A COMPARATIVE STUDY OF ETHNIC STUDENTS' LEARNING STYLES
IN LEARNING BURMESE LANGUAGE AND THEIR ACHIEVEMENT IN
SELECTED SCHOOLS IN PYIN OO LWIN, MANDALAY REGION,
MYANMAR

La San

A COMPARATIVE STUDY OF ETHNIC STUDENTS' LEARNING STYLES IN LEARNING BURMESE LANGUAGE AND THEIR ACHIEVEMENT IN SELECTED SCHOOLS IN PYIN OO LWIN, MANDALAY REGION, MYANMAR

La San

I.D. No. 5429512

A Thesis Submitted in Partial Fulfillment of the

Requirements for the Degree of

MASTER OF EDUCATION

in Curriculum and Instruction

Graduate School of Education

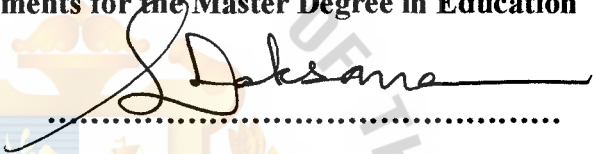**ASSUMPTION UNIVERSITY OF THAILAND**

2013

Thesis Title: A COMPARATIVE STUDY OF ETHNIC STUDENTS' LEARNING
STYLES IN LEARNING BURMESE LANGUAGE AND THEIR
ACHIEVEMENT IN SELECTED SCHOOLS IN PYIN OO LWIN,
MANDALAY REGION, MYANMAR

By: LA SAN

Field of Study: CURRICULUM AND INSTRUCTION

Thesis Advisor: DR. YAN YE

Accepted by the Graduate School of Education, Assumption University in
Partial Fulfillment of the Requirements for the Master Degree in Education

....

(Dr. Sangob Laksana)

Dean of the Graduate School of Education

Thesis Examination Committee

.... Chair

(Asst. Prof. Dr. Richard Lynch)

....Advisor

(Dr. Yan Ye)

....Faculty Member

(Assoc. Prof. Dr. Suwattana Eamoraphan)

.... External Expert

(Asst. Prof. Dr. Sirirat Petsangsri)

ABSTRACT

I.D. No.: 5429512

Key Words: LEARNING STYLES, ETHNIC STUDENTS' BURMESE
LANGUAGE ACHIEVEMENT.

Name: LA SAN

Thesis Title: A COMPARATIVE STUDY OF ETHNIC STUDENTS' LEARNING

STYLES IN LEARNING BURMESE LANGUAGE AND THEIR ACHIEVEMENT

IN SELECTED SCHOOLS IN PYIN OO LWIN, MANDALAY REGION,

MYANMAR

Thesis Advisor: DR. YAN YE

The purpose of this study was to investigate the perceptual learning style of ethnic

students learning the Burmese language in selected schools and to compare the ethnic

student's achievement of learning the Burmese language according to their most

preferred learning styles. This research was conducted in four selected schools in Pyin

Oo Lwin, Mandalay Region, Myanmar. Seventy grade 11 ethnic students participated

in this study in the 2013 academic year. In this study, Reid's perceptual learning

styles questionnaire was used as a primary source which also covers ethnic students'

demographic profiles. For the Burmese language achievement, grade 11 ethnic

students' test scores were used. The data returned from the questionnaires was

analyzed by descriptive statistics, frequency and percentage, mean, standard

deviation, and One-Way Analysis of Variance (ANOVA). The study found that the

participants preferred tactile learning style most followed by auditory, kinesthetic, and

then individual and group learning style. In addition, there was no visual learning style in the most preferred learning styles of grade 11 ethnic students. There was no significant difference among grade 11 ethnic students' achievement of learning Burmese language according to their most preferred learning styles.

Field of Study: Curriculum and Instruction Student's signature………………..

Graduate School of Education Advisor's signature ………………

Academic Year 2013

ACKNOWLEDGEMENTS

CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

This chapter presents a brief of the study that describes background of the study, statement of the problem, research questions, research objectives, research hypothesis, theoretical framework, conceptual framework, scope of the study, definition of terms, and significance of the study.

Background of the Study

Myanmar has eight major national ethnic races groups including Kachin, Kaya, Kayin, Chin, Mon, Bamar, Rakhine, Shan. In these eight major national ethnic areas there are 135 diverse ethnic groups. In ethnic's areas such as Kachin and Shan, students are encouraged to speak their mother language. Most Shan and Kachin discourage their students from speaking Burmese. Kachin schools, which are located under control of The Kachin Independent Organization use Myanmar government school curriculum and the medium of instruction is both Kachin and Burmese. Kachin language is one of the compulsory subjects at these schools (Lwin, 2008).

In central Myanmar and cities, public schools, private schools and monastic schools use Burmese language as the medium of instruction, since Myanmar has rich of diverse culture and ethnic groups. The Burmese language is a compulsory subject for all Myanmar students from grade 1 to11. Current Myanmar schools textbooks are designed for Burmese students who speak Burmese as their mother language. Burmese language is second language for all the ethnic students. Their mother language is not Burmese and they were not encouraged to schools in central Myanmar and cities. They suffered due to their limited Burmese language skill in studying and interaction with their classmates and teachers. It discourages them and lets them feel difficult in learning Burmese language and need to take extra classes after public

schools. It is quite evident that most current Myanmar students have to take extra classes (known as special training center or tuition classes). The extra classes are run by private, communities, monks, and church organizations. Most teachers are from public schools and currently teach in public schools and some are retired teachers.

Students learn in different ways according to intelligences, interests, readiness, and modes of learning, speed of learning, and self awareness as a learner. Some of the students that like innovation and activities, immerse themselves in experiences, and like to work in groups in order to share and test ideas. Some may like to collect information as much as possible, analyze it and make decisions first, eager to look before they leap. Some students love to observe, adapt, and integrate their observations into frame-works. They love to make question and assessment on new information with possible ways adding new information into existing frame-works. They love to seek out, use and apply to practical and real problems. Some learners have good visual skills and prefer to learn by seeing visual presentations. They learn effectively by seeing forms such as, diagrams, graphs, maps, posters, and pictures. Some students have good auditory memory and prefer to learn by listening. They learn best when it has been explained to them orally. Some students learn best using their bodies and prefer to learn with physical activities, field trips, and practical lessons (Pritchard, 2005).

Many students have different intelligences, but the teachers do not provide differentiated instructions and the teaching styles are not match with student's intelligences. They struggle in school and give up, doubting their own capacities (Hoerr, 2000). Dunn stated that differentiated instruction is one of the most important educational issues in order to fit with learners' variances (Dunn, Honigsfeld, & Doolan, 2009). Many educators realized that each learner is different, have different

learning styles, different abilities, and skills. Successful learning is more likely happen when the educators value, respect variance of students and integrate it in teaching and learning process (McCombs & Miller, 2007).

The aim of differentiated instruction is to respond students' differences by providing different ways of teaching to support each student in order to understand the essential content. Differentiated instruction is based on the belief that students learn at high level when the instruction and their variation meet together (Tomlinson, 2010).

Understanding students' different learning styles help educators to plan instruction for different students. It helps ensure specific plans so that all different students get important and key content and helps to manage classroom flexible with the student variance. Each student variance is worth of dignity and respect. It provides equal learning opportunities to all different learners.

Statement of the Problem

The researcher believes that understanding students' different learning-styles and incorporating it into instructional strategies would promote effective learning, teaching and equal learning in selected schools. However, the teachers have been using teacher centered approach and traditional methods in most schools. They have not been using differentiated instructions based on student differences in learning styles, intelligences, interests, and readiness. In Myanmar, many teachers have being using traditional teaching method as a certain way of teaching method. It seems not fit and fair for all different students especially for the ethnic students.

There are no study students' different learning styles in selected schools. The researcher realizes that most ethnics' students are not comfortable with the traditional way of teaching and learning and are willing to learn alternative ways. On the other

hand, the teachers do not have enough time, information, and resources to research on student's learning style in selected schools. It has been observable and is quite evident that current instruction is not addressing to the differences in students learning styles. It is important to understand the differences students learning styles in order to improve teaching and to use effective differentiated instruction in selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar.

Therefore, the researcher believes that this study on students' learning styles helped the teachers to have a deeper understanding and awareness of students' different learning styles and as well as to promote an effective teaching and learning process in selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar.

Research Questions

1. What are the preferred learning styles of ethnic students learning Burmese language in selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar?

2. Are there any differences among ethnic students' achievement of learning Burmese language according to their most preferred learning styles?

Research Objectives

1. To investigate the preferred learning styles of ethnic students learning Burmese language in selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar.

2. To compare the ethnic student's achievement of learning Burmese language according to their most preferred learning styles.

Research Hypotheses

There are significant differences among grade 11 ethnic students' achievement of learning Burmese language according to their most preferred learning styles.

Theoretical Framework

In this study, the researcher applied the perceptual learning styles preferences as the theoretical basis. Reid (1984) developed and applied the concept of perceptual learning style preferences.

There are a lot of definitions about learning styles and it can be explained from different point of view, however, this study focused on perceptual learning styles. Reid is the one who developed the Perceptual Learning Style Preference Questionnaire and used as an instrument. Reid developed the concept of perceptual learning styles to assess the learning styles of ESL or EFL learners and it seemed the most suitable to test the learning styles of language learners. Therefore, it is applicable for the ethnic students who are learning Burmese language in selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar.

Reid developed perceptual learning style preference questionnaire based on Dunn's research out come by adding two more learning style categories such as, group and individual learning styles in 1984. According to the Dunn researched with school children in the United States, there are four basic perceptual learning styles such as, visual, auditory, kinesthetic, and tactile learning styles (Dunn, 1983 and Dunn & Dunn, 1979, both cited in Reid, 1987).

In Reid' Perceptual Learning-Style Preference Questionnaire, there are six categories of learning styles such as, visual, auditory, kinesthetic, tactile, group, and individual. Visual learners can learn the best by seeing, auditory learners can learn most effectively by hearing, kinesthetic learners learn by bodily experiences, tactile

learners learn better by hands-on experiences, group learners learn by working with

other or classmates, and individual learners learn most effectively by working alone

(Reid, 1984).

Conceptual Framework

This study aimed to identify the ethnic students' preferred learning styles in

learning Burmese language and compare their different achievement according to

their learning styles. The dependent variable was the Burmese language achievement

of ethnic student. The independent variable was preferred learning style of ethnic

student learning Burmese language. The following figure showed the conceptual

framework of this study.

Independent variable	Dependent variable
Preferred learning style - Visual - Auditory - Kinesthetic - Tactile - Group - Individual	- Ethnic students' Burmese language achievement
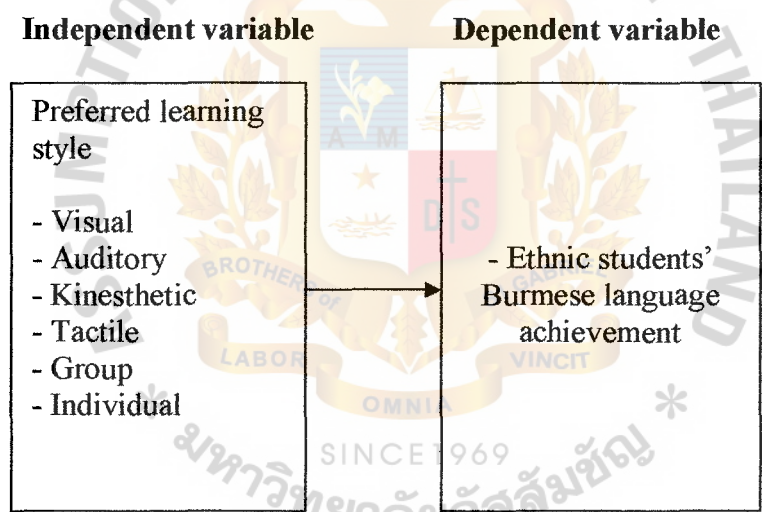
Figure 1. Conceptual Framework

Scope and Limitation of the Study

This study was conducted in grade 11 ethnic students learning Burmese language in four selected schools in Pyin Oo Lwin. The selected criteria for these four schools were: First, they all are used the same Myanmar national curriculum with added moral or spiritual subjects. Second, they all are run by organizations as private in the same city of Pyin Oo Lwin. Third, they offer ethnic students to stay and learn in Pyin Oo Lwin. Fourth, they all have grade 11 ethnic students. Based on these criteria, in Pyin Oo Lwin, there were only four schools matched all these criteria. Therefore, the researcher selected St. Matthew's Orphanage Center, Lisu Gayuna Orphanage School, Shwe Nalone Taw (Sacred Heart) Orphanage Center, and one privet high school for this study. This study took place in the Burmese language classes and conducted at four selected schools in Pyin Oo Lwin only.

Meanwhile, this study focused on only grade 11 ethnic students who are learning the Burmese language in selected schools. This study was conducted within 2013 academic year and student achievement was representing to the Burmese language scores of the examination that the researcher tested them.

Therefore, this research results may not be generalized to other subjects and other schools. Moreover, the researcher also realized that there might be some factors that affect ethnic students' achievement in learning Burmese language such as, social and cultural aspects, teaching styles, language aptitude, self awareness, interest and etc.

Definitions of Terms

Achievement refers to the evident of how much a student has learned and the outcome of a student's learning. In this study, student achievement is representing to the Burmese language score of the examination that the researcher tested them.

Ethnic students refer to the students those whose mother language is not Burmese such as, Kachin, Kaya, Kayin, Chin, Mon, Rahkai, and Shan.

Learning styles are the ways that individual use and the preferred ways of learner when they receive, process, store and retrieve new information and new experiences as they perceived. In this study, the researcher used Reid's perceptual learning style preferences questionnaire to measure the preferred learning styles of ethnic students.

Visual learners learn well by the visual channel or by presenting visually rather than listening to an oral explanation.

Auditory learners learn information effectively by hearing it.

Kinesthetic learners learn the more effectively when they get the more opportunities to involve physically in experiences.

Tactile learners learn best when they get chance to do hands- on experiences.

Group learners learn more easily and more successful completing work by working and learning with other classmates.

Individual learners learn best when they work on their own.

Selected schools refer to the schools that were selected by this researcher for conduction the study. They all matched the selecting criteria (as stated in chapter 3, population and sample) for the purpose of conducting this research. They are St. Matthew's Orphanage Center, Lisu Gayuna Orphanage School, Shwe Nalone Taw (Sacred Heart) Orphanage Center, and one private high school.

Significance of the Study

This study benefited to the teachers who taught Burmese language in four selected school to understand the learning style of ethnic students. The research helped to find out the preferred learning style of ethnic students in selected schools. This study provides a brief of learning styles theory. It was helpful for the teachers in lessons planning and helpful for the teachers to find out the effective ways to select appropriate methods of teaching in order to address the students learning styles. The students got opportunities to learn Burmese language with their preferred learning style and it encouraged and motivated them to learn Burmese language actively.

