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The Graduate College

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ENGLISH PROFICIENCY LEVEL CORRELATED WITH CUMULATIVE
GRADE POINT AVERAGE FOR SELECTED SOUTHEAST ASIAN
STUDENTS BY GENDER, GRADE LEVEL, AND BIRTHPLACE

by

Debra M. Marsh

A Research Paper

Submitted in Partial Fulfillment of the
Requirements for the
Master of Science Degree
with a Major in
Guidance and Counseling

Approved: 2 Semester Credits

The Graduate College
University of Wisconsin - Stout

August 1998
A statistical analysis was done using a sample of 163 Southeast Asian students exploring the correlation between Grade Point Average and Limited English Proficiency level, as well as how GPA and LEP level might be impacted by gender, grade level, and birthplace. Four questions were addressed in this study and the following conclusions were made: (1) there is no significant correlation between LEP level and GPA; (2) there is a significant correlation between G: ` and grade level demonstrating a higher mean GPA for 9th and 10th graders over 11th and 12th graders; (3) there is a significant correlation acknowledging that female students have a higher mean GPA than male students; and (4) there is a significant correlation demonstrating that students born outside of the United States have a higher mean GPA than students born in the United States.
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Chapter 1

Introduction

Allied with the United States during the Viet Nam War, the Hmong were forced to flee their native Laos. They began arriving in the United States in 1975, and large numbers continued to immigrate until 1986. Traumatized by the violence they have seen or suffered in Laos, they eagerly embraced the freedom offered in the United States. Theirs was an uphill battle as they spoke no English, and lacked the advantages of education.

In the United States, which has experienced waves of newcomers since it's inception, immigrant problems have a long history. However, recent years have witnessed a change in the world economy from an industrial to a technological age. "...the manufacturing age has come and gone, and today's jobs demand far greater agility." The time seems to have passed when those who couldn't speak the language, or lacked education and skills, could support families through assembly line, agricultural, or unskilled construction work. Today's emerging new jobs require more education. Given the current economic needs, all schools are stretched to their limits to educate well. It is unclear if our society has ever been able to effectively provide a high level education to the majority of immigrants or their children. However, in the past more employment opportunities existed for those who simply did not acquire a good education. Today if a child does not learn to speak English or do the academic work required
to gain an adequate education, it is quite likely the child will be only marginally employable. (Dufresne, 1992)

Cultural Background

The Hmong were primarily agrarian people who kept themselves separate from their linguistically different neighbors. Though money was occasionally used when dealing with ethnically different people, bartering with goods was a more typical way of doing business. All members of the village were constantly aware that cooperation of community members and cohesiveness of the group were paramount in maintaining the social structure that served and protected the community. A clan structure evolved which determined the relationships and responsibilities of all members. A proper marriage of one's daughter to a boy of another clan in a neighboring village ensured harmony between groups and strengthened mutual assistance bonds. This sense of cooperation and cohesiveness necessitated a willingness of members to put the good of the family, the clan, and the village ahead of the particular desires of the individual.

Discussion, compromise, and consensus were important in decision making, and though a village leader might have the last word, group input had to be sought. The central goal was harmony in the group. The clan structure, with its responsibilities and obligations, curtailed individual freedoms and choices, but provided both physical and emotional security and helped Hmong avoid crime, juvenile delinquency, and other social problems. (Dao Yang, 1990)
Prior to the Viet Nam War, few Hmong received any sort of formal schooling. The few who had attended school generally had acquired only a marginal education in Laotian or Thai schools, studying in a language other than Hmong. Except to the extent that individuals had been exposed to aircraft, radios, and weapons during the war, few Hmong had any real familiarity with the high tech world most Westerners take for granted. (Dufresne, 1992)

As the Hmong fled Laos and were resettled in the United States, they encountered profound differences in language, culture, values, economic life, technology, education, and family structures. Some refugees have adapted to these differences and perhaps find themselves financially better off than they were in their home country. The impact of American culture, however, has had some alarming effects. While considering themselves Hmong, many youth have little knowledge of the traditional ways and moral values. Commonly, young people reject their parents’ concerns and values, feeling their parents know nothing of the new country, and therefore have no real advice to give. Many give up their Hmong values without truly acquiring real American values. Instead of interacting with adults around the fireside, learning traditions and moral values, they ignore the adults, watch TV and talk to other teenagers, usually other Hmong teenagers who are as disaffected as they. (Duo Yang, 1990b)

