Objectives, (3) Contents, (4) Teaching Methodology, (5) Learning Activities, and (6) Evaluation. The researcher will also ask the subjects about what they perceive as limitations of the curriculum implementation. Interview time should not exceed 45 minutes and the use of audio recording will only be by permission of the interviewed subjects. Names of interviewed subjects will remain anonymous, and all secured data will be treated strictly confidential and used only for educational purposes.

Note: use "at SBS" or "at your school" in the interview questions as appropriate.

    I.   **Philosophy**

        1. **The Philosophy of SBS is to "Build Leaders for Tomorrow."** How do you implement this philosophy?

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        2. What are perceived limitations in the implementation process of the stated Philosophy?

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II.   Objective

There are two main objectives at SBS:

2.1 Objective 1 is **"Learners shall be equipped with analytical thinking, social and communication skills."** How do you implement this objective?

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2.2 What are perceived limitations of Objective 1 being implemented at SBS?

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2.3 Objective 2 is **"Develop natural language acquisition and sustain native-like language competency."** How do you implement this objective??

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2.4 What are perceived limitations of Objective 2 being implemented at SBS?

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III.   Contents

3.1 What is your opinion on Band division into 3 stages in terms of learning development: Band 1 (P1-P6), Band 2 (M1-3), and Band 3 (M4-6). How can they be effectively implemented at SBS?

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3.2 What is your opinion on the use of **ten subject strands** implemented at SBS?

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3.3 What is your opinion on the use of the current structure of the Unified Curriculum in assigning **weight in terms of credit hours per subject strand**? What is the implementation of the current structure at SBS as you have perceived?

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3.4 Are you aware of the **modified contents of the major strands in the Unified Curriculum**, i.e., Mathematics, Science, Social Studies and English? How are these modified contents implemented at SBS?

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IV. **Teaching Methodology**

SBS has four major practices as applied to teaching and learning: (1) Process-based Teaching Methodology, (2) Authentic Assessment, (3) Interactive Learning Activities and (4) ICT literacy.

4.1 How is **Process-based Teaching Methodology** implemented at SBS and what are perceived limitations?

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4.2 How is **Authentic Assessment** implemented at SBS and what are perceived limitations?

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4.3 How are **Interactive Learning Activities** implemented at SBS and what are perceived limitations?

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4.4 How is **ICT Literacy** implemented at SBS and what are perceived limitations?

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V. Learning Activities

   There are four major learning activities at SBS: (1) Project Work, (2) Information Search and Exhibit, (3) Competition, and (4) Real-life exposure.

5.1   How is **Learning Activity**: **Project Work** implemented at SBS and what are perceived limitations?

5.2 How is **Learning Activity: Information Search and Exhibit** implemented at SBS and what are perceived limitations?

5.3 How is **Learning Activity: Competition** implemented at SBS and what are perceived limitations?

5.4 How is **Learning Activity: Real-life Exposure** implemented at SBS and what are perceived limitations?

VI. Evaluation

There are four evaluation practices at SBS: (1) Written Tests, (2) Electronic Examination, (3) Peer Evaluation, and (4) Performance Presentation.

6.1 How are **Written Tests** implemented at SBS and what are perceived limitations?

6.2 How is **Electronic Examination** implemented at SBS and what are perceived limitations?

6.3 How is **Peer Evaluation** implemented at SBS and what are perceived limitations?

6.4 How is **Performance Presentation** implemented at SBS and what are perceived limitations?

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APPENDIX B

EXAMPLE PARENTS SURVEY

A Comparative Analysis of Two Selected Bilingual Curricula and

their Implementation with Parents' Perspective

Apiramon Ourairat

Parents' Perception Survey

Satit Bilingual School of Rangsit University

การวิเคราะห์เชิงเปรียบเทียบของหลักสูตรทวิภาษาสองหลักสูตรและการนำไปใช้โดยมีมุมมองจากผู้ปกครอง

อภิรมณ อุไรรัตน์

แบบสำรวจมุมมองและความพึงพอใจของผู้ปกครอง

โรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิต

Dear parents,

I'd like to ask for your assistance in providing data for my doctoral dissertation titled "A Comparative Analysis of Two Selected Bilingual Curricula and their Implementation with Parents' Perspective." In my study, I've already completed a curriculum component analysis of Satit Bilingual School of Rangsit University (SBS) and another bilingual school (school name kept confidential). As of now, I need data from parents regarding their perception of the Unified Bilingual Curriculum used at SBS. Please note that you can reserve your right for privacy if you do not wish to volunteer certain information. Please evaluate your perception on a scale on a 1 (low) to 5 (high) by drawing a circle around the selected figure. Thank you for your time and cooperation.