Furthermore, the study was valuable for the school principals and administrators that support the evaluation of the students' different preferred learning styles. This study helped administrators and principals to understand student's learning styles. It helped administrators and principals better to develop curriculum, to organize teacher-training programs and to develop an effective management system within their schools.

Finally, the researcher believed that this study enhanced the teaching and learning of Burmese language in selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar.

CHAPTER II

REVIEW OF LITERATURE

This chapter presents review of literature on learning styles. The objective of this chapter is to discus, highlight and relate important concepts of learning styles. The review of literature is about the nature of learner, concepts of learning styles, Carl Jung's learning styles model, Honey and Munford's learning styles model, Reid's perceptual learning style preferences, the learning style survey, multiple intelligences and learning styles, related studies of learning styles, criticisms of learning styles, a brief introduction of Myanmar education system, and historic background of sampling schools.

The Nature of Learner

The nature of learners is different and it is dependent on the individual. The various kinds of individual differences affect on individual learning. People learn in different ways according to their learning styles, background experience, culture, language, gender, interests, readiness to learn, modes of learning, speed of learning, self-awareness as a learner. These differences can be grouped such as cognitive, biological or physical, and social differences. Examples of biological or physical differences are aptitude, ethnicity, age, and gender.

Learners come to schools in different shapes and sizes; some learners arrive with being developed aptitudes whereas some do not. Some are fit, and healthy. In the classroom, some love to speak, listen, and make friends with each other. Others love to move around. All learners have different knowledge and different learning needs. Some learners love to take part in the learning and teaching activities and others need encouragement to participate. Males and females learners respond in different ways to the same instructions and teaching (MacGilchrist, Myers, & Reed, 2004).

The Concept of Learning Styles

Learning styles is a particular and preferred way an individual uses to gain skills and knowledge. Learning styles is habits, approaches, or regular mental behaviors when a person learns and applies new information and problem solving (Bennett, 2003). Learning styles is an approach that individual uses to make sense of new information and the way an individual use to perceive, process, store, and retrieve information and ideas (Grant & Sleeter, 1998).

Carl Jung's Learning Styles Model

Swiss psychologist Carl Jung stated that (1923 as cited in Silver, Strong, & Perini, 2000) human learning differences have two primary cognitive functions perception and judgment. Perception is the way that humans absorb information and judgment is the way that humans process the absorbed information. Human can perceive information both ways sensing and intuition. Human can judge information, either through of thinking or through of feeling. Human uses those four ways in learning such as sensing, intuition, thinking, and feeling. Sensing use of the sensory organs, the eyes, ears, nose, hands, and tongue inform humans that something exists. Intuition helps human learn about things that human cannot see, hear, smell, touch, or taste by making guesses or using the imagination. Thinking helps humans to understand the purpose of things. Feeling helps humans decide to like or dislike something.

Sensing-Thinking Learners or Mastery Learners prefer to work on logical, practical and useful things. Sensing- Thinking learners prefer hands-on, technical learning and focus more on things than ideas or people. Not only they are eager to work, they love to do more than listen to someone speak. They want immediate feedback on their task. They prefer step-by-step directions and clear instructions such

as what they have to do and how they have to do. They are very active to participate

in competitions and games. When instructions become long and complex they become

impatient. They may not be interested in an activity that moves too slowly and has no

practical use for it (Silver, Strong, & Perini, 2000).

Intuitive-Thinking Learners or Understanding Learners prefer to think about

things intellectually and patiently generate ideas in order to create a theory. Before

they start their work, they take time to organize ideas and necessary resources. They

can deal with difficult assignments patiently and persistently if they are interested in

it. They do not like time limitations when working on interesting things. They solve

problems by breaking it down into small parts. They prefer reasonable thinking that is

logical when they solve problems. Not only they love argument that base on logical

analysis but they are also concerned about objective truth more than fact (Silver,

Strong, & Perini, 2000).

Intuitive-Feeling Learners or Self-Expressive Learners dare to dream, commit

to their values, appreciate different point of views, search new ways all the time, and

express themselves with unusual ways. They are curious, insightful, imaginative, and

eager to explore ideas and create new ways to solve problems. They are motivated by

participation in imaginative activities that allow them to express their imaginations in

unique ways. They work creatively and do well on what they are interested in and do

poorly on what they do not like. They prefer to follow where their intuitions lead them

rather than to follow step by step procedures. Intuitive-feeling learners not only trust

their own insights but also they find their own solutions rather than following detailed

instructions (Silver, Strong, & Perini, 2000).

Sensing-Feeling Learners or Interpersonal Learners are sensitive to their own

feelings and others feelings. They are interested in people's affairs, preferring to listen

and talk about people's feelings. They learn and work best when they are emotionally involved in the learning process and when they feel relaxed, comfortable, and happy. In competition, they prefer to cooperate with each other. They need praise and are influenced by others opinions of liking or disliking them. They are motivated when they get opportunities to express their feelings and personal opinions. Sensing-feeling learners may fell bored and disengage when the learning is not related to human content and real life issues. Sometimes, they complete a task in order to please someone rather than doing it out of their own interest or desire to do it (Silver, Strong, & Perini, 2000).

Kolb's Learning Styles Model

Kolb's learning styles model is one of the most influential learning styles models and Kolb developed it in the early 1970s. Kolb's learning styles model was based on the Experiential Learning Theory. According to the Kolb, learning is a constant process based on experience, adaptation to the world, and communication process between the person and the environment. Kolb's theory was emphasized on grasping experience and transforming experience. Grasping experience consist two experience such as concrete experience and abstract conceptualization. Transforming experience contains reflective observation and active experimentation (Kolb, 1984). In Kolb's learning styles model, there are the convergent learning style, the divergent learning style, the assimilation learning style, and the accommodative learning style.

The convergent learning style learners rely mainly on abstract conceptualization and active experimentation learning abilities. The convergent learning style learners are good at problem solving, decision making, and also the utilization of ideas. The learners with convergent learning style do best in finding solutions to questions and problems and focus on specific problems. The convergent

learning style learners prefer to deal with technical tasks and problems rather than social issues (Kolb, 1984).

The divergent learning style learners emphasize on concrete experience and reflective observation. The divergent learning style learners are able to evaluate things from different perspectives and they look for the meaning of things. They prefer to look at instead of do. The learners with divergent learning style perform better in imagination and creative approach of doing things. They prefer to participate in group works, collect information, listen with an open mind, and receive personal feedback (Kolb, 1984).

Assimilation learners mainly have abstract conceptualization and reflective observation abilities. They are good at reasoning, understanding, and creating theoretical models and various ideas. The learners with assimilating learning styles prefer a brief and logical approach. They more concerned with ideas and abstract concepts rather than people and they love to participate in activities that offer them opportunities to plan and to research. They prefer to read, lectures, explore theories, and take time to think things in formal learning process (Kolb, 1984).

The accommodative learning style learners have highest abilities in concrete experience and active experimentation. They are good at carrying out plans in the real world and experiments. They prefer using intuition to solve problems and relying on others' analytic ability rather than carry out their own analysis for information. Accommodating learning styles learner prefer to work with other and in groups actively by trying with different ways to achieve a goal. But sometimes they are seemed impatient and pushy (Kolb, 1984).

Honey and Mumford's Learning Styles Model

There are four different learning styles according to Honey and Mumford such as Activists, Reflectors, Theorists, and Pragmatists (Honey & Mumford, 1986). Activist learners prefer to learn by doing rather than by reading or listening and the more opportunities they get to do the more they learn. They like innovation, activities, and group works in order to share and test ideas. They are open-minded, enthusiastic learners and they do not like repetition (Honey & Mumford, 1986).

Reflectors like to collect information as much as possible before they analyze and make decisions on information. For this reason, reflectors are often slow to make decisions, consider their own knowledge and beliefs. They watch and listen to others thoughts and ideas (Honey & Mumford, 1986).

Theorists love to observe, adapt, and integrate their observations into frame-works. Before they add new information into previous knowledge, they question and assess new information with possible ways. They have well-organized minds and they are eager to observe until they get a clear conclusion on their observations. They generally prefer a one-step at a time approach to problem solving and they solve problem logical.

Pragmatists prefer to seek out and use new ideas. Before making a judgment on new ideas and theories, they prefer to test practically. They want concepts that can be applied to practical and real problems. They learn best when they get opportunities to practice and try out (Honey & Mumford, 1986).

In different contexts, learners' learning styles can be changed and adopted. They may need to adopt one of four different styles in order to complete and to learn appropriately way (Pritchard, 2005). Neuro-Linguistic Programming research offers another description of learning styles. Neuro-Linguistic Programming focuses on the

ways of people's communication and how that affects learning. According to the

Neuro-Linguistic Programming research, there are three learning styles: visual,

auditory and kinesthetic learners (Pritchard, 2005).

Visual learners have good visual senses and learn best when they get chance to

see forms such as diagrams, graphs, maps, posters, pictures and displays. Auditory

learners have good auditory memory and they prefer to learn by listening. They learn

best and remember information more affectively when someone gives an explanation

to them orally. They learn more with discussion, lectures, interviewing, and hearing

from people and audio tapes.

Kinesthetic learners learn best by using their bodies and prefer to learn by

doing. They learn best with physical activities, field trips, and practical, first-hand

experiences. They remember new information more when they get chance to

participate in events and physical experiences rather than simply reading or listening

(Pritchard, 2005).

Reid's Perceptual Learning Style Preferences

Reid's perceptual learning style preferences model was based on the Dunn and

Dunn learning style model. Dunn and Dunn learning style model integrate five

aspects: environmental, emotional, sociological, physiological, and psychological

factors. The Dunn and Dunn learning style was formed from four basic perceptual

preferences: visual, auditory, kinesthetic, and tactile learning preferences. Reid (1984)

added another two more categories to Dunn and Dunn's model: group and individual

learning preferences. Dunn and Dunn classified group and individual learning

preferences as sociological factors. According to Reid (1987) perceptual learning

style is the characteristic of individual using different senses, natural, and habitual

when individual retrieve and interact new information and new facts. Dunn and other

researchers found out that very young children are primarily tactile and kinesthetic learners. In the fifth and sixth grade, their visual power develops and they gradually use auditory learning style to observe new information. (Price, Dunn, and Sanders, 1981, Keefe, 1978, as cited in Reid, 1987).

Before Reid's study of perceptual learning style preferences, most researchers had focused on cognitive styles and on conscious learning strategies in second language learning styles. Other studies investigated the importance of affective elements and cognitive styles in academic achievement. The other studies had focused on culture-specific modes. Researchers discovered that English as Second Language learners use different strategies in learning because they have different learning styles, affective styles, and cognitive styles (Reid, 1987). Reid (1987) also stated that ESL students have differences of language, cultural backgrounds, age, and previous education. They come together in intensive English language classes in which they are taught by a teacher who has limited knowledge of their individual learning styles. Moreover, neither students nor teachers are aware of the frustration and difficulty that students might face because of their differences of individual, language, culture, and learning styles. Reid (1987) developed and studied perceptual learning style preferences of ESL students and provided information of individual differences, language, and cultural differences. It was useful for future research. There are six different categories of major learning styles in Reid's model.

Visual major learning style preference: the learners who have Visual major learning style preference learn well by the visual channel or by presenting visually rather than listening to an oral explanation. They better remember and understand information when they get the opportunities to see it in Power Point or read it in

books and on whiteboards. Taking notes of oral instruction helps visual major learners effectively remember the information.

Auditory major learning style preference: An auditory major learner learns information effectively by hearing it. Auditory major learners may remember information more accurately when it has been explained to them orally as discussions, lectures, interviews, hearing from people, and use of audio materials. Reading aloud, teaching by other students, and talking with a teacher may benefit auditory major learners.

Kinesthetic major learning style preference: Kinesthetic major learning style preference learners learn more effectively when they get more opportunities to involve physically in experiences. Kinesthetic major learners learn best by participating in activities, field trips, and role-playing in the classroom. They prefer physical experiences rather than simply reading or listening. They may benefit from combination activities such as listening to an audiotape combined with a movement activity.

Tactile major learning style preference: Tactile major learners learn best when they get the chance to do hands- on experiences. They most successful learn by laboratory experiments, handling and constructing models, and touching and operating with materials. Their information retention may get benefit from participating in class activities and instruction and, writing notes.

Group major learning style preference: Learners with group learning style preference learn more easily and successfully completing work and learning with other classmates. They remember and understand new information better when they work with a group and communicate ideas with others.

Individual major learning style preference: Learners who have individual major learning style preference learn best when they work on their own. When they study or work alone, they understand new information better and make better improvement in the learning process.

Reid did the perceptual learning style preferences survey with about 1300 ESL students who were learning in English language programs around the United States and she published the results in 1987. In her large-scale survey, the students' mother languages were Spanish, Japanese, Chinese, Korean, Arabic, Malay, Indonesian and Thai. There are three classified degrees of preference: major, minor, and negative. Major learning style refers to the strong preference of learners' learning style, the most use learning style, or the most successful style with which the learner learns. Minor learning style refers to the learning style that the learner could learn information well by using it. Negative or negligible learning style indicates that it made learning more difficult for the learner using this style (Reid, 1984, 1998a).

The result from Reid's large-scale of perceptual learning style preference survey showed that most ESL students preferred kinesthetic and tactile learning styles and they did not prefer to use group-learning style. Of the193 Arabic students that responded to Reid's survey they had visual, auditory, kinesthetic, and tactile major learning styles and had group and individual as minor learning styles. There was no negative learning style among the Arabic students. One hundred and thirteen Malay ESL students were responded in Reid's survey and they also had no negative learning style. Malay ESL students had kinesthetic and tactile major learning styles and visual, auditory, group, and individual minor learning style. One hundred and thirty Japanese ESL students were among the sample in Reid's survey and they had no major learning style (Reid, 1998b). Reid's study data analysis showed that different mother language

and different culture learners have different preferences of major, minor, and negative learning styles. Reid stated that learner's specific major field seemed to influence learner's preferred learning style. For instance, an engineering major learner had tactile learning style preferences and on the other hand, a science major learner preferred to learn by visual learning style. The data in the Reid study also indicated that ESL students adjust and expand their learning styles according to their learning environment in which they are studying. ESL students learning style preferences become more similar to a native English speaker as they stay longer in the United States. Moreover, Reid suggested that practicing to use flexible learning styles and having ability to use various learning styles may help learners to study in the United States in the future for English as foreign language learners (Reid, 1998b).