The problems of the cultural/generational conflict is exacerbated by the general difficulties students experience in schools. The Hmong simply have not
experienced the type of success some other Asian groups have had in school
(Walker, 1988)

Statement of the Problem

Much research has been done to explore how to best educate the Hmong students with a limited English proficiency (LEP). However, an “assimilation” model underlies the structure of most schools. Schools stress mainstreaming as the best way to ensure an equal education for all and to keep at bay the specters of segregation and discrimination. One of the myths underlying this practice is “Hmong students will learn English easily and quickly, simply by being exposed to and surrounded by native English speakers”. In fact learning a second language takes time and significant intellectual effort on the part of the learner. Consequently, many LEP students have language, academic, and cultural adjustment needs which may cause them great difficulty in making progress in “mainstream” academic classes. Another myth surrounding Hmong learners is “if they are able to converse comfortably in English, they have developed proficiency in the language.” In fact it takes 6-9 years for ESOL (English to speakers of other languages) students to achieve the same levels of proficiency in academic English as native speakers. (Teachers of English to Speakers of Other Languages, Inc., 1997)

The purpose of this paper was to explore the issues facing Hmong ESOL learners and the school systems working to educate them, as well as
examine the current research regarding academic needs of ESOL learners. In particular, this study addressed how these issues might be affecting LEP Hmong students, grades 9-12, from a medium sized high school in the upper Midwest. To this end this researcher gathered statistics of all LEP students who were currently enrolled at this high school, including how each student's GPA compared to their LEP level, their gender, and their country of birth. This type of statistical comparison had never been done for their high school, and was intended to be used as a starting point to explore future educational services.

This statistical analysis addressed the following four questions:

1. What is the correlation between LEP level and GPA?
2. Is there a correlation between GPA and individual grade level?
3. What is the correlation between GPA and student gender?
4. Is there a correlation between GPA and whether or not the student was born in the United States?
Definition of Terms

LEP: Limited English Proficiency

ESL: Refers to the field of English as a second language as classes and standards themselves.

ESOL: (English to speakers of other languages) refers to the learners who are identified as still in the progress of acquiring English as an additional language.

Mainstream Classes: Regular education classes.

GPA: Cumulative grade point average beginning in 9th grade.

Hmong: means “free men” in their own language. They are fiercely independent people who have shown an unusual tenacity to preserve their sense of people-hood. The Hmong people originated in the mountainous areas of China where over three million Hmong continue to live today (Garrett, 1980).
In the targeted school district, LEP levels ranged from 1 (speaks no English) to 6 (speaks English proficiently). Students were tested every year to determine their LEP level. It was the assumption of this researcher that the students who's LEP level was low enough to possibly remain in ESL or sheltered classes (4 or below) would have a higher GPA than those who's LEP level was between 5 and 6 and therefore totally mainstreamed into regular classrooms.

This statistical analysis looked purely at numbers and compared those results to other research, thereby allowing the researcher to draw some possible conclusions. However, there are many factors not considered in this study including: parental involvement, economic status, individual teaching style and grading practices, and specific class choices to name a few.
Chapter 2

Literature Review

The literature review was unable to locate any studies that answered the questions addressed in this particular study. Therefore, this review focused on research which looked at the struggles involved in teaching English to the Hmong people, additional concepts which can be incorporated, and the difficulties encountered, particularly at the secondary academic level.

One of the ideal elements of successfully teaching English as a second language is the learner’s ability to read and write in their native language. Without this, the student has no academic reading skills to transfer into the new language, little background knowledge of the various subject areas to bring into the new reading situation, and are even unable to translate unfamiliar words with bilingual dictionaries. The more knowledge any of us has of given topics and language structures, the better we understand new but related material. The more limited our background, the more likely we simply will not understand what we are trying to read and will gain little from the experience except frustration.

