Chapter 4

Results of the Study

4.1 Introduction

This chapter discusses the results from the quantitative data analysis using the SPSS program and the qualitative data analysis from the interviews. The quantitative data is presented using descriptive statistics (Means, Standard Deviation, and percentage) and correlations, and the data from the interviews is presented through the themes and words provided by the students. This chapter is divided into three main sections with each section presenting the results of the research questions concerning motivation types, self-identity changes, and the correlation of the two.

4.2 Motivation Types

In this section the results and findings from the analysis of the motivation types section of the questionnaire are presented as well as the results of the follow-up interview questions. The participants' questionnaire responses were coded and keyed into the SPSS program; and the items were grouped according to the motivation type they referred to. The percentages for each response and mean scores of all of the motivation types were calculated as well as the standard deviation. The summary of the descriptive statistics are shown in Table 5; the results are listed in descending order of the mean scores.

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Table 5 Summary of Descriptive Statistics for Motivation Types

Motivation Type	Strongly Agree %	Agree %	Uncertain %	Disagree %	Strongly Disagree %	Mean	Degree of Motivation
Identified Regulation	71.30	26.03	1.60	1.07	0	4.67	Highest
Intrinsic Motivation Stimulation	48.97	39.87	10.63	0.40	0.13	4.37	Highest
Intrinsic Motivation Knowledge	45.97	39.53	10.63	2.93	0.93	4.27	Highest
Intrinsic Motivation Accomplishment	45.03	37.37	14.13	2.67	0.80	4.23	Highest
External Regulation	51.80	26.10	11.87	6.30	3.90	4.16	High
Introjected Regulation	26.10	26.90	23.10	13.30	10.65	3.45	High
Amotivation	0.80	2.03	7.77	21.40	67.97	1.46	Lowest

4.2.1 Identified Regulation

Items 2, 7, and 13 from the questionnaire referred to identified regulation which is one of the subtypes of extrinsic motivation valuing ELL as both good and important at the personal level. Ryan and Deci (2000) write that a participant who recognizes the personal importance of the behavior has accepted ownership or internalized the regulation. There is a conscious valuing of the activity. For example, a young boy memorizes spelling lists because he sees the value in his writing; being a good writer is a value he holds and is a life goal. Therefore, he has identified with the value of learning the spelling words.

The sample as a whole chose to agree or strongly agree with the three items (M = 4.67, SD = .431); Table 5 shows that 71.30% strongly agreed with the statements while 26.03% agreed. This corresponds with the highest level of motivation according to the guidelines set forth in chapter 3. There were no participants who strongly disagreed with these statements, and only 1.07% disagreed.

Seven students reported in their interviews that the most important reason they were studying English was because of identified regulation; they identify English as the means to communicate with the world and choose to be the type of person who can speak a second language. Two of the students see English as an opportunity to speak with the other citizens of the Association of Southeast Asian Nations (ASEAN) while three of the students noted that they felt that English was the language of the entire world. Participation in the larger community whether it be the ASEAN or the worldwide community was important at the personal level to these seven students.

4.2.2 Intrinsic Motivation

Three subtypes of intrinsic motivation had the highest means after identified regulation. The reward for the intrinsic motivation subtype for stimulation is the pleasure of experiencing pleasant sensations. Noels (2001b) writes that participants find the sensations of the language stimulating. They might find pleasure in the sounds, melodies, or the rhythm of the language in a piece of poetry or prose.

The results corresponded with the highest level of motivation although at a slightly lower score than that of identified regulation (M = 4.37, SD = .567). Table 5 shows that 48.97% strongly agreed with the three items, and 39.87% agreed with

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them. Only 0.13% chose "strongly disagree" while 0.40% chose "disagree." The mean score of the selections was 4.37 which is the highest degree of motivation (*SD* = .567).

Items 9, 10, and 19 referred to another subtype of intrinsic motivation. Participants who agreed with these statements about intrinsic motivation for knowledge are motivated by the satisfaction of learning a new idea. Their pleasure comes from learning, exploring, and grasping new things. For example an ELL student might look up little-known foreign words just because he's curious (Noels, 2001b). For these items the mean score of 4.27 indicates the highest degree of motivation (*SD* = .590). A small number of students strongly disagreed with the statements (0.93%) and disagreed (2.93%); more students chose to strongly agree (45.97%) and agree (39.53%).