Reid (1998) claimed that learning styles can be adapted and learned, and that learners' unaware learning styles could grow in to aware learning styles. The capability of using various learning styles could promote learning achievement and successful learning. Reid recommended that teachers not only carry out research in the class but also let students carry out research on their own learning style. As teachers and students research and develop more knowledge on different learning styles, they would benefit and experience more success in the learning process (Reid, 1998b).

The Learning Style Survey

The first well-known instrument purposely designed to assess the learning style of language learners was Reid's perceptual learning style preference questionnaire developed in 1984 (Cesur & Fer, 2009). After Reid developed the perceptual learning style preference questionnaire, there have been many researchers that have become interested in learning styles. Rebecca Oxford developed another

instrument for learning styles known as Style Analysis Survey (SAS) in 1993 (Cesur & Fer, 2009). In 2001, Cohen, Oxford, and Chi developed the Learning Style Survey (LSS) instrument. It was based on SAS and the authors increased the quality of original instruments by adding several dimensions and focusing on language related subjects. LSS has 11 learning style dimensions, 23 subscales, and 110 question items (Cohen, Oxford, and Chi, 2001). Although, the LSS instrument has been widely used in studies on language learning and can investigate many aspects of students learning style, this study focus on perceptual preferences of the students. Therefore, the researcher decided to use Reid's perceptual preferences learning style preferences questionnaire.

Multiple Intelligences and Learning Styles

Ancient Greeks stated that intelligence was capable of two great mental abilities, quickly understanding causes and situations, and making good moral choices. Buddhist beliefs that intelligence is the qualities of mind-wisdom, morality, and meditation that guides humans to view, think, and to act correctly in the society they are in. Christian philosophers stated that intelligence was minor to faith and goodness (Silver, Strong & Perini, 2000).

According the Gardner (1993) intelligence is the ability that a person uses to solve problems, generate solution, and make sense of what a person encounters in real life. Howard Gardner has developed the multiple intelligences theory. Originally, there were seven multiple intelligences in Gardner's theory and later, he added two more intelligences. The intelligence categories are expressed in the following paragraphs.

Verbal-linguistic intelligence is the ability to use the core operation of language and words with clearness. The significant components of this intelligence

are reading, writing, listening, speaking, storytelling, and prose writing. High verbal-linguistic people love to use words such as metaphors, and similes. People with a strong verbal-linguistic intelligence have the ability to read for hours at a time. Verbal-linguistic intelligent people have high-level auditory skills. They learn best when they can speak, listen, read, and write. (Gardner, 1993)

Haggerty mentions that linguistic ability is related to brain area called "Broca's area." This area takes vital role to perceive and convert ideas into the intended spoken message. The person who suffers damage to the Broca's area can understand words and sentences well, but they face difficulties combining them into sentences. On the other hand, the people who suffer damage to this brain area are able to speak normally and to understand written language. He concluded that language as intelligence is supported by the regularity development in children across cultures. (Haggerty, 1995).

Logical-Mathematical intelligence is the ability to use numbers and reasoning, solve abstract problems, and understand the complex relationships of solid concepts, ideas, and things. The skills of classifying, predicting, formulating scientific hypotheses, and understanding cause-effect relationships are high in a person with the logical-Mathematical intelligence. People with logical-mathematical intelligence apply logical thinking in science, social studies, and literature. They think and question in terms of concepts and love to put ideas to the test (Gardner, 1993).

Visual-spatial intelligence is the capacity of perceiving, creating, and re-creating pictures and images. It includes the ability to see form, color, shape, and grain in the "mind's eye and express these in concrete art forms. People like artists, engineers, architects, photographers, painters, and sculptors use spatial intelligence. People with visual-spatial intelligence mix prior knowledge with experience,

emotions, and images to build a new image and able to transfer words and impressions into mental images (Gardner, 1993).

Musical intelligence is the ability to create melody, rhythm and the ability to respond emotionally it as well as to understand, appreciate, and form opinions about music. Singing in key, keeping tempo, analyzing musical forms, and creating musical expression are abilities of a musical intelligent person and they are sensitive to all types of nonverbal sounds and rhythms of everyday noise (Gardner, 1993).

Bodily-kinesthetic intelligence is the ability to control, interpret, and establish harmony between the mind and the body. People with the bodily-kinesthetic intelligence enjoy physical challenges and they learn best by doing, moving, and acting things out (Gardner, 1993).

Interpersonal intelligence is the intelligence of social understanding and the ability work well with others. People with interpersonal intelligence know how to judge, classify, and react to the personalities of others. Interpersonal intelligence includes communication, consensus-building, collaborative skills, as well as the ability to trust, respect, lead and motivate others to achievement. Generally excellent team players and managers are interpersonal intelligent people and they learn best by relating to other people (Gardner, 1993).

Intrapersonal intelligence is the ability of self-knowledge or the ability to gain access to their own feelings and emotional states. People with intrapersonal intelligence understand their own range of emotions, take responsibility for their own lives, learning, and complete self-assessments. They trust their self-understanding and usually choose to work on their own and they able to form goals and their own conceptions (Gardner, 1993).

Naturalist intelligence is the ability to recognize species of plants and animals and this intelligence is found in those who are familiar to the natural world of species as well as to natural geography and natural objects. People with naturalist intelligence love to be outdoors and love to observe patterns, feature, and differences of species and natural things. They love to classify and categorize natural and living objects. They show appreciation and deep understanding of the environment (Gardner, 1993, as cited in Pritchard, 2005). Existential intelligence is the ability that asks and examines matters of life, death and realities (Gardner, 1993, as cited in Pritchard, 2005).

However, the multiple intelligence theory focuses more on the content of learning and the relationship between intelligence fields and learning rather than how people observe and process information. On the other hand, the learning styles theory focuses on the individual process of learning and observation of information, but the learning style theory does not address the content of that learning style directly. Multiple intelligence theory is incapable to account for different processes of learning without learning styles and learning styles are unable to account for the content of learning without multiple intelligences. Moreover, the different intelligence styles are operating in individual different learning styles (Silver, Strong, & Perini, 2000).

Although, multiple intelligence theory does not offer both the complete theory of human nature and a complete theory of education, it contributes to seek and help students understand their intelligences (Haggerty 1995).

Related Studies of Learning Styles

Many researchers are aware of the research in the fields of learning styles and multiple intelligences and have developed instruments to find out the relationship between learning styles and academic achievements of students. Finely (2000) made a

study on the learning styles and academic achievements of the high school students in United States. The result indicated that 81 percent of the kinesthetic learners took an active part in the class and learned better than the passive students. The addition result showed that 64 percent of the students could become global learners when they get opportunity to learn with relevance pictures of the subject.

Levinsohn (2007) investigated the differences of Chinese and European students' learning styles and approaches to learning in New Zealand. The result made from this study showed that Chinese students are more result focused and that European students are more focused on vocation. Previous knowledge, cultural beliefs and educational history might have affected the differences of two student groups.

Wilson-Hull (2008) investigated whether the teachers address learning styles at the middle school level in the Mississippi Delta Region. The investigation focused on learning styles and the impact of learning styles in the teaching process. In addition, the study identified which learning styles were addressed in lesson plans, instruction, and assessment. The result indicated that the learning styles that are addressed in lesson plans, instruction, and assessment enhance educational achievement.

Juris, Ramos, and Castaneda (2009) explored the learning styles of students and whether the teaching styles of teachers matched the learning styles of students in the public and private schools of four cities in Colombia. Two hundred fifty-four students and 9 teachers participated in the study. The result showed that the most preferred style was kinesthetic and follow by tactile learning style and then auditory. An additional observation is that the teachers did not teach in style that matched with the students learning styles.

Makhlouf, Witte, and Dahawy (2012) studied a comparison of preferred leaning styles between vocational and academic secondary school students in Egypt. In this study, 441 students participated and out of them, 261 students were from academic secondary schools and 180 were from vocational secondary schools. The result showed that there are no significant ability differences between male and female students with auditory and visual learning styles. However, there were significantly different results found among those with a Kinesthetic learning style. In a kinesthetic learning style, male students were significantly higher than female students in academic secondary schools. On the other hand, the female students had higher kinesthetic learning ability than male students in vocational schools. In addition finding result, there were no statistical differences among the auditory, visual and kinesthetic abilities.

Criticisms of Learning Styles

There are a lot of studies and researches on learning styles around the world. Although the models seem useful for improving learning and teaching, there are some criticisms on it. Curry (1990) argued that the field of learning style researchers tends to investigate only a part of the whole and provide a definitive picture like the blind men in the story about the elephant. Curry mention that learning style theory has various definition and wide variation in the scale and the scope of learning. Some definitions only predict and state an individual's while other predicted by various learning style concepts. Learning style theory has problem in the accumulated evidence for the reliability and validity of measurements. In addition, learning style theory has weakness in classification of relevant characteristics in learners and instructional settings (Curry, 1990).

Renou (2008) argued that there are differences in the components that make up each one even within learning styles. For example, in the category of perceptual learning styles there are three styles such as visual, tactile and kinesthetic (Dunn, Dunn & Price,1975, as cited in Renou, 2008). In Keefe's theory there are kinesthetic/psychomotor, visual/spatial, and auditory/verbal (Keefe, 1979, as cited in Renou, 2008). While in Reid's perceptual learning style there are visual, auditory, tactile, kinesthetic, group and individual learning styles Reid (1995). As result, the instruments chosen to measure a learning style differ from one researcher to another (Renou, 2008). Researchers studied the overview of learning-style models and identified 71 models of learning styles published from 1902 to 2002 (Hall & Moseley, 2005, as cited in Renou, 2008).

The concepts of learning styles have endless and various probable components and lack exact definition. The literatures define, categorize, and measure with a number of different ways on the concept of learning styles. Among researchers, there is no agreement on definition, categorization, and measurement and there are many factors or elements that constitute a learning style. Moreover, it is difficult to form essential factors to be measured (Fujita, 2008, as cited in Katsuda, 2012).

Scott argued that researchers invented a variety of instruments to assess the learning style. Although all these instruments intend to measure learning styles, they do not actually assess using the same criteria. Some instruments intend to measure perceptual styles. Others are more concerned with cognitive styles, while still others focus on factors such as motivation and personality. There is no possible way to integrate all the different theories, models, and ideas in to one group of learning styles (Scott, 2010).

The application of learning styles is one of the issues of criticism and concern. Expecting teachers to teach to every student's learning styles is practically impossible. Alexander (2009) argued that the teachers cannot structure and create instruction for all learning styles in one instruction for each learner. Measuring learning styles does not offer and guide the teacher to create instructional strategies. Using the results of only one instrument on learner's preferred styles may not improve instruction since there are various different instruments to measure learner's preferred styles (Scott, 2010).

Criticism on matching teaching and learning styles is a major concern of researchers. Peacock (2001) studied the connection between learning and teaching styles based on Reid's hypotheses and he stated that a mismatch between teaching and learning styles lead to learning failure, limitation of learners' motivation and frustration. Therefore, the supporter of learning styles generally claims that effective learning happen when teaching styles and learners' learning styles match together.

Labeling of learners' learning styles is also a major concern of researchers. Some research mention that students those who have some difficulties in academic learning are likely to be judged as kinesthetic or tactile learners. Scoot (2010) argued that this kind of labeling could become self-fulfilling prophecy. The expectations of teacher on students' behavior could actually cause such student behavior to happen and it will limit students' potential and unintentionally decide what they can and cannot do in learning process (Scott, 2010). Learning style: the debate (n.d.) argued that Labeling on learner could be used by some learners as an excuse for their failure and students could use as a reason to blame teachers' instructions that do not match with their learning style.

Spoon and Shell, however, argued that many studies on learning styles are mainly focused on the achievements of high school students and not focused on adult learners. Moreover, they argued that matching teaching and learning styles is not focused on adult and basic skill learners primarily because learning style may differ according to age and situational factors such as the type of class or subject being studied (Spoon and Shell, 1998, as cited in Brown, 2003). Similarly, Garton, Spain, Lamberson, and Spiers (1999) investigated the practical relationship between the teaching style and learning styles of students. They found out that there is no practical relationship between the teaching styles and learning styles of students.

Brown (2003) mention that there are benefits of matching teaching style and learning style, but it alone does not guarantee greater learner's achievement. Age, educational level, and motivation influence student learning styles causing preferred learning styles to change over time.

There is a lot of research and literature concerning learning styles, but there is not enough research and studies that used an experimental methodology. The validity of learning styles applied in the classroom is limited (Pashler, Daniel, Rohrer, and Bjork , 2009, as cited in Katsuda, 2012).

Learning styles are still an interesting and emerging concept and it needs further practical investigation. It is important to prove that the learning styles concept is useful offer more practical evidence and effectiveness as applied in teaching and learning practices (Dornyei and Skehan, 2005).

A Brief Introduction to Myanmar Education System

In the Myanmar education system, there are four levels: elementary education (grade 1 to 5), middle intermediate school (grade 6 to 9), Secondary education or high school (grade 10 to11), and higher education (Universities). There are three different

kinds of schools in Myanmar. There are public, Monastic, and private schools. Public schools are run by the ministry of education. Curriculum is text-book based and the ministry of education develops the national curriculum. Monastic schools are run by Buddhist monks and Christian organizations and they use the national curriculum. Private schools are operated by private companies and they use the ministry of education's national curriculum. Most of the private school's concern is to teach the students to master the English language (Lwin, 2008).

There are different educational qualities between central Myanmar and ethnically remote areas. Because of civil war the ethnic national schools are not stable and there is limited schooling for the students in remote areas such as Kachin, Shan, Mon states, and the Wa area (Lwin, 2008). As a result, some students from ethnic remote areas have migrated to cities and central Myanmar to get better opportunities for schooling. Most students live at compassion homes, orphanage centers, and monasteries run by communities, monks and church organizations.

The researcher, as a teacher in St. Matthew's orphanage center has observed the learning styles of ethnic students and the researcher saw that some ethnic students have a visual learning style. They prefer to learn by seeing pictures rather than listening to oral explanations. Some ethnic students have an auditory learning style and they prefer to learn by reading aloud, and talking with teachers and other class-mate. Some students have a kinesthetic learning style and they love to learn by physical experiences rather than simply reading and listening. Some students have a tactile learning style and they love to participate in activities, writing notes, and love to do hands-on experiences. Moreover the researcher also has observed the achievement of ethnic students learning Burmese language. According to the researcher's observation, the ethnic students have struggled in learning Burmese

language since the current use text-book is designed for Burmese mother language speaker and it may affect the ethnic students' Burmese language achievement.