There was no written language in Hmong. Children learned their surroundings by sight, touch, and hearing. During the day they accompanied their parents into the fields, and at night they listened to their elders relate Hmong history, legends, and folklore. In the United States, the intrusion of television and homework have left less time for children to listen to adults tell stories, legends,
and history. This means they have less exposure to complex and abstract Hmong language. The children can function socially in the home language, but are limited in expressing complex ideas. When English language development is also limited, the children have no vehicle for expressing thoughts. It is believed that encouragement by a teacher can increase both the language use by the parents and the degree of participation by the children. Teachers should encourage parents to develop their children's native language skills (Downing, Bliatout, Lewis, and Yang, 1988). This in turn will have a positive effect on their acquisition of the English language.

The following four basic principals are essential when teaching ESOL students.

1. Learning occurs most easily when language is kept whole. Often second language students are given more drill and practice on isolated bits and pieces of language because they think whole meaningful language is too difficult for them. However, children learn language as a medium of communication rather than a curriculum subject with sets of isolated topics, facts, or skills (Enright and McCloskey, 1985). Rather than teaching bits and pieces of history, teaching should begin with whole concepts and let the details fall into place as they develop an understanding of topics.

2. Classes should be learner centered with meaningful, functional activities.
Begin with what the student knows. Students should be thought of as explorers, active learners who bring a great deal to their environment. That environment can then be used to develop new understandings.

3. Language is learned in social interaction.

Working in pairs or groups is encouraged because as students work together, they must incorporate all four modes of communication; writing, listening, reading, and speaking.

4. Language is learned best when teachers have faith in learners.

(Freeman & Freeman, 1989).

These four principals were demonstrated in 1987 when a special summer program was developed for 46 minority ESOL students in and Arizona school. The 46 students were made up of Freshman and Junior youth all of whom had low standardized test scores and had failed at least 3 classes.

(Freeman et al., 1989). The teachers who ran this program were regular classroom teachers with no previous experience in this type of program. They incorporated these four principals into history and science. After these six weeks were completed, 74% of the students agreed with the statement “I feel better about school because of the help I got in the class.” All but two of the students passed, and those two failed because they did not fulfill the strict attendance requirements.

This study found that by working with whole concepts, drawing on students
strengths and understandings, encouraging group interaction, and having faith in learners themselves, teachers were able to help these students change their view of themselves as learners (Freeman et al., 1989).

These are worthwhile methods which focus on building background knowledge prior to the reading experience to improve comprehension. Unfortunately, most are used only by elementary teachers who know the needs of individual students very well and define their job in terms of building basic reading skills and basic knowledge. Secondary school teachers often see themselves as teaching a subject rather than a basic skill. They know the needs of the individual less because they may see 150 students per day instead of 30. Secondary teachers assume that, though there will be a certain range of abilities, most students will have basic skills and knowledge on which to build. It is beyond their ability to work with students who are extremely deficient. LEP students mainstreamed into these classrooms are quite unlikely to receive needed additional assistance. Nevertheless, language minority students are often placed in the mainstream classrooms long before they develop the degree of language proficiency necessary to compete on equal footing with native speakers of the school language. In some cases, students and their families may refuse help because of the perceived remedial stigma, or students slip through the screening systems set up by school districts to identify students who need special language instruction (Harklau, 1994). Lack of funding may be the impetus behind school districts limiting the number of years students can remain in ESL classes.
and encouraging them to be mainstreamed. So what is the difference between ESL classes and mainstream classes? Although the ESL classroom is also often taught by a native English speaking person, the classroom style is much more social. The chairs may be designed in a circle which offers much more interaction. The teacher speaks slower and is cued in to individuals who look like they may not be understanding. There is also more give and take offered between student and teacher. The ESL class also offers a chance to socialize in their native language after long hours of silence or impassivity in regular classrooms. (Freeman et al., 1987)