The final subtype of intrinsic motivation is for accomplishment. Intrinsic motivation for accomplishment has a reward of satisfaction of accomplishing something new. Whether the participant is trying to accomplish something, surpass himself, or create, the emphasis is on the achievement process not the goal or final result. For example the motivation might come from the satisfaction of successfully accomplishing a difficult grammatical structure in the second language (Noels, 2001b). Items 8, 14, and 20 referred to this type of motivation, and there was the highest degree of motivation for these statements (*M* = 4.23, *SD* = .623). The largest percentage of participants strongly agreed (45.03%) while 37.37% agreed; a few participants chose to disagree (2.67%) and strongly disagree (0.80%).

Only one student who was interviewed identified intrinsic motivation as the most important reason for ELL at this point in time. He loves English and studies because of the enjoyment and pleasure it brings him, and he can not remember a time when he did not love English. He learns because it's interesting not just because he sees benefits from learning but because ELL is stimulating. Another student did not reference intrinsic motivation for knowledge when asked about her motivation type but did reference it for another question. She reported that because she is able to read English books, she sees the world in a different way. Because she knows English, she can read history through the narrator who is a local observer. She can gain knowledge from the one who has the experience.

Two students cited a subtype of intrinsic motivation for their primary and secondary school years. One said that she studied for the pleasure she received from ELL, and one participant said that he had a cousin who could speak English. He wanted to be smart like his cousin, and he enjoyed gaining the new knowledge from learning new things in English.

4.2.3 External Regulation

According to Ryan and Deci (2000) external regulation is a form of extrinsic motivation which separates motivation from the activity; the participants want to study English either to receive a positive outcome or to avoid a negative consequence. It is the least autonomous subtype of extrinsic motivation as ELL is not undertaken or continued without outside control, and it is characterized by compliance to external forces. Items 3, 6, and 16 refer to external regulation. The majority of the sample chose to strongly agree (51.80%) or agree (26.10%) with these items while 6.30% disagreed and 3.90% strongly disagreed. The mean score 4.16 indicates a high degree of motivation (*SD* = .663).

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None of the students who were interviewed identified external regulation as their primary motivation type, but they did relate that they believed English would help them in getting a job. Four students said that English was necessary for them to get a good job in the future, and they thought that it would give them a competitive edge over other candidates.

4.2.4 Introjected Regulation

If participants receive a cue from their environment that the activity is beneficial and take that cue in, it is a form of extrinsic motivation called introjected regulation. Although the regulation is internalized, it does not fully become a part of the person. Actions are still carried out in order to avoid guilt, anxiety or to increase the feeling of worth. This type of regulation is still quite controlling causing people to act in order to receive approval from self or others (Ryan & Deci, 2000). Items 11 and 18 referred to this type of motivation and had a mean score of 3.45 which is a high degree of motivation (SD = 1.045). More participants chose to strongly agree (26.10%) or agree (26.90%) than disagree (13.30%) or strongly disagree (10.65).

4.2.5 Amotivation

The last items in the questionnaire referred to amotivation which is where the student acts passively or does not act at all. Ryan and Deci (2000) describe the participant's behavior as unintentional and without personal cause. The action is impersonal and perceived as irrelevant. Amotivation results from not valuing the activity, feelings of incompetence, or not believing it will achieve a goal. Only 0.80% of the participants responded "strongly agree" while 2.03% chose "agree." The majority responded "disagree" or "strongly disagree" (21.40% and 67.97%). The mean score of 1.46 indicates the lowest degree of motivation meaning few responders are amotivated (SD = .554).

Although none of the students who were interviewed indicated that they were amotivated at the current time in their ELL, several did recall a time when they were not motivated to learn. When asked why they studied English in their primary or secondary education years, seven students reported they studied only because it was part of the core curriculum or because their parents took them to English classes during their primary or secondary education years. Their motivation type changed before entering university and choosing English as a major.

Two students identified a reason for studying English that was not directly related to any of the items on the questionnaire. Both students want to learn English so that they can travel abroad.

4.2.6 Group Comparisons

In order to compare the motivation types of students between the four university level groups (Freshman, Sophomore, Junior, and Senior), a Kruskal-Wallis H test was calculated. Pairwise comparisons were performed using Mann-Whitney tests with a Bonferroni correction for multiple comparisons. Table 6 shows the results of the Kruskal-Wallis H test for each of the motivation types.