Historic Background of Sampling Schools in Mandalay Region

Compassion Home was established in the Calvary Baptist Church compound in 1987 and the founder was Rev. Htun La who was a pastor of St. Matthew Kachin Baptist Church. Compassion Home was moved from the grounds of the Calvary Baptist Church, to the St. Matthew's Church compound in 1990. In 2003, Compassion Home changed its name to St. Matthew's Orphanage Center. The objective of St. Matthew's Orphanage Center (SMOC) is to provide quality education within a caring Christian environment and to encourage leadership, thought and development of life-long learning skills. The ultimate goal of the school is to nurture all students to become good citizens and live peacefully with other people in Myanmar and in the world by reflecting Jesus' character, love, and wisdom. SMOC is only one orphanage center that run by the Kachin Baptist Church in Pyin Oo Lwin for the ethnic students. The school chooses Myanmar national curriculum as their curriculum and adds some subjects such as music, spiritual, and moral development. The school uses Burmese and Kachin as the medium of instruction for teaching and communication.

Lisu Gayuna Orphanage School is one of the schools that are run by a Lisu Christian organization and it was founded in 1999 by U Salahti and Sayama Yuwadi. It was the first and only orphanage school in Pyin Oo Lwin for the Lisu ethnic group. The school provides accommodation and the students stay at the Lisu Gayuna Orphanage School and they also go to the public school. The school curriculum is the same as the public school's national curriculum and the ministry of education developed it. In addition, the school provides moral and spiritual education. The

class's schedules are before and after the public school time. The school use Burmese as a medium of instruction since Burmese is the official language in Myanmar.

The association of Franciscan Sisters of St. Aloysius Gonzaga was founded 80 years ago in Pyin Oo Lwin and this association is operating the Shwe Nalone Taw (Sacred Heart) orphanage center, established in 2002. Shwe Nalone Taw orphanage center is one of the schools that provide accommodation and education for ethnic orphan students from remote areas. Sister Felomila Aye Thantha is leading the school and the goal of the school is to provide loving and passionate teaching for the students. They use the Myanmar national curriculum developed by the ministry of education in addition to provide moral and spiritual guidance. The school encourages students' positive local and global attitudes in the students every day experiences. The students have to attend class at both Shwe Nalone Taw (Sacred Heart) orphanage center and public school. One private high school's principal asked the researcher not to mention historic background of their school due to confidential.

Mandalay region is located in the central dry zone of Myanmar and the economic center of upper Myanmar. Mandalay region is considered as the centre of Myanmar culture. It has the best educational facilities and institutions, after Yangon region in Myanmar. Pyin Oo Lwin was an important educational centre and the location of the various schools open to all ethnicities in Mandalay region.

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents the research design, population, research instrument, validity and reliability of the instrument, collection of data, data analysis, and summary of the research process.

Research Design

This research was designed as a quantitative research and a questionnaire was used to investigate the perceptual learning style preferences as well as to measure grade 11 ethnic students' Burmese language achievement in selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar.

The questionnaire had two parts. In part one, the researcher tried to identify demographics of grade 11 ethnic students and perceptual learning style preferences questionnaire developed by Reid (1984) was applied to identify the preferred learning style of grade 11 ethnic students. In part two, one set of Burmese language questionnaire was used to test the grade 11 ethnic students in order to find out the students' Burmese language scores.

Population

The researcher selected four schools that match with the following criteria. First, they all used the same Myanmar national curriculum with added moral or spiritual subjects. Second, they all are run by private and Christian organizations in the same city of Pyin Oo Lwin. Third, they offer ethnic students to stay and learn in Pyin Oo Lwin. Fourth, they all have grade 11 ethnic students. This study was conducted in Pyin Oo Lwin, Mandalay Region, Myanmar. The researcher selected grade 11 ethnic students learning the Burmese language in St. Matthew's Orphanage

Center (SMOC), Lisu Gayuna Orphanage School, and Shwe Nalone Taw (Sacred

Heart) Orphanage Center and one private high school as the population of this study.

Sample

Every year, there were around 100 grade 11 ethnic students in the four

selected schools. The researcher selected 2013 academic year grade 11 ethnic students

from the four schools as the sample of this study. The total number of 2013 academic

year grade 11 ethnic students from the 4 selected schools was 70. The following table

shows the number of 2013 academic year grade 11 ethnic students from each selected

school.

Table 1

Numbers of Grade 11 ethnic students from the four schools in Pyin Oo Lwin,
Mandalay Region, Myanmar

Name of the school	Grade 11 ethnic students
St. Matthew's Orphanage Center	23
Lisu Gayuna Orphanage School	9
Shwe Nalone Taw (Sacred Heart) Orphanage Center	8
One private high school	30
Total number of grade 11 ethnic students	70

Research Instrument

The researcher used the Perceptual Learning-Style Preference Questionnaire

developed by Reid (1984) and a set of the questionnaire for Burmese language. Reid's

questionnaire was developed especially to assess the learning styles of language

learners. It has been used by many researchers in many studies to assess the learning

styles of language learners and it' validity and reliability have been demonstrated.

Therefore, the researchers chose this questionnaire to assess the learning styles of

ethnic students learning Burmese language in selected schools. The researcher

attached a cover letter with the questionnaire. The intention of the letter was to

explain the objective of the study and to promise that all the information of respondents would be strictly confidential and the results would only be used in this study and will not be used in any other purposes. In demographic part, the researcher asked students' name, gender, and ethnic group. The aim of asking name was to identify the students' scores for learning Burmese language.

The Perceptual Learning-Style Preference Questionnaire

The original developer of the perceptual learning-styles preference questionnaire (PLSPQ) was Reid and intended to assess the perceptual learning-style preferences of ESL students in the United States. There are six categories of perceptual learning style preferences in the PLSPQ such as visual, auditory, kinesthetic, tactile, group, and individual. In this questionnaire there are 5 questions for each of the six learning style categories 30 questions in total (Appendix A). The researcher adapted the questionnaire of Reid (1984) by replacing the word "English" with "Burmese". Table 2 displays the question item numbers corresponding to each of the preference learning-style.

Table 2

Detailed of the Perceptual Learning-Style Preference Questionnaire

Learning Styles	Question Item Number	Total question items of Each learning style category
Visual	6,10,12,24,29	5
Auditory	1,7,9,17,20	5
Kinesthetic	2,8,15,19,26	5
Tactile	11,14,16,22,25	5
Group	3,4,5,21,23	5
Individual	13,18,27,28,30	5
Total		30

There are 5 point likert scales in this questionnaire to find out the attitude of ethnic students toward each statement. Ethnic students were asked and had to decide on each statement whether they agreed or disagreed. After they decided, they needed to mark one of the boxes: strongly disagree, disagree, undecided, agree, or strongly agree. The numerical values, scores, scales represented the level of agreement were listed as follows.

Level of agreement	Score	Scale
Strongly disagree	1	1.00-1.49
Disagree	2	1.50-2.49
Undecided	3	2.50-3.49
Agree	4	3.50-4.49
Strongly agree	5	4.50-5.00

In this study, to identify preferred learning styles of grade 11 ethnic students and to compare the student's Burmese language achievement according to the most preferred learning style of each grade 11 ethnic students. The research firstly group the scores of each learning styles according to the question items as listed on last page, then computed the means and standard deviation for each learning style based on the replied data, the highest means was used to represent the most preferred learning style. Table 3 showed the example for deciding the most preferred learning styles for each grade 11 ethnic students based on their mean scores.

Table 3

Example for deciding ethnic students' Learning styles based on their mean scores

Student	Mean score of Visual	Mean Score of Auditory	Mean Score of Kinesthetic	Mean Score of Tactile	Mean Score of Group	Mean Score of Individual	Most preferred Learning Style
1	3.80	4.20	5.00	4.60	4.00	4.40	Kinesthetic
2	4.00	4.40	4.20	3.80	4.60	5.00	Individual
3	4.60	4.40	4.20	5.00	3.80	4.00	Tactile
4	3.00	3.60	3.80	2.20	4.20	2.00	Group
5	4.40	5.00	4.00	4.60	3.20	1.40	Auditory

The Test Used to Measure the Burmese Language' Achievement

For the Burmese language achievement, the researcher used government-standardized paper for grade 11 to test ethnic students in all four selected schools. The test was based on the standard Burmese language questionnaire of the Myanmar Board of Examinations, in the Ministry of Education, Myanmar. There are six questions in this Burmese language test and the total score was 100.

Question one dealt with Burmese grammar rules and consisted of three items. The first item asked the students to give the definition of one out of five grammar terms. The second item asked the students to identify four out of six grammar terms. The third item asked the students to construct three sentences by using the given words.

Question two tested the students' understanding of grammatical terms from poems and stories; it had three items. In the first item, students had to define five out of eight selected terms from poems and stories. In the second item, students had to construct five sentences out of seven given words from poems and stories. In the third item, students had to discuss about five out of eight given similes from the poems and stories.

Question three consisted of two items. The first item asked students to answer five of the eight short questions that required factual knowledge of the poems. The second item asked students to discuss the writing style and performance of one of two poems.

Question four also consisted of two items. The first item asked students to answer five of eight short questions that required factual knowledge of the stories. The second item also asked students to discuss writing style and performance of one of two stories.

In question five, both items asked students to write a brief discussion of one of two given stories. Question seven measured the writing skills by asking students to write one essay out of three given topics.

Translation Process

For this study, the cover letter and questionnaire of PLSPQ was translated into Burmese for the convenience of ethnic students. The researcher and Mr. Aung Li translated the questionnaire and cover letter from English to Burmese (Appendix B). Then, the researcher requested the help of three experts based on the following criteria. First, they have native-level skills in both English and Burmese. Second they have teaching experience more than five years. Third, they all are master degree holder in educational field.

According to their corrections and comments, the researcher replaced some words and grammatically changed in some questions items. After the literally consistent and grammatically accurate of questionnaire had been approved and changed, the researcher distributed the Burmese version questionnaire.

Validity and Reliability of the PLSPQ and Burmese Language Test

The perceptual learning-styles preference questionnaire (PLSPQ) was validated by the split-half method in past research (Reid, 1987). Renou (2008) stated that the PLSPQ generally had high reliability. Cheng investigated the reliability of the PLSPQ by doing one pilot study and the Cronbach's alpha was 0.81 (Cheng, 1997, as cited in Chen, 2009). On the other hand, according to some studies, there are questions on the validity and reliability of the PLSPQ. In Isemonger and Sheppard's study the reliability of the PLSPQ was lower with the Korean version (Isemonger & Sheppard, 2007, as cited in Renou, 2008). However, despite the criticisms on the reliability of the PLSPQ, the researcher considers to use the PLSPQ instrument to assess perceptual learning styles. The researcher carried out the reliability analysis of the questionnaire from the seventy set of the questionnaires and calculated by Cronbach's alpha coefficient. The value of Cronbach's Alpha of this study was .71.

The researcher used a government-standardized questionnaire to test ethnic grade 11 ethnic students for the Burmese language achievement. The content of the test was validated by the Myanmar Board of Examinations, in the Ministry of Education, Myanmar for over a decade.

Collection of Data

To start the research, the researcher got the permission of the school director and administrator of St. Matthew's Orphanage Center, Lisu Gayuna Orphanage School, Shwe Nalone Taw (Sacred Heart) Orphanage Center, and one private high school for this study.

The research was conducted during the last week of September and in the first week of November, 2013 in four schools. The researcher distributed a total of 30 PLSPQ questionnaires to the principal of one private high school on 21st September,

2013. The researcher picked the PLSPQ questionnaires and Burmese language scores of grade 11 ethnic students up from the principal of one private high school on 25th September 2013, and the returned questionnaires were 30 out of 30, the returned valid reached 100%.

On September 22nd 2013, the researcher carried out the PLSPQ survey and on September 29th, 2013 the researcher tested Burmese language at the Lisu Gayuna Orphanage School. The returned valid questionnaire reached 100%. The researcher carried out the questionnaire and tested Burmese language at Shwe Nalone Taw (Sacred Heart) Orphanage Center on November 4th, 2013, Friday 09:00-12:30. Before carrying out the questionnaire, the researcher explained the purpose of his study. The returned questionnaire validity of Shwe Nalone Taw (Sacred Heart) Orphanage Center was 100%. On October 5th 2013, the researcher carried out the survey and tested Burmese language at St's Matthew Orphanage Center. The returned valid questionnaire reached 100%.

Data Analysis

The researcher used descriptive statistics and One-Way Analysis of Variance (ANOVA) to analyze collected data from the questionnaire. The following statistical methods were used for the objectives of this study.

For objective 1, means and standard deviation were used to determine the preferred learning style of the ethnic students. Frequencies and percentage was used to report preferred learning-style of the ethnic students in four selected schools.

For objective 2, One-Way Analysis of Variance (ANOVA) was used to compare the ethnic student's achievement of learning Burmese language according to their most preferred learning styles.

Table 4

Summary of the Research Process

Research Objective	Source of Data or Sample	Data Collection Method or Research Instrument	Data Analysis
1. To investigate the preferred learning styles of ethnic students learning Burmese language in selected schools in Pyin Oo Lwin, Mandalay region, Myanmar.	70 grade 11 ethnic students learning Burmese language in selected schools	The Perceptual Learning-Style Preference Questionnaire and Burmese language questionnaire	Means, Standard Deviation, Frequency, Percentages
2. To compare the ethnic student's achievement of learning Burmese language according to their most preferred learning styles.	70 grade 11 ethnic students learning Burmese language in selected schools	A Standardized Test for all Grade 11 ethnic students	One way ANOVA

CHAPTER IV

RESEARCH FINDINGS

In this chapter, the researcher presents the findings and interpretation of the data obtained by 70 respondents. In this study, there are two parts in the questionnaire. A demographic part and the PLSPQ part were consisted in the first part of questionnaire. The second part consisted of grade 11 Burmese language questionnaire. The researcher chose 70 grade 11ethnic students learning Burmese language in the four schools as the sample of this study. The researcher conducted the survey between September 21st and October 5th, 2013. The researcher distributed a total of 70 questionnaires to the targeted population. The 70 questionnaires had been received and the respondents' valid returned rate was 100%. The researcher asked grade 11 ethnic students' name, gender, grade level, and ethnic group. Table 5 presented the numbers of respondents separated by gender.

Table 5

The numbers of the respondents categorized by gender

Gender	One private high school	Shwe Nalone Taw (Sacred Heart) Orphanage Center	Lisu Gayuna Orphanage School	St. Matthew's Orphanage Center
Female	30	8	6	12
Male	-	-	3	11
Total	30	8	9	23

Table 5 indicated that there were total 56 female and 14 male grade 11 ethnic students respond in this study. There were total 70 respondents in this study. Table 6 shows that most of the respondents were 31 (44.3%) Kachin, 8 (11.4%) respondents were Shan , 2 (2.9%) respondents were Rekhine, 9 (12.9%) respondents were Chin, 2 (2.9%) respondents were Kayah. 3 (4.3%) respondents were Kayin, 2 (2.9%) respondents were Naga, 2 (2.9%) respondents were Wa. 9 (12.9%) respondents were Lisu, and 2 (2.9%) respondents were Palaung ethnic students.