In the mainstream classroom, the predominant activity is termed "teacher led discussion" in which the teacher overwhelmingly dominates the talk. Teachers seldom adjust their lecture so it is more comprehensible to the LEP learner. Often teachers talk fast, and do not repeat or pause to see if students understand. Learners have particular difficulty understanding ironic or sarcastic statements, as well as teachers who used frequent asides to their lecture. There is very little class interaction in the lower level classes. There is more interaction in higher level classes, but the information is much more complex and difficult for the LEP learner to understand. Although they argue in favor of mainstreaming students to give them the opportunity to socialize with native speakers thereby enhancing their English skills, Hmong students, intimidated by their lack of knowledge and uncomfortable with their English skills, remain silent. While native students seize any opportunity to do groupwork, the Hmong students often
rely on the native speakers to do their talking in the group. Learners expressed frustration and embarrassment at their spoken English ability, and felt that they could not contribute greatly because they don't share the background in United States pop culture.

At the MinneTESOL conference, a panel of linguists, ESL and bilingual teachers, and Hmong students concluded that the failure to embrace bilingual education and/or sheltered content classes has had the following ongoing effects in St. Paul and other districts:

1. **ESL teachers focus on vocabulary development and content area information, and spend inadequate time on crucial language structure issues.** It is believed that too much is expected of ESL teachers in too little time. Consequently, students never completely understand the structure of the language and continue to exhibit ongoing speaking, writing, and reading comprehension problems.

2. **Students exit ESL with inadequate general knowledge and vocabulary background.** In this case, students flounder in mainstream classes, expending much effort with little gain because the language level of the coursework is so far beyond them that they understand little and cannot use bilingual materials to help themselves. Commonly students sit quietly, study hard, (though ineffectively), and are given passing grades because of conduct, attendance, attitude, and hard work.
3. Those students passing mainstream content classes without truly understanding the material are unprepared to deal with more difficult academic or work-related tasks.

4. Many students become jaundiced or disaffected due to continual frustration, sometimes exhibiting behavior problems or choosing to drop out.

5. Mainstream teachers face instructional dilemmas: Either they ignore the special problems of the LEP students and teach the main body of students the appropriate material, or spend large amounts of time in remediation of LEP students, perhaps ignoring the needs of others.

6. Students are either allowed to flounder in classes over their heads or are continually scheduled into classes with little academic substance: physical education, art, industrial arts, home economics. (Bosher, et al. 1990)
Chapter 3

Methodology

This chapter discusses the methods and procedures of the study. Included is a description of the subjects, instrumentation, and procedures. This particular study relied on a variety of statistics already available through the high school. The study was focused on 163 LEP Southeast Asian students grades 9 - 12. The statistics gathered included each individual's cumulative GPA, LEP level, gender, country of birth, and grade level. Each individual was identified by a number so as to retain their confidentiality.

Once the statistics were gathered, it was determined that a Pearson Correlation Coefficient would be used to compare GPA with the LEP level for each student. In addition, a t test was done regarding the demographic information. It compared male to female students, students born in the United States to students born outside of the country, and students with LEP levels 4.99 and below to students with LEP levels of 5-6. There was also a one-way analysis of variance done on the four grade levels. With the grades separated, it was hoped to determine if there was a relationship between a specific grade level and successful GPA.

Certainly this study was limited in that the focus was only on students from this high school. Although the statistics themselves were accurate, this type of study did not take into consideration each individual's personality, support
system at home and in school, and attendance. It also did not explore the complexity of individual courses, nor the attitudes, teaching style, or grading practices of each individual teacher. However, it was hoped that by comparing these statistics and examining other research, the staff at this high school might become more aware of possible needs of their LEP Southeast Asian students. Ideally this would lead to examining gaps in services, and being able to eventually formulate additional services or resources to better meet the students' needs.
Chapter 4

Analysis of Data

This analysis evaluated LEP and GPA of 163 Southeast Asian students, grades 9-12, who had currently been enrolled at an upper Mid-western high school. See Table 1.