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Table 6 Kruskal-Wallis H Test--Motivation Types

	Identified Regulation	Intrinsic-Stimulation	Intrinsic-Knowledge	Intrinsic-Accomplishment	External Regulation	Introjected Regulation	Amotivation
Chi-Square	3.972	2.337	4.668	6.421	3.981	9.813	1.079
Df	3	3	3	3	3	3	3
Asymp. Sig.	.264	.505	.198	.093	.264	.020	.782

Statistical significance was accepted at the $p < .05$ level for the omnibus test and $p < .0083$ level for the multiple comparisons. According to the Kruskal-Wallis test, there were no statistically significant differences between the groups in identified regulation ($H(3) = 3.972$, $p = .264$), intrinsic motivation – stimulation ($H(3) = 2.337$, $p = .505$), knowledge ($H(3) = 4.668$, $p = .198$), accomplishment ($H(3) = 6.421$, $p = .093$), external regulation ($H(3) = 3.981$, $p = .264$), and amotivation ($H(3) = 1.079$, $p = .782$). There was a statistically significant difference between the university levels in the introjected regulation motivation type ($H(3) = 9.813$, $p = .020$) with a mean rank of 135.85 for Freshmen, 117.14 for Sophomores, 116.60 for Juniors, and 95.92 for Seniors. Table 7 shows the results of *post-hoc* analysis which revealed a statistically significant difference between Freshmen (*Mdn.* = 3.75) and Seniors (*Mdn.* = 3.00) with regard to introjected regulation ($z = -3.000$; $p = .003$). There were no statistically significant differences between Freshmen and Sophomores ($z = -1.554$; $p = .120$), Juniors and Seniors ($z = -1.367$; $p = .172$), Sophomores and Seniors ($z = -1.429$; $p = .153$), Sophomores and Juniors ($z = -.049$; $p = .961$), and Freshmen and Juniors ($z = -1.657$; $p = .097$).

Table 7 Introjected Regulation Group Comparisons

	Freshmen/ Sophomores	Juniors/ Seniors	Sophomores/ Seniors	Sophomores/ Juniors	Freshmen/ Seniors	Freshmen/ Juniors
Z	-1.554	-1.367	-1.429	-.049	-3.000	-1.657
Asymp. Sig. (2-tailed)	.120	.172	.153	.961	.003	.097

None of the students who were interviewed reported any changes in their motivation types since entering the university English program. Any changes that had occurred in the motivation types occurred before they entered the university. Five students identified their secondary education years as times where they moved from amotivation to being motivated to learn English.

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4.3 Self-Identity Changes

In the following sections the results from the self-identity change portion of the questionnaire will be presented in the same manner as the results from the motivation section as well as the responses from the follow-up interviews. For self-identity change, there were six types of change: confidence, productive, additive, zero, subtractive, and split. The SPSS program was used to generate the frequency of the participants' responses which were coded and keyed into the computer for all 26 items. The percentages for each response and mean scores of all of the self-identity changes were calculated as well as the standard deviation. The summary of the descriptive statistics is shown in Table 8; the results are listed in descending order of the mean scores.

Table 8 Summary of Descriptive Statistics for Self-Identity Change

Type of Change	Strongly Agree %	Agree %	Uncertain %	Disagree %	Strongly Disagree %	Mean	Degree of Change
Confidence	25.05	45.05	22.08	5.38	2.43	3.85	High
Productive	23.78	41.70	26.92	5.24	2.34	3.79	High
Additive	21.76	27.28	21.68	14.96	14.32	3.27	Moderate
Zero	22.40	17.38	17.23	22.08	20.85	2.98	Moderate
Subtractive	8.55	18.85	21.98	24.60	26.00	2.59	Low
Split	4.03	9.50	22.73	33.75	29.93	2.24	Low

4.3.1 Confidence Change

In reference to their changes in confidence, the participants responded to four statements; items 3, 5, 7, and 17 related to the changes in the perception of one's own ability. Changes in self-confidence are not cultural changes, but they are changes in confidence and attitude. Success in ELL can produce terrific feelings while difficulties can cause doubts in abilities. ELL can improve the self-confidence and participants think they have grown after overcoming difficulties (Gao, 2001).