Table 6

The numbers of the respondents categorized by ethnic group

Ethnic group	Frequency	Percentage
Kachin	31	44.3
Shan	8	11.4
Rakhine	2	2.9
Chin	9	12.9
Kayah	2	2.9
Kayin	3	4.3
Naga	2	2.9
Wa	2	2.9
Lisu	9	12.9
Palaung	2	2.9
Total	70	100

According to the research objectives of the study, data analysis and research findings were presented as follow.

1. To investigate the preferred learning styles of ethnic students learning Burmese language in selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar.

2. To compare the ethnic student's achievements of learning Burmese language according to their most preferred learning styles.

Research Finding of Research objective one

The researcher collected data from the PLSPQ questionnaire and used for objective one: To determined the preferred learning styles of ethnic students learning Burmese language in selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar. The PLSPQ questionnaire exam ethnic students' preferred perceptual learning styles from six categories: visual, auditory, kinesthetic, tactile, group, and individual learning styles. Thirty statements comprise the PLSPQ questionnaire and a 5-point likert scale (strongly disagree, disagree, undecided, agree, and strongly agree) was used to investigate ethnic students' preference toward each statement.

To identify preferred learning styles of ethnic students, the mean scores of each learning styles responded by grade 11 ethnic students were used. Among 70 grade 11 ethnic students, there were 19 students (27%) got the highest mean scores for tactile learning style, 16 students (23%) got the highest mean scores for auditory learning styles, 16 students (23%) got the highest mean scores for kinesthetic learning styles, 12 students (17%) got the highest scores for individual learning style, and 7 students (10%) got the highest scores for group learning style. There were no highest scores for visual learning style of grade 11 ethnic students learning Burmese language in four selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar (Appendix C).

Table 7 presented preferred learning styles of grade 11 ethnic students. The result pointed out that the most preferred learning style of grade 11 ethnic students was tactile (27%) and followed by auditory (23%), Kinesthetic (23%), and then individual (17%) and group learning style (10%). In addition, grade 11 ethnic students not preferred visual learning style.

Table 7

Frequency and percentage of the grade 11 ethnic students' learning styles

Learning style	Frequency	Percentage
Tactile	19	27
Auditory	16	23
Kinesthetic	16	23
Individual	12	17
Group	7	10
Visual	0	0
Total	70	100

Research Finding of Research objective two

The highest mean scores for the perceptual learning style of each grade 11 ethnic students and ethnic students' Burmese language scores were used for research objective two: To compare ethnic students' Burmese language achievement according to their most preferred learning styles. The researcher used one way ANOVA to compare the ethnic student's achievement of learning Burmese language according to their most preferred learning styles. Table 8 showed that the highest mean score of the grade 11 ethnic students for learning styles was tactile and followed by kinesthetic, auditory, and then group and visual learning style. The least mean score of grade 11 ethnic students was individual learning style. Table 8 showed the mean scores of grade 11 ethnic students' learning styles.

Table 8

The mean scores of the grade 11 ethnic students' learning styles

Learning Styles	N	Mean	Std. Deviation
Visual	70	3.4571	.64349
Auditory	70	3.9371	.55067
Kinesthetic	70	3.9914	.56202
Tactile	70	4.0286	.56495
Group	70	3.6257	.68940
Individual	70	3.1314	1.03385

Table 9 indicated that the probability significance of .433 was bigger than .05, which means there were no significant differences between the means of grade 11 ethnic students learning Burmese language achievement according to their most preferred leadership styles. Therefore, hypothesis "There are significant differences among grade 11 ethnic students' achievement of learning Burmese language according to their most preferred learning styles" was rejected and there were no significant differences among grade 11 ethnic students' achievement of learning Burmese language according to their most preferred learning styles in four selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar.

Table 9

Comparing grade 11 ethnic students' Burmese language achievement according to their most preferred learning styles

Learning styles	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	703.290	4	175.822	.965	.433
Within Groups	11838.153	65	182.125		
Total	12541.443	69			

Summary

In this chapter, the researcher presented the research findings of this study. The research findings are presented according to research objectives as the followings. For the research objective one, the result found out that the grade 11 ethnic students learning Burmese language in four selected schools preferred learning style was tactile most and followed by auditory, Kinesthetic, and then individual and group learning style. There was no significant difference Burmese language achievement among grade 11 ethnic students learning Burmese language according to their most preferred learning styles in four selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar. In addition, there were 10 ethnic group student participants in this study and 54 female and 14 male grade 11 ethnic students participated in this study as well as they are not prefer visual learning style.

CHAPTER V

CONCLUSION, DISCUSSION, AND RECOMMENDATIONS

In this chapter, the researcher presents a summary of this study including the research objectives and hypotheses, research methodology, and findings. It will then provide conclusions of the research, discuss the implications of those findings, and offer recommendations for both practice and future research.

Learning styles have been considered as important differences that influence language learning. It is important to have knowledge of individual differences in order to implement differentiated instruction and to meet the different learner needs. Every learner has different learning ways and preferred learning styles. The researcher, as a teacher at St. Matthew's Orphanage Center, became aware of and interested in these individual differences of ethnic students. The most important purpose of this study was to investigate the perceptual learning styles preferences and to compare the Burmese language achievement according to their most preferred learning among grade 11 ethnic students learning Burmese language in four selected schools. There was a lot of research on learning styles but there was no study on ethnic students' different learning styles in four selected schools.

The sample of this study was 70 grade 11 ethnic students from four selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar. A PLSPQ questionnaire was given to each grade 11 ethnic students to investigate their preferred learning styles. The students have completed the Burmese language test and the scores were used for Burmese language achievement. A total 70 questionnaires had been distributed to grade 11 ethnic students from four selected schools and the respondents' valid returned rate was 100%.

There were two research objectives in this study. They were

1. To investigate the preferred learning styles of ethnic students learning Burmese language in four selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar.

2. To compare the ethnic student's achievement of learning Burmese language according to their most preferred learning styles.

There was one hypothesis: there are significant differences among grade 11 ethnic students' achievement of learning Burmese language according to their most preferred learning styles.

This study was a quantitative study and a questionnaire was used in order to investigate the perceptual learning style preferences as well as to measure grade 11 ethnic students' Burmese language achievement. For learning styles, the concept of perceptual learning style preferences developed by Reid (1984) was applied as the basis theory. For the Burmese language achievement, the researcher tested in four selected schools. Therefore, the PLSPQ developed by Reid (1984) and Burmese language questionnaire were used as the research instrument in the study.

The data was collected from 70 grade 11 ethnic students learning Burmese language in four selected schools. The data was analyzed by using descriptive statistics.

Findings

1.The respondents as a whole (grade 11 ethnic students) 19 students (27%) preferred tactile learning style, 16 students (23%) preferred auditory, 16 students (23%) preferred kinesthetic, and then 12 students (17%) preferred individual and 7 students (10%) preferred group learning style. In addition, visual learning style was not found in the most preferred learning styles of grade 11 ethnic students.

2. There was no significant differences Burmese language achievement among grade 11 ethnic students learning Burmese language according to their most preferred leadership styles.

Conclusion

The following conclusions are drawn from the findings of the study.

1. Grade 11 ethnic students learning Burmese language preferred tactile learning styles most followed by auditory, kinesthetic, and then individual and group learning style. In addition, there was no visual learning style in the most preferred learning styles of respondents.

2. The learning Burmese language achievement of grade 11 ethnic students with different preferred styles was not significant difference.

Discussion

1. What are the preferred learning styles of ethnic students learning Burmese language in selected schools in Pyin Oo Lwin, Mandalay Region, Myanmar?

As mentioned in Chapter 2, the193 Arabic students that responded to Reid's survey had visual, auditory, kinesthetic, and tactile major learning styles and had group and individual minor learning styles. There was no negligible learning style among the Arabic students. In this study the respondents (grade 11 ethnic students) preferred tactile, auditory, kinesthetic, and then individual and group learning style. In

addition, grade 11 ethnic students not preferred visual learning style. The findings of this research also support the findings of Dunn and other researchers which stated that very young children are primarily tactile and kinesthetic learners. In the later grade, their visual power develops and they gradually use the auditory learning style to observe new information. (Price, Dunn, and Sanders, 1981, Keefe, 1978, as cited in Reid, 1987).

In this study, however, there was no visual learning style in the most preferred learning styles of grade 11 ethnic students while Arabic students preferred in Reid's survey. This difference might be due to the various factors such as, different languages taught (English and Burmese), different size of the samples from this study (193 and 70), learning environment, and instructional methods. Myanmar's educational system has totally relied on rote learning and students are expected to memorize all the lessons. Teachers explain and dictate the lecture to the students and memorization is only way to prepare for the exams (Lwin, 2008). This kind of instructional method might be the most contributing factor to the different results. It might be due to the lack of visual instructions such as, power points, showing pictures and slide shows.

As mention in chapter 2, Reid conducted the survey on one hundred and thirty Japanese ESL students and they had no major learning style. However, grade 11 ethnic students preferred five out of six learning styles in this study. This difference might be due to the differences in mother language, culture, instructional methods, and specific major fields. In addition, a different learning environment seemed to influence students' preferred learning styles.

Juris, Ramos, and Castaneda (2009) explored the learning styles of students in the public and private schools of four cities in Colombia. Two hundred fifty-four

students and 9 teachers participated in the study and the most preferred style was kinesthetic followed by tactile learning style and then auditory. The respondents of this current study also preferred tactile learning styles most and followed by auditory, kinesthetic learning style. There were individual and group learning style in the most preferred learning styles in this study while there were no individual and group learning style in Juris, Ramos, and Castaneda' study. This difference might be due to the differences in culture, size of the samples from this study (254 and 70), and instructional methods.

The study findings revealed that regarding to the most preferred learning styles such as, auditory, kinesthetic, tactile, group, and individual, there were no significant differences regarding the Burmese subject achievement among the respondents. This finding indicated that students can learn the Burmese subject by using any of the five learning styles. There was no visual learning style in the most preferred learning styles of respondents.

2. Are there any differences among ethnic students' Burmese language achievement according to their most preferred learning styles?

According to the research findings, there was no significant difference Burmese language achievement among grade 11 ethnic students learning Burmese language according to their most preferred leadership styles. In 2005 and 2006, Orhun and Orhun investigated the relationship between learning styles and achievements of Turkish students in Physics I and Calculus I in the Physics Department of Anadolu University. One hundred and forty two university students participated in their study. They applied Kolb's learning style inventory to collect the data. The result showed that there is a statistically significant difference in the Physics course achievement according to the students' different learning styles. On the other hand, there was no

significant difference in the Calculus course achievement according to the students' different learning styles (Orhun and Orhun, 2005-2006). According to the different results, it can be assumed that students' achievement could be difference according to their preferred learning styles depending on specific major fields.

Makhlouf, Witte, and Dahawy (2012) did a research and in their addition finding result, there were no statistical differences among the auditory, visual and kinesthetic abilities.

Damavandi (2011) investigated the impact of learning styles on the academic achievement of secondary school students in Iran. There were two hundred eighty five grade 10 students (56.5% male and 43.5% female) that participated in that study from eight governmental schools in Tehran, Iran. Damavandi used the mean of the English, mathematics, science, history and geography national standardized examinations' results as the academic achievement of the students. Kolb's learning styles model was applied in that study and the subjects were divided into diverging, converging, accommodating, and assimilating groups according to their learning styles. The results showed that accommodating and diverging learners were slightly less successful than converging and assimilating learners. In the researcher findings, there was no significant difference in the Burmese language achievement among grade 11 ethnic students according to their most preferred learning styles. The different result might be due to the differences in the subject areas (English, mathematics, science, history and geography and Burmese), the size of the samples from this study (285 and 70), and using the model from this study (Kolb's learning styles model and Reid's perceptual learning style preferences model).

Recommendations

Recommendations for Practice

According to the results of the study, respondents preferred tactile learning style most followed by auditory, kinesthetic, and then individual and group learning styles. In addition, respondents have a low preference for the visual learning style. It might help effective learning if instructors incorporate a student-centered approached and differentiate instruction allowing the students to use their strong learning styles in the classroom. A mismatch between teaching and learning styles lead to learning failure, limitation of learners' motivation and frustration. Effective learning happens when teaching styles and learners' learning styles match together and it could provided all learners an equal chance in the teaching process.

Learning styles could be extended, adapted and changed depending on different students' educational experiences and environmental changes. The ability of using multiple learning styles effectively could promote greater learning success. Age, educational level, and motivation influence student learning styles causing preferred learning styles to change over time.

Therefore, although having awareness and knowledge of learning styles preferences of the students is important, instructors should not focus only on students' most preferred learning styles but also focus on all learning styles. Too much emphasize on students' most preferred learning styles in the classroom may disadvantage some students with different strong learning styles. It is crucial to know that basically every individual student has a different learning style preference from another. Since students do not prefer one particular style to another, each student should be encouraged to learn in all possible ways. Therefore, the researcher strongly

recommends for instructors to be aware of the different learning styles of the students and create lessons allowing the students to learn with different learning styles.

In the Myanmar educational system, traditional lecture style, teacher center approach, and rote learning are commonly used in all basic level education. The researcher believes that it is important to investigate the different learning styles of the students and to integrate it in teaching. Therefore, the researcher strongly recommends to instructors to apply active, and cooperative learning strategies such as, class presentations, showing movies, discussions, field trips, games, and other activities. Teaching and learning approaches should be student-centered and differentiated instruction should be used. Instructors should create flexible or differentiate instructions and a wide range of instruction in order to meet the student differences in learning styles. For the auditory learning style, instructors should use discussion to approach various topics using Burmese language. The activities such as, role-playing and games will help the kinesthetic learners to learn the Burmese language affectively. Providing writing tasks such as easy writing, and making posters related to the lessons will engage the students who have the tactile learning style. Moreover, providing activities, assignments, and discussions with the students paired, grouped and alone will benefit both the group and individual learners learning Burmese language. Especially for the visual learning style, the researcher recommends to instructors to use a variety of visual and multi-media materials, such as pictures, photos, videos, Power Points, diagrams, and charts. Because, students' learning styles could be extended, adapted, and changed depending on their educational experiences change. Moreover, student could become visual learners when they get opportunity to learn with visually.

The researcher hopes that this study supports instructors teaching Burmese language in four selected schools and other instructors to better understanding their students' preferred learning styles. The study helps instructors to improve their instructional methods and lessons based on the students' various learning styles. In terms of the perceptual learning styles, instructors of the Burmese language can surely incorporate all the six learning styles in their classes.

For the principals and administrators, the researcher would also like to give a recommendation to be aware of the different learning styles. The principals and administrators can play a vital role in a school by giving suggestions and organizing teacher-training programs related to integrating six learning styles in instructions.