**TABLE 1**

**Numbers of LEP Students by Grade.**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>54</td>
<td>33.1</td>
</tr>
<tr>
<td>10</td>
<td>46</td>
<td>28.2</td>
</tr>
<tr>
<td>11</td>
<td>37</td>
<td>22.7</td>
</tr>
<tr>
<td>12</td>
<td>26</td>
<td>16.0</td>
</tr>
<tr>
<td>Total</td>
<td>163</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Each of these students was given a LEP Level which ranged in number between 1 (low) and 6 (high). For the purpose of this study, all of the students with an LEP Level between 1 and 4.99 were organized in the low level, and those between 5.00 and 6 were in the high level. See Table 2.
### TABLE 2

**Breakdown of Students Based on LEP Level**

<table>
<thead>
<tr>
<th>Value Label</th>
<th>Value</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0 English Proficiency</td>
<td>2.0</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>3.0 English Proficiency</td>
<td>3.0</td>
<td>8</td>
<td>4.9</td>
</tr>
<tr>
<td></td>
<td>3.5</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>4.0 English Proficiency</td>
<td>4.0</td>
<td>17</td>
<td>10.4</td>
</tr>
<tr>
<td></td>
<td>4.5</td>
<td>4</td>
<td>2.5</td>
</tr>
<tr>
<td>5.0 English Proficiency</td>
<td>5.0</td>
<td>44</td>
<td>27.0</td>
</tr>
<tr>
<td></td>
<td>5.5</td>
<td>6</td>
<td>3.7</td>
</tr>
<tr>
<td>6.0 English Proficiency</td>
<td>6.0</td>
<td>78</td>
<td>47.9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>163</td>
<td>100.0</td>
</tr>
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</table>

### TABLE 2.1

**Breakdown of Students Based on Low or High LEP Level**

<table>
<thead>
<tr>
<th>Value Level</th>
<th>Value</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>low / 1 - 4.99</td>
<td>1</td>
<td>35</td>
<td>21.5</td>
</tr>
<tr>
<td>high / 5 - 6.00</td>
<td>2</td>
<td>128</td>
<td>78.5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>163</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The first question addressed in this study was, "What is the correlation between LEP and GPA?". A Pearson Correlation Coefficient was used to determine whether or not a correlation existed between the two. The result of this test was $p = .148$, which based on the $p < .05$ significance level, demonstrated that there was no significant correlation. In addition, a $t$-test was also run, the results of which are in Table 3.
TABLE 3

Grade Point Average Means and Standard Deviations for
Group 1: low / 1 - 4.99 and Group 2: high / 5 - 6.00

<table>
<thead>
<tr>
<th>Group</th>
<th>M</th>
<th>S</th>
<th>N</th>
<th>p*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>2.5385</td>
<td>.777</td>
<td>32</td>
<td>*Not Significant</td>
</tr>
<tr>
<td>Group 2</td>
<td>2.5384</td>
<td>.853</td>
<td>128</td>
<td>at .05 level</td>
</tr>
</tbody>
</table>

The second question addressed in this study was "Is there a correlation between GPA and individual grade level?". To examine this question, a one-way analysis of variance was done followed by the Student-Newman-Keuls Procedure and the Duncan Procedure. While exploring the correlation between LEP and individual grade level, no two groups were significantly different at the p < .05 level of significance. However, there was a significant finding when GPA was correlated with individual grade level. See Table 4.

TABLE 4

ANOVA for Cumulative High School GPA and Grade Level

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5.6448</td>
<td>3</td>
<td>1.8816</td>
<td>*0426</td>
</tr>
<tr>
<td>Within Groups</td>
<td>107.4114</td>
<td>159</td>
<td>.6755</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>113.0562</td>
<td>162</td>
<td></td>
<td>*significance at .05 level</td>
</tr>
</tbody>
</table>

The breakdown for each grade level is demonstrated in Table 4.1.
### TABLE 4.1

**Means and Standard Deviations for Grade Point Average by Grade**

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 9</td>
<td>2.6497</td>
<td>.9228</td>
<td>54</td>
</tr>
<tr>
<td>Grade 10</td>
<td>2.7248</td>
<td>.6932</td>
<td>46</td>
</tr>
<tr>
<td>Grade 11</td>
<td>2.3088</td>
<td>.8725</td>
<td>37</td>
</tr>
<tr>
<td>Grade 12</td>
<td>2.3042</td>
<td>.7281</td>
<td>26</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2.5384</strong></td>
<td><strong>8352</strong></td>
<td><strong>163</strong></td>
</tr>
</tbody>
</table>

The results demonstrate that the LEP students in this study have a higher mean GPA during ninth and tenth grade compared to the mean GPA during eleventh and twelfth grade.