เรียน ท่านผู้ปกครอง

ผู้วิจัยใคร่ขอความกรุณาจากท่านให้ข้อมูลสำหรับงานวิจัยในระดับปริญญาเอกเรื่อง การวิเคราะห์เชิง เปรียบเทียบของหลักสูตรทวิภาษาสองหลักสูตรและการนำไปใช้โดยมีมุมมองจากผู้ปกครอง ในงานวิจัยนี้ ผู้วิจัย ได้ดำเนินการวิเคราะห์หลักสูตรทวิภาษาสองหลักสูตรในเชิงเปรียบเทียบที่โรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิต และอีกหนึ่งโรงเรียน (ไม่เปิดเผยชื่อตามความต้องการของโรงเรียนดังกล่าว) และในขณะนี้ผู้วิจัยต้องการข้อมูลจาก ท่านผู้ปกครองในส่วนที่เกี่ยวข้องกับมุมมองหรือความคิดเห็นของท่านที่มีต่อหลักสูตรทวิภาษาแบบองค์รวมที่ ดำเนินการใช้ที่โรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิต ในการให้ข้อมูลครั้งนี้หากท่านไม่ประสงค์จะให้ข้อมูลใดที่ ท่านพิจารณาว่าเป็นข้อมูลส่วนตัว ท่านก็สามารถรักษาสิทธิ์นี้ได้ **โปรดให้ข้อมูลและประเมินระดับมุมมองหรือ ความคิดเห็นของท่านเป็น 1 น้อย ถึง 5 มาก โดยเขียนวงกลมรอบตัวเลขที่ท่านเลือก ผู้วิจัยขอขอบพระคุณที่ท่าน ได้กรุณาให้เวลาและความร่วมมือในการตอบแบบสอบถามนี้**

Parent's Data **ข้อมูลผู้ปกครอง**

Name **ชื่อ**.. Surname

นามสกุล……………………………………………

Your child's level **นักเรียนระดับชั้น** Primary Level **ประถมศึกษา** ☐ Secondary Level **มัธยมศึกษา** ☐

Occupation **อาชีพ** ....

Educational Background **การศึกษา** (Bachelor's Degree) **ปริญญาตรี** ☐ (Master's Degree) **ปริญญา โท** ☐ (Doctoral Degree) **ปริญญาเอก** ☐

You chose to enroll your child at SBS as recommended by:

ท่านนำบุตรหลานเข้าศึกษาที่โรงเรียนแห่งนี้ ท่านได้รับข้อมูลและข่าวสารจากที่ใด

☐ Friends ☐ Relatives ☐ Media ☐ website

เพื่อน **ญาติ** **สื่อ** **เว็บไซต์**

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1. Philosophy ปรัชญา

1.1 You have knowledge of the school's philosophy on "Building leaders for tomorrow."

ท่านรับทราบปรัชญาของโรงเรียนที่ว่า "สร้างผู้นำในอนาคต" 1 2 3 4 5

1.2 You are satisfied with the philosophy of the school on "Building leaders for tomorrow."

ท่านมีความพึงพอใจกับปรัชญาของโรงเรียน คือ การสร้างผู้นำในอนาคต 1 2 3 4 5

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2. Objectives วัตถุประสงค์

2.1 You are satisfied with the school's Objective 1 on **"Learners shall be equipped with analytical thinking,**

   social and communication skills."

ท่านมีความพึงพอใจกับวัตถุประสงค์หลักแรก ที่ว่าโรงเรียนสร้างให้นักเรียนมีทักษะของการคิดวิเคราะห์ ทักษะ

ทางด้านการสื่อสารและสังคม 1 2 3 4 5

2.2 Your child has more **analytical thinking skills** when enrolled at SBS.

นักเรียนมีทักษะของการคิดวิเคราะห์เพิ่มมากขึ้นเมื่อมาเรียนที่โรงเรียนแห่งนี้ 1 2 3 4 5

2.3 You agree to the school's objective 2on learning language with the native speaker.

ท่านเห็นด้วยกับวัตถุประสงค์หลักที่ 2 ของโรงเรียนคือการเรียนภาษาจากเจ้าของภาษาโดยตรง

1 2 3 4 5

2.4 You are satisfied with school's objective 2 on **"developing natural language acquisition and sustain**

native like language competency."

ท่านมีความพึงพอใจกับวัตถุประสงค์หลักที่ 2 ที่ระบุว่าการเรียนภาษาแบบเป็นธรรมชาติจากเจ้าของภาษาโดยตรง

1 2 3 4 5

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3. Content เนื้อหาหลักสูตร

3.1 You agree to the use of 8 subject strands prescribed by the Ministry of Education.

ท่านเห็นด้วยกับการแบ่งเนื้อหาหลักสูตรเป็น 8 กลุ่มสาระวิชา ตามที่กระทรวงศึกษาธิการกำหนด

1 2 3 4 5

3.2 You agree to the use of **ten subject strands** provided by adding Mandarin and ICT as two more additional

subject strands at SBS.