Recommendations for Future Research

The Burmese language is a compulsory subject for all Myanmar students from grade 1 to11. This research was limited to only grade-11 ethnic students. Therefore, for the future research in Myanmar, this study could be replicated at other schools with a larger sample size, in other parts of the country, in different grade levels, and among other ethnic students. In order to find out more precise information, gender balancing should be considering in the future research. The study area focus was only on four selected school due to the limitation to get information and permission from public schools. The researcher also recommends that further research would be good to do at public schools and across the whole of Myanmar. It will be interesting to compare achievement of the ethnic students and the Burmese students learning the Burmese language according to their preferred learning styles and find out what the result would look like.

The researcher also recommends that further research use a qualitative and mixed method such as interviews, classroom observation, and a pretest-posttest. The

researcher strongly recommends that a pretest-posttest will be useful to explore whether there is a significant difference between the pretest and posttest of the Burmese language achievement of the students taught with instruction that is adjusted according to students' different learning styles (experimental group) and the students taught with traditional teaching methods (control group).

Finally, the researcher recommends that future investigations on the topic of learning styles should be made in order to meet with students learning styles and contribute to better teaching of the Burmese language in the future.

REFERENCES

Alexander, B. (2009). Understanding Different Learning Styles That Student Use is

Essential for Planning Successful Learning Programs. Retrieved from

http://www.classroom-management-success.org/different-learning-styles.html

Bennett, C. I. (2003). Comprehensive Multicultural Education: *Theory and Practice*

(4ᵗʰ ed.). Boston: Pearson Education, Inc.

Brown, B.L. (2003). Teaching Style vs. Learning Style: *Do the Best learning*

Outcomes Occur When Teaching Style Matches Learning Style? Retrieved from

http://www.calpro-online.org/eric/textonly/docgen.asp?tbl=mr&ID=117

Cesur, M. O. & Fer, S. (2009). What is validity and reliability study of learning style

survey? *Journal of Theory and Practice in Education*, 5(2), 289-315. Retrieved

from http://www.researchgate.net/publication/26842476_WHAT_IS_VALIDITY

_AND_RELIABILITY_STUDY_OF_LEARNING_STYLE_SURVEY

Chen, M. (2009). Influence of grade level on perceptual learning style preferences and

language learning strategies of Taiwanese English as a foreign language learners.

Learning and Individual Differences, 19, 304-308. Retrieved from

http://www.sciencedirect.com/science/article/pii/S1041608009000107

Cohen, A.D., Oxford, R. L., & Chi, J. C. (2001). Learning style survey. Retrieved

from http://www.carla.umn.edu/maxsa/documents/LearningStyleSurvey_

MAXSA_IG.pdf

Damavandi, A. J. (2011). Academic Achievement of Students with Different Learning

Styles, International Journal of Psychological Studies; Vol. 3, No. 2 (December

2011) p. 186-192. Retrieved from

http://www.ccsenet.org/journal/index.php/ijps/article/download/13343/9209

Dornyei, Z., & Skehan, P. (2005). Individual differences in second language learning. In Doughty, C. J., & Long, M. H. (Eds.), *The Handbook of Second Language Acquisition*. Blackwell Publishing, Blackwell Reference Online, Retrieved from http://www.blackwellreference.com/public/tocnode?id=g9781405132817_chunk _g978140513281719

Finely, S.R. (2000). The Relationship between Learning Styles/Multiple Intelligences and Academic Achievement of High School Students, *The High School Journal*; v.83, No.2 (Dec.1999/Jan.2000) p. 11.

Garton, B. L., Spain, J. N., Lamberson, W. R., & Spiers, D. E. (1999). Learning Styles, Teaching Performance, and Student achievement: A Relational Study. *Journal of Agricultural Education*, 40 (3), 11-20. Retrieved from http://www.jaeonline.org/attachments/article/472/40-03-11LearningStylesTeaching.pdf

Gardner, H. (1993). Multiple Intelligences: *The Theory in Practice*. New York: Basic Books

Grant, C. A., & Sleeter, C. E. (1998). Turning on Learning: *Five Approaches for Multicultural Teaching Plans for Race, Class, Gender, and Disability (2nd ed.)*. New Jersey: Prentice-Hall, Inc

Haggerty, B. A. (1995). Nurturing Intelligences: *A Guide to Multiple Intelligences Theory and Teaching*. New York: Addison-Wesley Publishing Company.

Hoerr, T. R. (2000). Multiple Intelligences Theory: A New Way to Look at Students. *Instructional Leader, 13(1), 6-10.*

Honey, P. & Mumford, A. (1986) Manual of Learning Styles. 2nd ed., London: P.

Juris, M. F., Ramos, V. V & Casteneda, M. G. G. (2009). Learning and Teaching Crossroads, Institute for Learning Styles Research Journal, Vol. 1, Spring 2009. Retrieved from http://www.auburn.edu/academic/education/ilsrj/archives.htm

Katsuda, C. (2012). A Study of Learning Styles, Motivation for Learning, and Student Achievement among Thai Students Studying Japanese as a Foreign Language at King Mongkut's Institute of Technology, Ladkrabang, Thailand. Unpublished Master's Thesis. Graduate School of Education. Assumption University.

Kolb, D. A. (1984). Experiential Learning: Experience as the Source of Learning and Development. Englewood Cliffs, New Jersey: Prentice-Hall.

Learning Style: the debate. Retrieved from http://www.brainboxx.co.uk/a2_learnstyles/pages/LStyles_debate.htm

Levinsohn, R. K. (2007). Cultural Difference and Learning Styles of Chinese and European Trade Students. *Institute for Learning Styles Journal, Vol. 1, Fall 2007*. Retrieved from http://www.auburn.edu/academic/education/ilsrj/archives.htm

Lwin, T. (2008). Education and Democracy in Burma: *An Overview of the Current State of Education and Suggestions for the Future*. Teacher Training Center for Burmese Teachers (TTBT), Chiang Mai, Thailand.

Lynn Curry, L. (1990) A Critique of research on Learning Styles. Retrieved from http://www.ascd.org/ASCD/pdf/journals/ed_lead/el_199010_curry.pdf

MacGilichrist, B., Myers, K., & Reed, J. (2004). The Intelligent Schools (2nd ed.). New Delhi: SAGE Publications Ltd.

Makhlouf, A. M. S., Witte, M. M., & Dahawy, B. M. A Comparison of Preferred Learning Styles between Vocational and Academic Secondary School Students in Egypt. *Institute for Learning Styles Research Journal, Vol. 1, Spring 2012*. Retrieved from http://www.auburn.edu/academic/education/ilsrj/archives.htm

McCombs, B. L., & Miller, L. (2007). Learner-Centered Classroom Practices and

Assessments: *Maximizing Student Motivation, Learning, and Achievement.*

Thousand Oaks, CA: Corwin Press.

Orhun, O., & Orhun, N. (2005-2006). The Relationship between Learning Styles

and Achievement in Physics Course and Calculus Course. Retrieved from

http://academic.research.microsoft.com/Paper/10854816.aspx

Peacock, M. (2001). Match or Mismatch? Learning Theories and Learning Styles in

EFL. *International Journal of Applied Linguistic, 11 (1). 20.*

Pritchard, A. (2005). Ways of Learning: *Learning Theories and Learning Styles in the*

Classroom. New York: David Fulton Publishers.

Reid, J. M. (1984). Perceptual Learning- Style Preference Questionnaire. Retrieved

from http://lookingahead.heinle.com/filing/l-styles.htm

Reid, J. M. (1987). The Learning Style Preferences of ESL Students. *TESOL*

Quaterly, 21 (1), 87-110. Retrieved from

http://lwtoefl.ielp.pdx.edu/internal_resources/tutor/level_1_regular/Learning_Styl

e_ESL%20_%20Reid.pdf

Reid, J. M. (1995). Preface. In Reid, J. (Ed.), *Learning Styles in the EFL/ESL*

Classroom. (pp. viii-xvii). Boston: Heinle & Heinle Publisher.

Reid, J. M. (1998a). Preface. In Reid, J. (Ed.), *Understanding Learning Styles in*

Second Language Classroom (pp. ix-xiv). Upper Saddle River, New Jersey:

Prentice-hall, Inc.

Reid, J. M. (1998b). Teachers as Perceptual Learning Styles Researchers. In Reid, J.

(Ed.), *Understanding Learning Styles in Second Language Classroom* (pp. 15-

26). Upper Saddle River, New Jersey: Prentice-hall, Inc.

Renou, J. (2008). A Study of Perceptual Learning Styles and Achievement in a

University-Level Foreign Language Course. Crisolenguas, 1 (2). Retrieved from

http://www.crisolenguas.uprrp.edu/Articles/JanetRenou.pdf

Scott, C. (2010). The enduring appeal of 'learning styles.' *Australian Journal of*

Education, 54, 5-17. Retrieved fromhttp://search.proquest.com/docview/

325128276/fulltextPDF/134E64265FFD8F5010/1?accountid=50158

Silver, H. F., Strong, R. W., & Perini, M. J. (2000). So Each May Learn: Integrating

Learning Styles and Multiple Intelligences. Alexandria, VA: ASCD.

Tomlinson, C. A. (2010). On Excellence in Teaching. In R. Marzano (Ed.),

Differentiating Instruction in Response to Academically Diverse Student

Populations (pp. 247-286). Bloomington: Solution Tree Press.

Wilson-Hull, S. L. (2008). The Impact of Learning Styles on High Stakes Testing:

Perspectives from Mississippi Delta Area Teachers, Institute for Learning Styles

Research, Vol. 1, Fall 2008. Retrieved from

http://www.auburn.edu/academic/education/ilsrj/archives.htm
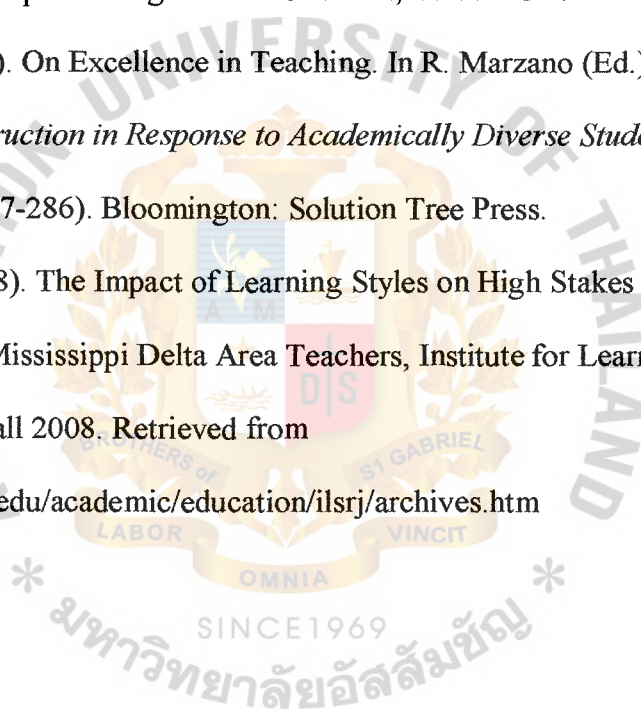
APPENDICES
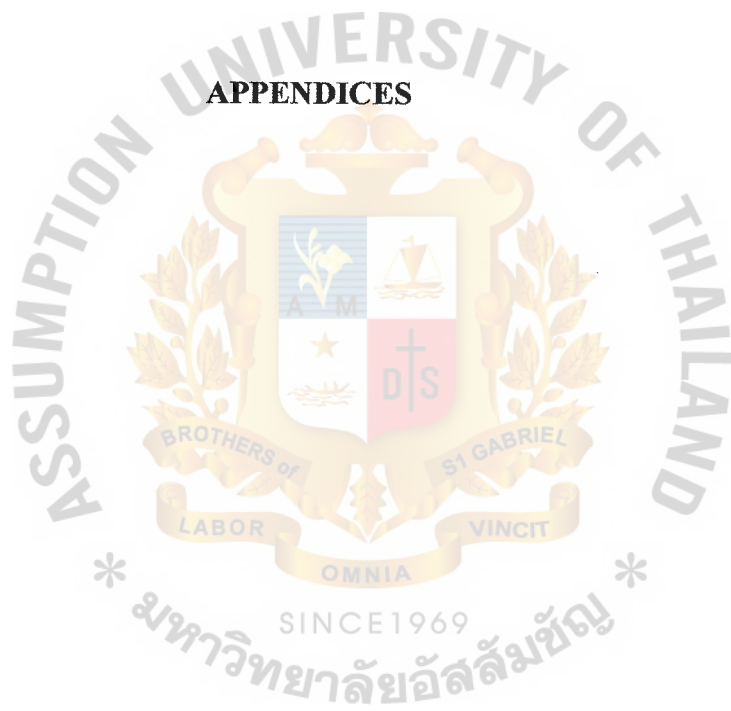
THE QUESTIONNAIRE (ENGLISH VERSION)

Dear Students:

The objective of this study is to investigate the learning-styles of ethnic students learning Burmese in Church-based schools in Pyin Oo Lwin. This study will increase understanding about ethnic students' learning styles, help teachers to promote effective teaching and learning, and contribute to future research in learning Burmese.

There are two parts included in this questionnaire: Part one contains demographic questions and part two contains perceptual learning-style preference questions.

In part one, please records your name, gender, and grade. Although it is necessary to analyze data, individual information will not be published in any form. The answers will be strictly confidential and the result will be used only for documentation in this study. The success of this study depends on your honest responses. Please help the success this study by answering all questions within 15 minutes.

Thank you very much for your time and giving me the chance to survey your learning-style.

Sincerely,
La San

Part 1: About yourself

- Name :

- Gender: Male (   )   Female (   )

- Grade Level   6 ☐   7 ☐   8 ☐   9 ☐   10 ☐   11 ☐

- Ethnic group   (   )

Part 2: Perceptual learning-style preferences for learning Burmese.

     People learn differently and each person has preferred way to learn. Some people may learn best by seeing but some may prefer to learn by listening. Some people learn more by physically participating in activities and others learn more when they get chance to do hands- on experiences. Some people learn best by working alone while others may learn well by working with other. This questionnaire was developed to identify your preferred way of learning.

Directions:

Read each statement on the following pages. Please respond to the statements AS IT APPLIES TO LEARNING BURMESE.

Please make your decision whether you agree or disagree on each statement. For example, if you strongly agree, please mark: X as below.

1 Strongly Disagree	2 Disagree	3 Undecided	4 Agree	5 Strongly agree
				X

Response honestly to each statement without too much thought. After choosing your answer, do not go back to change it. Please answer all 30 questions.