The third question addressed was, "What is the correlation between GPA and student gender?". A *t* test was done to compare LEP and GPA for students based on gender. Again there was no significant difference when LEP was compared to gender. However, there was a significant correlation between GPA and gender. See Table 5.

### TABLE 5

**Means and Standard Deviations of GPA by Gender**  
**Group 1: Male and Group 2: Female**

<table>
<thead>
<tr>
<th>Group</th>
<th>M</th>
<th>SD</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>2.2979</td>
<td>.836</td>
<td>89</td>
<td>.001</td>
</tr>
<tr>
<td>Group 2</td>
<td>2.8277</td>
<td>.743</td>
<td>74</td>
<td></td>
</tr>
</tbody>
</table>
The variance determined there was a significant difference, p<.001. This significance was accepted using p<.05 as the significance level. The results indicate that female students in this sample have a higher mean GPA than male students.

The final question addressed in this study was, "Is there a correlation between GPA and whether or not the student was born in the United States?". A \( t \) test was done to explore the possible correlation between being born in the United States and LEP and GPA scores. Table 6 shows a correlation between LEP level and whether or not the student was born in the United States.

**TABLE 6**

<table>
<thead>
<tr>
<th>Group</th>
<th>M</th>
<th>SD</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1: born in the USA &amp; Group 2: Not born in the USA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 1</td>
<td>5.6538</td>
<td>.542</td>
<td>78</td>
<td>.001</td>
</tr>
<tr>
<td>Group 2</td>
<td>4.7857</td>
<td>1.117</td>
<td>84</td>
<td></td>
</tr>
</tbody>
</table>

The variance determined that the findings were significant, \( p=.001 \). Based on the p<.05 significance level, this clearly shows that students born in the United States have a higher English proficiency.
Table 7 explores a correlation between GPA and birth in the United States.

**TABLE 7**

Mean and Standard Deviations for GPA scores for
*Group 1: Born in the USA and Group 2: Not Born in the USA*

<table>
<thead>
<tr>
<th>Group</th>
<th>M</th>
<th>SD</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>2.3820</td>
<td>.846</td>
<td>78</td>
<td>.015</td>
</tr>
<tr>
<td>Group 2</td>
<td>2.6992</td>
<td>.793</td>
<td>84</td>
<td></td>
</tr>
</tbody>
</table>

The variance determined a significant correlation, \(p=.015\) based on the \(p<.05\) significance level. In other words, students born outside the United States were found to have a higher mean GPA than students born in the United States.
Chapter 5

Summary, Conclusion & Recommendation

SUMMARY

This study examined statistics concerning the limited English proficient Southeast Asian students enrolled at an upper Mid-western high school. For each of the 163 LEP students, statistics were gathered concerning their LEP level, cumulative GPA, grade level, gender, and country of birth. This statistical analysis addressed four questions, the first of which was "What is the correlation between GPA and LEP level?". The data were analyzed using a Pearson Correlation Coefficient followed by a t test to compare LEP level with GPA. The results demonstrated that there was no significant correlation between the two, in other words the null hypothesis was accepted. These data were further broken down to respond to the second question, "Is there a correlation between GPA and individual grade?". A one way analysis of variance was done, the results of which demonstrate that there is indeed a significant correlation between GPA and individual grade. In fact, the statistical analysis showed a significantly higher GPA for the ninth and tenth graders than for the eleventh and twelfth graders. It should be noted, however, that the number of ninth grade students (54) was nearly double the twelfth grade students (26). This smaller number of twelfth grade students could have more readily skewed the mean GPA. However, these statistics might also point to the fact that as students progress in school, the
academic complexity increases which may be reflected in GPA scores.

The third question addressed in this analysis was, "What is the correlation between GPA and student gender?". A t-test was done to compare GPA for students based on gender. This analysis determined that there was a significant correlation which indicated that female students have a higher mean GPA than male students.