As seen in Table 8 the mean score for the four items was 3.85 which indicates a high degree of change in confidence (SD = .566). When participants responded to these items, 25.05% chose to strongly agree, and 45.05% chose to agree. Only 5.83% chose to disagree while 2.43% strongly disagreed.

Four students noted during their interviews that their confidence level has increased during their ELL with one student noting that this has come from the university professors asking for the students to share their opinions in English. All four of the students have become more confident when talking to foreigners and feel that they can now do so with ease, and one student related that she chose this particular university because she knew she would meet more foreigners there. Being around students from English-speaking countries has let her know that she can successfully talk with them and share her opinions.

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4.3.2 Productive Change

Items 2, 10, 13, 20, and 25 referred to a change where both the English language and the Thai language positively reinforce each other. Gao (2001) writes that as L2 proficiency increases appreciation for L1 increases as well. The participant's identity with the C1 becomes stronger as understanding of the C2 increases. Unlike additive changes, productive change produces a new product The L1 and C1 interact with the L2 learning to produce a person who has a strong C1 identity yet is multicultural. As reflected in Table 8 the participants showed a high degree of productive change with a mean score of 3.79 (*SD* = .512). The majority of participants chose to strongly agree (23.78%) or agree (41.70%); only 5.24% chose "disagree," and "strongly disagree" was chosen by 2.34%.

Three students discussed in their interviews how English has changed their worldview and caused them to learn more about the cultures of their English-speaking friends. They have begun to appreciate the outside culture as well as maintaining a respect for their Thai culture. As they read more English literature and are exposed to more art from different cultures, their worldview expands, and their points of view change. The change has also caused them to be more talkative and to share more with their English-speaking friends as well as sharing the Thai culture with them.

4.3.3 Additive Change

Five items referred to additive change; participants responded to items 8, 16, 18, 21, and 24 which referred to the L1 and L2, behavioral patterns, and values functioning separately and in their own appropriate contexts. For example, an immigrant student speaks L2 at school and speaks L1 at home; therefore the student functions in the C2 at school and returns to the C1 at home. Each language and each culture has its place. The participant simply switches when the situation requires it (Gao, 2001). The mean score indicates a moderate degree of change (*M* = 3.27, *SD* = .470). Table 4 shows that 21.76% of the participants chose "strongly agree" while 27.28% chose "agree." Fewer participants chose "disagree" (14.96%) and "strongly disagree" (14.32%).

4.3.4 Zero Change

Students responded to items 4, 11, 14, and 22 which referred to a lack of change in self-identity as a result of ELL. Personal changes do not occur after ELL; no matter which language or culture the participant is operating in, he or she remains the same. Language learning is not something that can change a person (Gao, 2004). Only 22.40% strongly agreed with these statements, and 17.38% agreed while 22.08% disagreed and 20.85% strongly disagreed. The mean score indicates a moderate degree of self-identity change (*M* = 2.98, *SD* = .588). One student referred to zero change in the interview and stated that even though he can speak, act, know about the language, and apply the language, it hasn't changed him very much; he continues to be who he is.

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4.3.5 Subtractive Change

Subtractive change occurs when the target language and culture replaces the native language and culture; it is characterized by loss. Even if the participant should achieve near-native like speech and gestures in the L2, he or she will not be able to see the value of other cultures (Gao, 2001). Items 1, 9, 23, and 26 referred to the English language and culture replacing the Thai language and culture. Only 8.55% of responders chose to strongly agree while 18.85% chose to agree; however, 24.60% chose to disagree, and 26.00% chose to strongly disagree. The mean score indicates a low degree of subtractive change ($M = 2.59$, $SD = .729$). One student identified a subtractive change in her interview; she struggles sometimes when she is speaking Thai to remember some of the Thai words. These words are easily replaced with English words. She switches from Thai to English automatically even if the situation does not warrant it.

4.3.6 Split Change

The final group of items referenced a split change; items 6, 12, 15, and 19 related to identity conflicts that can arise from the struggle between the languages and cultures. The participant may use the wrong language in a situation or might act according to the way of his or her C1 when acting according to the C2 would be more appropriate. It's a time of confusion, contradiction, and conflict as there is a struggle between two languages and two cultures. Split change might be a transitional type of change where participants may develop other types of change in the future in order to alleviate the conflict (Gao, 2004). The mean score indicates a low degree of change ($M = 2.24$, $SD = .664$), and only 4.03% strongly agreed while 9.50% agreed. More participants chose to disagree (33.75%) or strongly disagree (29.93%).