Perceptual Learning – Style Preference Questionnaire

SD Strongly Disagree	D Disagree	U Undecided	A Agree	SA Strongly agree
1	2	3	4	5

Item	1	2	3	4	5
1. When the teacher tells me the instructions I understand better.					
2. I prefer to learn by doing something in class.					
3. I get more work done when I work with others.					
4. I learn more when I study with a group.					
5. In class, I learn best when I work with others.					
6. I learn better by reading what the teacher writes on the chalkboard.					
7. When someone tells me how to do something in class, I learn it better.					
8. When I do things in class, I learn better.					
9. I remember things I have heard in class better than things I have read					
10. When I read instructions, I remember them better.					
11. I learn more when I can make a model of something.					
12. I understand better when I read instructions.					
13. When I study alone, I remember things better.					
14. I learn more when I make something for a class project.					
15. I enjoy learning in class by doing experiments.					
16. I learn better when I make drawings as I study.					
17. I learn better in class when the teacher gives a lecture.					
18. When I work alone, I learn better.					
19. I understand things better in class when I participate in role-playing.					
20. I learn better in class when I listen to someone.					
21. I enjoy working on an assignment with two or three classmates.					
22. When I build something, I remember what I have learned better.					
23. I prefer to study with others.					
24. I learn better by reading than by listening to someone.					
25. I enjoy making something for a class project.					
26. I learn best in class when I can participate in related activities.					
27. In class, I work better when I work alone.					
28. I prefer working on projects by myself.					
29. I learn more by reading textbooks than by listening to lectures.					
30. I prefer to work by myself					

APPENDIX B:

THE QUESTIONNAIRE (BURMESE VERSION)

သို့ -

ကျောင်းသူ/ကျောင်းသားများ

　　　ယခု ကွင်းဆင်းလေ့လာ စစ်တမ်းကောက်ရသည့် ရည်ရွယ်ချက်မှာ ပြင်ဦးလွင်မြို့ရှိ ခရစ်ယာန် ဘုရားကျောင်းများမှ ဖွင့်လှစ်ထားသော ကျောင်းများတွင် မြန်မာစာကို သင်ယူ လေ့လာနေသည့် တိုင်းရင်းသား ကျောင်းသူ/ကျောင်းသားများမှ နှစ်သက်သော သင်ယူမှုနည်းလမ်းများကို စစ်တမ်းကောက် သုတေသန စာတမ်းပြုစုရန် ဖြစ်ပါသည်။ ရလာသည့် ရလဒ်များမှာ ဆရာ/ဆရာမများအနေဖြင့် တိုင်းရင်းသား ကျောင်းသူ ကျောင်းသားများ၏ မြန်မာစာ သင်ယူလေ့လာရာတွင် ပိုမိုနှစ်သက်သော နည်းလမ်းများကို ပို၍ သိရှိနိုင်ရန်နှင့် သင်ကြားရေးအပိုင်းတွင် ပို၍ ထိရောက်စွာ အထောက်အကူ ပြုနိုင်စေရန် ဖြစ်ပါသည်။ ထို့အပြင် နောက်ပိုင်းတွင် မြန်မာစာသင်ယူမှုဆိုင်ရာ သုတေသနစာတမ်းများကို တစ်ဖက်တစ်လမ်းမှ အထောက်အကူ ပြုနိုင်မည်ဟုလည်း ယုံကြည်ပါသည်။

　　　မေးခွန်းလွှာတွင် အပိုင်း နှစ်ပိုင်း ပါဝင်ပါသည်။ အပိုင်း (၁) တွင် ကျောင်းသူ/ကျောင်းသားများ၏ ကိုယ်ရေး အချက်အလက်ဆိုင်ရာများနှင့် အပိုင်း (၂) တွင် ကြိုက်နှစ်သက်သော သင်ယူလေ့လာမှု နည်းလမ်းများဆိုင်ရာ မေးခွန်းများ ပါဝင်ပါသည်။

　　　အပိုင်း (၁) ကို ဖြေဆိုရာတွင် သင်၏ အမည်၊ လိင်အမျိုးအစား၊ အတန်းနှင့် လူမျိုးအမည် တို့ကို တိကျစွာ ဖော်ပြရန် လိုအပ်ပါသည်။ သင်၏ ကိုယ်ရေးအချက်အလက်များနှင့် အဖြေများကို အချက် အလက်များ စိစစ်ရာတွင်လည်းကောင်း၊ အထောက်အထားနေဖြင့်သာ အသုံးပြုမည်ဖြစ်ပြီး ပုံနှိပ်ရာတွင် (လုံးဝ) ထည့်သွင်း ဖော်ပြမည် မဟုတ်ပါ။ ယခုသုတေသနစာတမ်း ပြီးမြောက် အောင်မြင်ရန်မှာ ကျောင်းသူ ကျောင်းသားများ၏ ရိုးသား မှန်ကန်သော ဖြေဆိုမှု အပေါ်တွင် မူတည်နေပါသည်။ သုတေသန စာတမ်း ပြီးမြောက် အောင်မြင်ရန် ကျေးဇူးပြု၍ မေးခွန်းအားလုံးကို ၁၅ မိနစ်အတွင်း ဖြေဆိုခြင်းဖြင့် ကူညီ ပေးကြပါရန် မေတ္တာရပ်ခံ အပ်ပါသည်။

　　　ယခုကဲ့သို့ ပညာရေး သုတေသနစစ်တမ်း ကောက်ယူနိုင်ရန် ပါဝင်ကူညီ အချိန်ပေးသော ကျောင်းသူ/ကျောင်းသားများကို ကျေးဇူး အထူး တင်ရှိပါကြောင်း ဖော်ပြအပ်ပါသည်။

ကျေးဇူးတင်စွာဖြင့်
လဆန်
ပညာရေးသုတေသီ

ႈ�ွဲႏု�က း�5၇ၶ�300, ၌ၣ်လၼ5ၢ ပွႈး5ၟ်ၒဇၡ၈ၐ ၍ႈ3ၵၵ ၵၵၘးၵ6ႏ၍ှ ၍ၩ65ၟ
5ၡၵ ႈ၊း၆ၵၒၟ6ၢ9 ၀ႈး၊၊း၌ꩻ ၌၌ၵ၊ၵ :5ꩻး5း၎၈ ၝၯၕၼꩻလၕၡ 5၊ၶ၊ꩻၒၟ6ꩻ9 ပွႈးၵၢꩻꩻ၈ႈးꩻၵ၈

	x				
	9ၡ ၵၵ5ၵၵၵၵၵၼꩻလၕၡ **၆**	9ၡ ၵၵ5ၵၵၵၵၵ **၅**	၊၍ ၄ၵၵၵၚၵၒꩻး၌၈ၵ **၄**	၊၍ ၌ၒ၈ၵၵၵၵ **၃**	၊၍ ၌ၒ၈ၵၵၵၵၵၵးꩻလꩻ **၁**

ꩻꩻၵၒ6ၟ9 ၜꩻ6ꩻ5၈

ၒ5ၡ x ꩻ5ꩻၟ်၈၍ꩻၵꩻး၊ၶꩻၞꩻၐ၈ꩻၵ 5၊ၒၞၕၼၡ ၝၞ၈ၐꩻ6ꩻꩻꩻꩻ၈ 9ꩻၵ5ၵၵၵၵၵ ၼꩻလၕၡ 5ꩻꩻꩻၒ5ꩻꩻၵꩻ5ၟꩻၡꩻꩻ5ၵၵၵၵၵ ၼꩻလꩻ၈ꩻ5ꩻၵ ꩻ၈ꩻၜ ꩻꩻၵꩻၒ6ꩻၡ ႈꩻ၊9ꩻးꩻꩻ၂ꩻ ꩻꩻး5၈ ပꩻ5ꩻၵ5ꩻၵ ၵၵꩻꩻၵ (5ꩻꩻꩻꩻ5ꩻ) 5ꩻꩻ5ꩻꩻꩻ5ꩻꩻ 5ꩻꩻꩻꩻ5ꩻၒ5ꩻꩻ5ꩻ ꩻꩻ5ꩻꩻ

ꩻꩻꩻ5ꩻꩻꩻꩻ ꩻꩻꩻ5ꩻꩻꩻ

5၊ၶꩻꩻꩻ5ꩻၵ ၜꩻၵ5ꩻ5ꩻ ꩻ5ꩻꩻꩻꩻꩻ5ꩻ ꩻꩻꩻꩻ၈ ꩻꩻးꩻၵ ꩻꩻꩻꩻ ꩻꩻꩻ5ꩻ

ꩻꩻꩻꩻ ꩻ5ꩻꩻꩻꩻ5ꩻ

ꩻꩻꩻ5ꩻ5ꩻꩻꩻ5ꩻꩻ5ꩻꩻ5ꩻ ꩻꩻၵꩻꩻ5ꩻꩻꩻꩻꩻ5ꩻꩻ5ꩻꩻ၈

ꩻ5ꩻꩻꩻꩻꩻꩻꩻ5ꩻ

.... ꩻꩻၵ5ꩻ

[ ] ၀ၵ ꩻ5ꩻꩻ5၈၈

( ) ၈ ( ) ꩻၵꩻ ꩻꩻ5၈၈ꩻ5ꩻၒ5ꩻ

.... ꩻꩻၵꩻ၈

ꩻꩻꩻꩻꩻꩻꩻ ꩻꩻꩻ5ꩻ ꩻꩻၵ ꩻ၁ ꩻ5ꩻ၈

					။ရှိင်းပြုဂ္ဂလိကပြုချက်သင်္ခဏ မြစ်ပဲ့ ယျုတ်ခုင်္လက်
					။ရှိင်းပြုဂ္ဂတ္တဝစ္စဝက် မြစ်ပဲ့ ပွုးဒါးပျါးထေးထျင်နှင်
					။ရှိင်းပြုဂ္ဂဝက် မြစ်ပဲ့ ပွုဒ္ဓငေးဒ္ဂင်္ထျ၁ခေဒ
					။ရှိင်းပြုဂ္ဂပုချ်ုသင်္ခဏဝ ဏ်လ၁ဂ္ဂင
					။ရှိင်းပြုဂ္ဂပုချ်ုသင်္ခဏဝ၀်ုဏ်ဝ၁ဂ္ဂင မြစ်ပဲ့ ရှိင္လင္တၜ့ိုၕ၁
					။ရှိင်းပြုဂ္ဂပုချ်ုသင်္ခဏဝ၀်ုဏ်ဝ၁ဂ္ဂင မြစ်ပဲ့
					။ရှိင်းပြုဂ္ဂပုချ်ုသင်္ခဏဝ ဏ်လ၁ဂ္ဂင း၀ၜး၃ပ္လ၁ဝေဒ
					။ရှိင်းပြုဂ္ဂပုချ်ုသင်္ခဏဝ ဏ်လ၁ဂ္ဂင မြစ်ပဲ့ ယျုလ္ထလ၁ံခ်ဏ်ဝ၁ဂ္ဂင
					။ရှိင်းပြုဂ္ဂပုချ်ုသဉ်္ချ် မြစ်ပဲ့ ၀ၜ်လ၁ဂ
					။ရှိင်းပြုဂ္ဂလ်ုဏ်ဝ၁ဂ္ဂင ၃ပ္ုဏ်း၃ပ္လ၁ဝထ၀်ုဏ်ိၕ၁
					။ရှိင်းပြုဂ္ဂလၜးဝ၁ၝ် မြစ်ပဲ့ ၂၉ဏ်လ၁၁း၁ထျင်နှင်
၆	၅	၄	၂	၁	ဒါၜး၃ဂ္ထျ၁ခေဒ

	ရှိင်္ဂ ဏ်လ၁ဂ္ဂင၁ဏ္တၕၜ၁ဏ ၆	ရှိင်္ဂ ဏ်လ၁ဂ္ဂင၁ဏ ၅	၂ ၀ၜင္တ၀ၜးၝ်ုဂၜ ၄	၂ ၝ်ုဂ္ဂင္တၜ၁ဏ ၂	၂ ၝ်ုဂ္ဂင္တၜ၁ဏၜးၕ၁ ၁

။၀ၜင္တၜိ၁ ပွုးၕ၁းၜဒ (၀ၜ) းၝ်ုၜးၞ်ုဏၜဒ ဏ်လ၁ၜးၞထျ၁ၕၜ ၃ပ္ုဝ၁ၜဒၜ မြစ်ပဲ့းၝ်ုၜ၁

အကြောင်းအရာ	၁	၂	၃	၄	၅
၁၂။ ကျွန်ုပ်သည် ညွှန်ကြားချက်များကို ဖတ်ရသောအခါ ပိုပြီး နားလည်သည်။					
၁၃။ ကျွန်ုပ် တစ်ယောက်တည်း သင်ကြား လေ့လာသည့်အခါတွင် ပို၍ နားလည်သည်။					
၁၄။ ကျွန်ုပ်သည် တစ်စုံတစ်ရာကို အတန်းတွင်း လုပ်ငန်းအနေဖြင့် ပြုလုပ်ရပါက ပို၍ သင်ကြားတတ်မြောက်သည်။					
၁၅။ ကျွန်ုပ်သည် အတန်းထဲတွင် စမ်းသပ်မှု ပြုလုပ်ရပါက နှစ်သက် ပျော်ရွှင်ပါသည်။					
၁၆။ ကျွန်ုပ်သည် လေ့လာ သင်ယူသည့်အခါ ပုံ ရေးဆွဲ၍ လေ့လာပါက ပို၍ တတ်မြောက်သည်။					
၁၇။ ကျွန်ုပ်သည် အတန်းထဲတွင် ဆရာ/ဆရာမက ဟောပြောပို့ချပါက ပို၍ သင်ယူ တတ်မြောက်ပါသည်။					
၁၈။ ကျွန်ုပ်သည် မိမိတစ်ဦးတည်း ကိုယ့်ဖာသာ လုပ်ဆောင်ချိန်တွင် ပိုမို သင်ယူ တတ်မြောက်သည်။					
၁၉။ ကျွန်ုပ်သည် အကြောင်းအရာများအလိုက် အတန်းတွင်း ပြန့်ဖတ်တွင် ပါဝင်ရပါက အကြောင်းအရာများကို ပို၍ နားလည်သဘောပေါက်သည်။					
၂၀။ ကျွန်ုပ်သည် စာသင်ခန်းတွင် တစ်စုံတစ်ဦး ပြောပြသည်ကို နားထောင်ရချိန်တွင် ပို၍ သင်ယူတတ်မြောက်သည်။					
၂၁။ ကျွန်ုပ်သည် ဆရာ/ဆရာမများ စေခိုင်းထားသော စာကို အတန်းဖော် နှစ်ဦး (သို့မဟုတ်) သုံးဦးဖြင့် လုပ်ဆောင်ရခြင်းကို နှစ်သက်ပါသည်။					
၂၂။ ကျွန်ုပ်သည် သင်ယူလေ့လာ ပြီးသော အရာများကို အသုံးပြု လုပ်ဆောင် တည်ဆောက်ခြင်းဖြင့် ပို၍ မှတ်မိသည်။					
၂၃။ ကျွန်ုပ်သည် အခြားသူများဖြင့် အတူတကွ သင်ယူခြင်းကို နှစ်သက်သည်။					
၂၄။ ကျွန်ုပ်သည် နားထောင်ခြင်းထက် ဖတ်ရှုခြင်းဖြင့် ပို၍ သင်ယူ တတ်မြောက်သည်။					
၂၅။ ကျွန်ုပ်သည် တစ်စုံတစ်ရာကို အတန်းတွင်း လုပ်ငန်းအနေဖြင့် လုပ်ဆောင်ရခြင်းကို နှစ်သက်ပါသည်။					
၂၆။ ကျွန်ုပ်သည် အတန်းထဲတွင် သင်ခန်းစာနှင့် ပတ်သက် ဆက်နွယ်သော လှုပ်ရှားမှုများတွင် ပါဝင်ခွင့် ရပါက အကောင်းဆုံး သင်ယူ တတ်မြောက်သည်။					