ท่านเห็นด้วยกับรูปแบบการจัดการศึกษาเป็น 10 กลุ่มสาระวิชา ตามที่โรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิตจัดขึ้น

1 2 3 4 5

3.3 You agree to the teaching assignments into 4 **Bands** at the school.

ท่านเห็นด้วยกับการจัดการศึกษาของโรงเรียนเป็น 4 ระดับ คือ Band 1 (ป.1-ป.3), Band 2 (ป.4-ป.6), Band 3 (ม.1-

ม.3), Band 4 (ม.4- ม.6) 1 2 3 4 5

3.4 You agree to the use of the current structure of the Unified Curriculum in **assigning weight in terms of**

credit hours per subject strand.

ท่านเห็นด้วยกับการให้น้ำหนักการเรียนโดยใช้หน่วยกิตตามที่โรงเรียนกำหนด 1 2 3 4 5

3.5 You agree to **the modified contents** of the major strands in the Unified Bilingual Curriculum.

ท่านเห็นด้วยที่โรงเรียนได้ทำการผสมเนื้อหาหลักสูตรนานาชาติเข้าไปในกลุ่มสาระวิชาหลัก

1	2	3	4	5

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4. **Teaching Methodology** วิธีการสอน

4.1 You are satisfied with the school using the **Process-based teaching methodology**.

ท่านพึงพอใจกับการเรียนการสอนที่เน้นกระบวนการของโรงเรียน   1   2   3   4   5

4.2 You can perceive your child's development as a result of **Interactive learning activities** used at SBS.

ท่านเห็นพัฒนาการที่เปลี่ยนแปลงของนักเรียนกับวิธีการสอนแบบมีปฏิสัมพันธ์ของโรงเรียน

   1   2   3   4   5

4.3 You are satisfied with your child's ability to use **ICT** in his/her learning.

ท่านพึงพอใจกับทักษะการใช้เทคโนโลยีสารสนเทศในการเรียนรู้ของลูกของท่าน   1   2   3   4   5

4.4 You are satisfied with teachers using ICT in all subject strands.

ท่านมีความพึงพอใจกับการใช้ เทคโนโลยีสารสนเทศของครูในทุกสาระวิชา   1   2   3   4   5

4.5 You are satisfied with **Authentic Assessment** used at SBS.

ท่านพึงพอใจกับการที่โรงเรียนใช้การประเมินนักเรียนตามสภาพจริง   1   2   3   4   5

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5. **Learning Activities** กิจกรรมการเรียน

5.1 You are satisfied with **project work** used in subjects as appropriate.

ท่านพึงพอใจกับการทำโครงงานที่นักเรียนได้ทำในแต่ละรายวิชา   1   2   3   4   5

5.2 Your child has ample opportunities to do **Information search and work on Exhibits** as his/her learning activities.

นักเรียนได้มีการค้นหาข้อมูลและจัดทำนิทรรศการอย่างเหมาะสม   1   2   3   4   5

5.3 You agree to the frequency of internal and external **Competitions** organized for student at SBS.

ท่านเห็นด้วยว่าทางโรงเรียนได้มีการจัดแข่งขันวิชาการทั้งภายในและภายนอกได้อย่างเหมาะสม

   1   2   3   4   5

5.4 You are satisfied with **Real-life Exposure** arranged for students at each level.

    ท่านพึงพอใจกับการที่นักเรียนทุกระดับได้ไปศึกษาตามสภาพจริงนอกห้องเรียน   1   2   3   4   5

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6. Evaluation การประเมินผล

6.1 You are satisfied with the use of **written tests** at SBS.

    ท่านมีความพึงพอใจกับรูปแบบการออกข้อสอบแบบข้อเขียนที่ใช้ที่โรงเรียนสาธิตแห่งมหาวิทยาลัยรังสิต

                                                                             1   2   3   4   5

6.2 You are satisfied with the use of **Electronic Examination** implement at SBS.

    ท่านมีความพึงพอใจกับการทำข้อสอบโดยผ่านระบบคอมพิวเตอร์   1   2   3   4   5

6.3 You are satisfied with the use of **Performance Presentation** as a method of evaluation implemented at SBS.

    ท่านมีความพึงพอใจกับการประเมินผล โดยให้นักเรียนนำเสนอผลงาน   1   2   3   4   5

6.4 You agree to the use of **Peer Evaluation** to help assess students' performance.

    ท่านเห็นด้วยกับการให้เพื่อนนักเรียนมีส่วนร่วมในการประเมินนักเรียน   1   2   3   4   5

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Your comments (if any)   ความเห็นอื่นๆ (หากมี)

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BIBLIOGRAPHY

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