The final question addressed in this study was, "Is there a correlation between GPA and whether or not the student was born in the United States?". A t-test was done to explore the possible correlation being born in the United States had on GPA and LEP scores. As would be expected, there was a significant correlation demonstrating higher LEP scores for students who were born in the United States. Conversely, the analysis demonstrated a significant correlation between a higher GPA for students having been born outside of the United States.

**CONCLUSION**

This statistical analysis was organized to provide a "piece of the puzzle" in understanding the academic struggles of Southeast Asian students at a selected high school. Statistically there was no correlation between GPA and English proficiency. However, this statistical analysis does not reflect the many factors that impact the students' grade point average, including the support they receive in class or at home, the difficulty of their coursework, the teaching and grading
style of individual teachers, and whether or not they are in regular or sheltered classes. Although there was no correlation between LEP level and GPA, there was a significant correlation between GPA and grade level. Specifically, the lower grades have a higher mean GPA that the higher grades. The statistics also reflect that at this high school only 35 students have an LEP level of less than 5 which means that fewer than 35 of the 163 students remain in sheltered classes, the rest are totally mainstreamed. The sheltered classes offered them more individual support and instructors who were practiced in breaking down concepts so they could better understand. As they enter the mainstream classes, they experience lecture as the primary mode of instruction. Teachers have a much larger ratio of students, and teach to the majority. Our literature review tells us that although students may have a high LEP level, and can speak English fluently, the cultural changes have left them lacking the exposure to complex and abstract thought in either the Hmong or English language. As students achieve higher grade levels, the academic content becomes much more abstract and complex. Often Hmong students lack the self confidence to ask questions or seek additional assistance. Their grades and self esteem may suffer, along with their motivation. This may be reflected in the fact that the higher grades have a lower mean GPA than the lower high school grades. In addition, these students lack the advantage of seeking assistance from their parents as many of their parents speak minimal English.

Our literature review also discussed the values of the Hmong culture, and
the importance of working for the good of the whole. As Hmong immigrants sought refuge in the United States, they spoke no English, yet were motivated toward a better life. They recognized the importance education played in that goal. However, the impact of the American culture has left youth with little knowledge of their traditional ways and moral values. Youth may be rejecting their Hmong values without really acquiring American values. This may result in less motivation to succeed in school. In addition, students may not see the value of education as there are limited positive Hmong role models who they can emulate. This is statistically demonstrated in the analysis comparing GPA with whether or not students were born in the United States. Although students born in the United States have a higher LEP level, it is the students born outside of the United States who have a higher mean GPA. Again, the statistics do not reflect actual coursework, so part of the statistical difference may be that students with a higher LEP are in more difficult classes.

The last statistically significant result of this analysis was that female LEP students have a higher mean GPA than do male LEP students. Again this may be a result of the cultural changes youth are experiencing. In the traditional Hmong culture, it is much more important that the male succeed and support the family while the female take on the role of homemaker. As students become more Americanized they are bombarded with the women’s movement, and the message that they can further their education and pursue a career outside the
family. This may result in greater motivation by the female students.

Recommendations

As new refugees are no longer entering the United States, we see most of our Southeast Asian students ranking higher with their level of English proficiency. Consequently we see reduced funding for Southeast Asian services. However, what our null hypothesis did demonstrate is that LEP level is not indicative of GPA. In other words, students with a high LEP level may still have a lower GPA. Southeast Asian students with good verbal and written English skills continue to be at a disadvantage when it comes to understanding complex concepts. Although there may be less need for ESL and sheltered classes, we are seeing students who continue to need supportive services but who may lack the self confidence to pursue these services on their own. As we see staff cutbacks for these classes, it would seem important to maintain the staff, but in a different, more supportive capacity.

As this analysis was purely based on statistics, an appropriate follow up might be to survey these Southeast Asian students to determine their perception of needs and desired services. In addition, since seeing success can be a positive motivator, this researcher might encourage hiring qualified Hmong teachers and administrators, as well as incorporating more Hmong role models in the yearly job fair.
BIBLIOGRAPHY