အကြောင်းအရာ	၁	၂	၃	၄	၅
၂၇။ အတန်းထဲတွင် ကျွန်ုပ် တစ်ယောက်တည်း လုပ်ဆောင်ရပါက အလုပ် ပို၍ ပြီးမြောက်သည်။					
၂၈။ ကျွန်ုပ်သည် အတန်းတွင်း လုပ်ငန်းဆောင်တာများကို တစ်ဦးတည်း လုပ်ဆောင်လိုပါသည်။					
၂၉။ ကျွန်ုပ်သည် ဟောပြော ပို့ချချက်များကို နားထောင်ခြင်းထက် ဖတ်စာများကို ဖတ်ရှုခြင်းဖြင့် ပို၍ သင်ယူတတ်မြောက်ပါသည်။					
၃၀။ ကျွန်ုပ်သည် အလုပ်ကို တစ်ဦးတည်းသာ လုပ်ဆောင်လိုပါသည်။					

APPENDIX C:
MOST PREFERRED LEARNING STYLES OF EACH GRADE 11 ETHNIC STUDENTS

Most preferred learning styles of each grade 11 ethnic students

Student	Mean score of Visual	Mean Score of Auditory	Mean Score of Kinesthetic	Mean Score of Tactile	Mean Score of Group	Mean Score of Individual	Most preferred Learning Style
1	3.80	4.20	5.00	4.60	4.00	4.40	Kinesthetic
2	4.00	4.40	4.40	3.80	4.60	5.00	Individual
3	4.20	4.00	4.40	4.20	4.60	5.00	Individual
4	3.60	4.00	4.20	3.20	2.60	2.40	Kinesthetic
5	3.60	4.00	3.80	3.80	4.20	5.00	Individual
6	4.60	4.40	4.20	5.00	3.80	4.00	Tactile
7	4.60	4.60	4.40	3.80	4.00	5.00	Individual
8	4.00	3.60	3.40	3.80	3.60	5.00	Individual
9	3.80	4.00	3.80	4.40	3.40	5.00	Individual
10	4.40	4.20	5.00	4.40	4.20	4.80	Kinesthetic
11	3.20	3.60	3.00	4.20	3.00	3.00	Tactile
12	3.20	3.20	3.20	3.20	3.80	2.40	Group
13	4.00	3.60	3.40	3.60	3.60	4.20	Individual
14	3.80	3.60	3.60	4.60	4.40	2.00	Tactile
15	3.40	3.40	3.80	3.60	4.40	3.00	Group
16	3.80	2.40	4.40	3.80	4.80	2.20	Group
17	3.80	3.20	4.20	4.40	3.80	2.20	Tactile
18	3.40	4.20	5.00	4.40	3.60	2.60	Kinesthetic
19	4.40	5.00	4.00	4.60	3.20	1.40	Auditory
20	3.00	3.00	4.60	4.80	4.00	2.20	Tactile
21	4.00	3.80	5.00	4.40	4.20	3.60	Kinesthetic
22	3.00	3.60	3.80	2.20	4.20	2.00	Group
23	4.00	1.80	4.20	5.00	2.20	2.80	Tactile
24	2.80	4.00	4.20	5.00	3.80	2.20	Tactile
25	3.00	4.40	4.20	5.00	4.00	2.60	Tactile
26	2.60	4.00	4.80	4.40	2.40	2.80	Kinesthetic
27	3.80	3.80	4.00	4.20	3.80	2.40	Tactile
28	3.60	3.60	4.80	4.40	4.20	3.00	Kinesthetic
29	3.20	4.20	4.00	3.60	3.20	1.20	Auditory
30	2.80	4.60	4.20	5.00	3.60	3.00	Tactile
31	3.40	4.00	4.80	4.00	4.40	2.80	Kinesthetic
32	3.40	3.80	3.60	5.00	4.60	1.40	Tactile
33	3.60	4.60	4.00	5.00	4.20	3.00	Tactile
34	2.20	3.40	4.80	4.20	4.60	1.80	Kinesthetic
35	3.60	4.00	5.00	4.40	2.80	4.60	Kinesthetic
36	3.60	4.60	4.00	3.80	3.20	2.40	Auditory

Student	Mean score of Visual	Mean Score of Auditory	Mean Score of Kinesthetic	Mean Score of Tactile	Mean Score of Group	Mean Score of Individual	Most preferred Learning Style
37	1.40	4.00	4.40	3.80	3.00	2.40	Kinesthetic
38	3.60	3.60	3.40	3.80	3.00	4.20	Individual
39	3.20	4.40	3.60	3.20	2.60	3.60	Auditory
40	4.40	3.80	4.20	4.60	4.40	2.20	Tactile
41	3.40	3.60	4.00	3.60	2.60	4.40	Individual
42	3.40	3.60	4.00	3.60	3.20	3.60	Kinesthetic
43	4.20	4.60	4.40	4.80	3.20	1.00	Tactile
44	3.60	4.40	2.60	3.20	4.00	4.80	Individual
45	4.80	5.00	3.80	4.20	3.20	4.00	Auditory
46	3.40	4.20	3.60	4.40	2.60	3.20	Tactile
47	4.20	4.60	4.40	3.80	4.00	3.60	Auditory
48	3.40	3.40	4.60	4.20	1.20	5.00	Individual
49	3.80	3.60	3.80	4.00	2.60	4.40	Individual
50	3.00	4.00	3.40	3.80	4.40	2.80	Group
51	3.80	4.20	3.60	4.60	4.40	3.60	Tactile
52	3.20	4.20	3.40	3.60	4.00	2.60	Auditory
53	3.20	4.20	3.80	4.00	3.40	2.60	Auditory
54	2.40	4.40	4.00	4.20	3.40	3.20	Auditory
55	3.80	3.40	3.60	4.00	3.20	3.80	Tactile
56	2.60	3.80	4.20	3.40	3.20	2.60	Kinesthetic
57	2.40	4.00	4.20	3.60	3.80	3.20	Kinesthetic
58	3.00	4.40	3.60	3.80	3.80	2.60	Auditory
59	3.20	4.40	3.60	3.80	3.80	2.80	Auditory
60	3.20	4.20	4.00	3.40	3.60	2.00	Auditory
61	3.40	3.80	3.40	3.40	4.00	2.80	Group
62	2.40	4.40	4.20	3.60	3.80	2.60	Auditory
63	4.00	3.80	4.20	3.80	4.60	2.80	Group
64	3.40	3.80	3.00	3.40	2.80	3.00	Auditory
65	3.60	4.40	4.00	3.60	3.00	3.80	Auditory
66	3.60	3.80	4.00	3.80	3.60	2.80	Kinesthetic
67	3.60	3.00	4.20	4.00	3.80	2.60	Kinesthetic
68	3.40	3.20	3.20	4.00	3.80	2.60	Tactile
69	2.40	4.00	3.40	4.20	3.80	3.20	Tactile
70	2.00	4.60	2.40	3.00	3.00	2.40	Auditory

APPENDIX D:

TRANSLATION APPROVAL FORMS

..... DEFENDING EDUCATION RIGHTS
Tel: +66 833 974 515
Emails: t.naing1@gmail.com
editors@maukkha.org
Web: www.maukkha.org

Maukkha Education Magazine (Burma)

TO WHOM IT MAY CONCERN:

Translation approval form

Date: 20 September 2013

Mae Sot, Thailand

This is to certify that the questionnaire translated by Mr. La San who is doing a Master of curriculum and instruction at Assumption University of Thailand has been checked and made necessary corrections by Mr. Thein Naing who is editor chief of Maukkha Education Magazine (Myanmar).

Thein Naing

Executive Editor
Maukkha Education Magazine (Myanmar)

Email: t.naing1@gmail.com
Ph: 0833974515
Web: www.maukkha.org

Translation Approval Form

Date: 9 September 2013

This is to certify that Mr. La San Who is doing a Master of Curriculum and Instruction at Assumption University of Thailand translated questionnaire has been checked and made necessary correction by Mr. Khun Seng who is a principal of Teacher Training College.

Mr. Khun seng

Principal

Teacher Training College

Myanmar

Date: 9th September, 2013

To Whom It May Concern

This is to certify that the questionnaire in the Burmese version translated by Mr. La San (ID: 542-9512), a postgraduate student of M.Ed in Curriculum and Instruction, Assumption University, with a purpose of surveying on preferred learning styles of ethnic students of Burmese language in Pyin Oo Lwin, have linguistically been verified and determined as they are literally consistent and grammatically accurate.

Sincerely

Naw Aye Min Min Oo

ID: 552 9877

Candidate of Ph.D in English Language Teaching

Institute of English Language and Education

Assumption University

APPENDIX E:

PERMISSION APPROVAL LETTERS TO CONDUCT RESEARCH

Principal or Director

Shwe Nalone Taw (Sacred Heart Orphanage),

Pyin Oo Lwin, Myanmar

RE: Permission to Conduct Research Study

Dear ....

I would like to request permission to conduct a research study at your school. I am doing my Master's Degree in Curriculum and Instruction at Assumption University. I am in the process of writing my Master's Thesis and my thesis title is ""A Comparative Study of Ethnic Students' Learning Styles in Learning Burmese and Burmese Subject Achievements in Three Church Based Schools and One Selected School in Pyin Oo Lwin, Mandalay Region, Myanmar". I hope that you and your school committee will allow me to have grade 11 ethnic students who are learning Burmese as my sample.

If approval is granted, the grade 11 ethnic students will respond questionnaire and it will be done in 30 minutes. The Burmese subject exam will be done in 3 hours. The survey results will be strictly confidential and will be used only as the document in my study.

The success of my study is depending on your approval and your approval to conduct my study will be greatly appreciated.

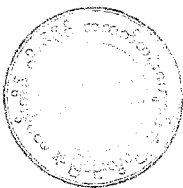If you approve my request, kindly sign below.

Thank you.

Sincerely,   Approved by:

La San   SR. MARY FLORA FSAG
                                                   ....
                                                   SISTER MARY FLORA MYINT
                                                   ┌ ─ ─
                                                        Provincial
                                                   Franciscan Sisters of
                                                   St. Aloysius Gonzaga
                                                        Myanmar

Principal or Director

....

RE: Permission to Conduct Research Study

Dear ....

I would like to request permission to conduct a research study at your school. I am doing my Master's Degree in Curriculum and Instruction at Assumption University. I am in the process of writing my Master's Thesis and my thesis title is ""A Comparative Study of Ethnic Students' Learning Styles in Learning Burmese and Burmese Subject Achievements in Three Church Based Schools and One Selected School in Pyin Oo Lwin, Mandalay Region, Myanmar". I hope that you and your school committee will allow me to have grade 11 ethnic students who are learning Burmese as my sample and to use grade 11 Burmese subject question that have been used in your school to test ethnic students in three church-based schools.

If approval is granted, the grade 11 ethnic students will respond questionnaire and it will be done in 30 minutes. The survey results will be strictly confidential and will be used only as the document in my study.

The success of my study is depending on your approval and your approval to conduct my study will be greatly appreciated.
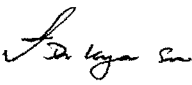
If you approve my request, kindly sign below.

Thank you.

Sincerely,

La San

Approved by:

....

....

၁၀၀ ၇ိ၁သိီ၁ဒ္ုိ႔ိ၇ိ၁၀၁ ၇ိ၁၀၇ိုၤ၁၀၇၁ၤ

ၿမိ႕ိ၁လ္ု၁ၿဲ

Principal or Director

St' Matthew Orphanage Center,

Pyin Oo Lwin, Myanmar

RE: Permission to Conduct Research Study

Dear___

I would like to request permission to conduct a research study at your school. I am doing my Master's Degree in Curriculum and Instruction at Assumption University. I am in the process of writing my Master's Thesis and my thesis title is "A Comparative Study of Ethnic Students' Learning Styles in Learning Burmese and Burmese Subject Achievements in Three Church Based Schools and One Selected School in Pyin Oo Lwin, Mandalay Region, Myanmar". I hope that you and your school committee will allow me to have grade 11 ethnic students who are learning Burmese as my sample.

If approval is granted, the grade 11 ethnic students will respond questionnaire and it will be done in 30 minutes. The Burmese subject exam will be done in 3 hours. The survey results will be strictly confidential and will be used only as the document in my study.

The success of my study is depending on your approval and your approval to conduct my study will be greatly appreciated.

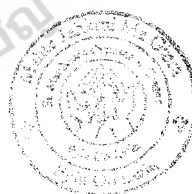If you approve my request, kindly sign below.

Thank you.

Sincerely,   Approved by:

                                                        ___ Ting Hkaw
La San   ___ Director, SMOC
                                                        September 20, 2013

Principal or Director

Lisu Compassion Orphanage Center,

Pyin Oo Lwin, Myanmar

RE: Permission to Conduct Research Study

Dear Daw Mar Lay

I would like to request permission to conduct a research study at your school. I am doing my Master's Degree in Curriculum and Instruction at Assumption University. I am in the process of writing my Master's Thesis and my thesis title is ""A Comparative Study of Ethnic Students' Learning Styles in Learning Burmese and Burmese Subject Achievements in Three Church Based Schools and One Selected School in Pyin Oo Lwin, Mandalay Region. Myanmar". I hope that you and your school committee will allow me to have grade 11 ethnic students who are learning Burmese as my sample.

If approval is granted, the grade 11 ethnic students will respond questionnaire and it will be done in 30 minutes. The Burmese subject exam will be done in 3 hours. The survey results will be strictly confidential and will be used only as the document in my study.

The success of my study is depending on your approval and your approval to conduct my study will be greatly appreciated.
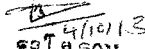
If you approve my request, kindly sign below.

Thank you.

Sincerely,   Approved by:

La San