4.3.7 Group Comparisons

A Kruskal-Wallis H test was calculated to determine if there were statistically significant differences in self-identity changes between the four university level groups. Table 9 shows the results of the Kruskal-Wallis H test for each of the self-identity changes.

Table 9 Kruskal-Wallis H Test—Self-Identity Changes

	Additive	Confidence	Subtractive	Productive	Split	Zero
Chi-Square	2.630	6.702	1.917	3.240	5.047	1.118
Df	3	3	3	3	3	3
Asymp. Sig.	.452	.082	.590	.356	.168	.773

Statistical significance was accepted at the $p < .05$ level for the omnibus test, but there were no statistically significant differences between the four university level groups and self-identity changes--additive ($H(3) = 2.630$, $p = .452$), confidence (H(3)

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= 6.702, p = .082), subtractive (H(3) = 1.917, p = .590), productive (H(3) = 3.240, p = .356), split (H(3) = 5.047, p = .168), and zero change (H(3) = 1.118, p = .773).

4.4 Correlation of Motivation Types and Self-Identity Changes

A Spearman's Rank Order correlation was run to determine the correlation between the motivation types and the self-identity changes of the participants. The identified regulation motivation type positively correlated with three self-identity changes—additive (p(240) = .21, P = 0.001), confidence (p(241) = .24, P < 0.001), and productive (p(244) = .28, P < 0.001). The other two types of extrinsic motivation, external regulation and introjected regulation also had positive correlations with self-identity changes. External regulation positively correlated with both subtractive changes (p(240) = .20, P = 0.002) and productive changes (p(240) = .22, P = 0.001). Introjected regulation positively correlated with split changes (p(237) = .14, P = 0.026) and zero change (p(233) = .20, P = 0.002).

The intrinsic motivation subtypes had positive correlations with several self-identity changes as well. The stimulation subtype positively correlated with additive changes (p(241) = .24, P < 0.001), confidence changes (p(242) = .16, P = 0.013), and productive changes (p(245) = .13, P = 0.042). The knowledge subtype of intrinsic motivation positively correlated with additive changes (p(242) = .31, P < 0.001), confidence changes (p(243) = .23, P < 0.001), and productive changes (p(246) = .35, P < 0.001). The final subtype accomplishment positively correlated with three changes—additive (p(242) = .22, P = 0.001), confidence (p(243) = .25, P < 0.001), and productive (p(246) = .35, P < 0.001). In addition the lack of motivation, or amotivation, also had positive correlations with three self-identity changes—subtractive (p(241) = .20, P = 0.002), split (p(238) = .36, P < 0.001) and zero (p(235) = .24, P < 0.001).

Several motivation types had negative correlations with self-identity changes. Identified regulation had a negative correlation with split change (p(241) = -.18, P = 0.006), and zero change (p(237) = -.19, P = 0.004); the subtypes of intrinsic motivation stimulation and knowledge also had negative correlations with zero change (p(238) = -.15, P = 0.017; p(239) = -.16, P = 0.015).

To summarize identified regulation and the subtypes of intrinsic motivation positively correlated with additive, productive, and confidence self-identity changes. External regulation correlated with subtractive and productive changes while introjected regulation correlated with split and zero changes. Amotivation correlated with subtractive, split, and zero changes. Negative correlations were identified between identified regulation and split and zero change; the intrinsic motivation subtypes of stimulation and knowledge negatively correlated with zero change.

4.5 Chapter Summary

This chapter has detailed the results of the questionnaire identifying the motivation types and self-identity changes among the participants, the group comparisons, and the correlation between motivation types and self-identity changes. The majority of the participants identified with the motivation type identified regulation and the self-identity change in the level of their self-confidence. The statistically significant differences between group comparisons were limited to one type of motivation between freshmen and seniors. The thoughts, perceptions, and

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additional information gained from the interviews were also presented. The following chapter will present the summary of the results, discussions, pedagogical implications, and recommendations for future studies.

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