

# Expanding and Integrating EFL Motivation Theory: A Study of Taiwan Technological and Vocational Students

## Abstract

Taiwan English instruction, like most of Asia, has been and continues to be heavily influenced by learning and motivation theories developed in the West and based on the ESL paradigm. The assumptions of these imported pedagogies are based on behavioral norms and social structures that exist in the West but are often absent in Asia. Most vital to this study are the assumptions about motivation, or why a student is in a foreign language class and what leads to the amount of effort in learning. Western theory is heavily influenced by the finding that a desire for integration with the target language people and culture forms the basis of motivation. Language teachers are guided by ESL theory to motivate their students by teaching *relevant* conversations and hosting exciting and active classrooms. These assumptions may be misplaced in the Taiwan EFL setting.

Numerous researchers have studied the role of motivation in language learning, yet the direction of influence has not been well addressed. While the integration motivation may have a strong link to successful language learning, does this mean that students who already have such a motivation will succeed, no matter the class emphasis? Or does the level of success increase as the class material is modified to emphasize the integrative aspects of language learning? What about students who do not have an integrative motivation, can such a motivation be developed by a teacher? Non-English majors certainly will start their language training with motivations that are defined by the wider culture in which they live. Can those motivations be changed or influenced in some way through instructional emphasis in the EFL classroom?

This project attempts to model the motivation construct across Taiwan technological and vocational non-English major English students in order to obtain a high level of external validity in the construct. The study will include both five-year junior college and four-year college tracks to test the degree and direction of influence from sociocultural factors on motivation orientation, language use, and skill acquisition. Motivation orientation will also be modeled, and the relationship between the motivation constructs (integrative, instrumental, and required) and intrinsic versus extrinsic self-directed behavior. A large-scale survey instrument will be implemented and results tested in structural equation models. Results will help to realign Taiwan EFL teaching to the underlying effective motivations of EFL non-English majors studying English in Taiwan and by implication improve learning effectiveness.

## **Introduction**

Hofstede (1997) has pointed out that education is a central part of a culture's method for reinforcing its values. Is it possible that the very idea that a teacher is responsible to ignite students' interest is culturally specific? Numerous researchers have studied the role of motivation in language learning, yet the direction of influence has not been well addressed. While the integration motivation may have a strong link to successful language learning, does this mean that students who already have such a motivation will succeed, no matter the class emphasis? Or does the level of success increase as the class material is modified to emphasize the integrative aspects of language learning? What about students who do not have an integrative motivation, can such a motivation be developed by a teacher? Thus we are left with the central question of just who is changed in this interaction between teacher and student? Certainly if it were possible to form

students' motivations in EFL settings to better match the integrative assumptions of most teaching materials few teachers would object. This is most likely just what takes place in foreign language majors in Asia, although it is an open question if these English majors had their motivations reformed or had apriori integrative motivations which is why they chose to major in a foreign language to start with. Non-majors certainly will start their language training with motivations that are defined by the wider culture in which they live. Can those motivations be changed or influenced in some way through instructional emphasis in the EFL classroom?

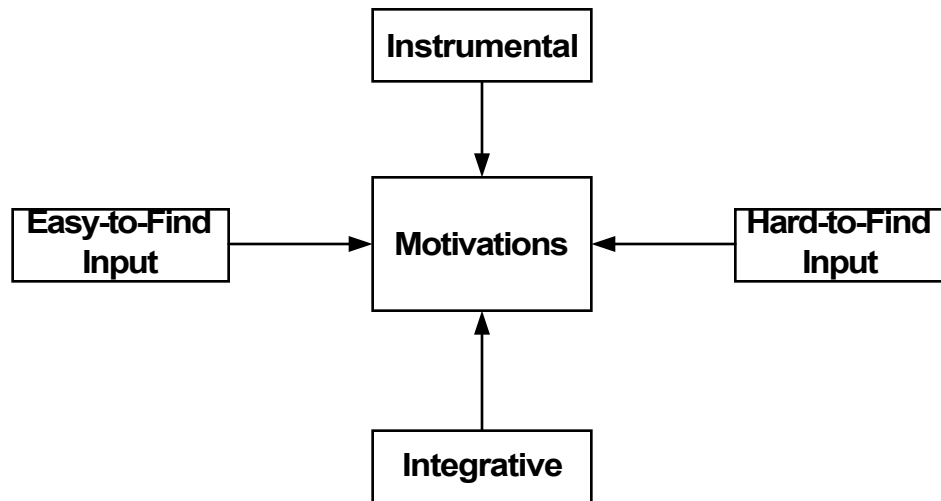
## **Motivational factors in language learning**

Gardner and Lambert (1972) found that students' success in language learning was greatly increased when they exhibited an interest in communicating with people from the target language group (Gardner et al., 1976). This motivation has been labeled *integrative motivation*. While the integrative motivation has been widely accepted in ESL learning settings in the West, as well as being built into the foundation of teacher training in Western universities, researchers have pointed out other important motivations. The *instrumental* motivation is based on the learner's interest in learning the foreign language because of its relationship to utilitarian advantages such as better employment or a higher salary (Dornyei, 1990). Students were found to take more time considering the correct answers to an English test when they were given a monetary reward Gardner and MacIntyre (1991), directly showing the benefit of an instrumental motivation. Gardner (1985) has observed that any motivation can assist with learning and thus increase language acquisition. Grosse et al. (1998) found that business students selected foreign language courses with consideration for the economic utility of the

language, with the most important consideration being future employment opportunities. Students may exhibit differing orientations, such as integration or instrumental, but then not follow up with a motivation that actually improves success. Oxford and Shearin (1994) point out that this difference can play an important role in the real life experiences of a language learner, as motivations can change over time (a student first learns a language to satisfy a requirement, then finds the language useful in obtaining a job, and then makes friends with native speakers of the language).

Differences between second language learning motivation in second and foreign language environments have been examined by many researchers. A second language is a language learned in a place where for most people that language is typically used as the medium of everyday communication (for instance, English being learned by a non-native speaker after moving to Canada). The learner of the second language is surrounded by all kinds of visual and auditory stimulation in the target language and, therefore, has many motivational and instructional advantages (Oxford and Shearin, 1994). A foreign language is one that is learned in a place where that language is not typically used as the medium of everyday communication (for instance, English as it is usually learned in Taiwan, Japan, or Korea). In most cases foreign language learners rarely have opportunities to use the target language since they are surrounded by their own native language. They have to try hard to find some stimulation and input in the target language. Learners typically receive input in the target language only in the classroom and by rather artificial means (Oxford and Shearin 1994).

Figure 1. Inputs to language learning motivation



### ***Aligning Motivations and Curriculums***

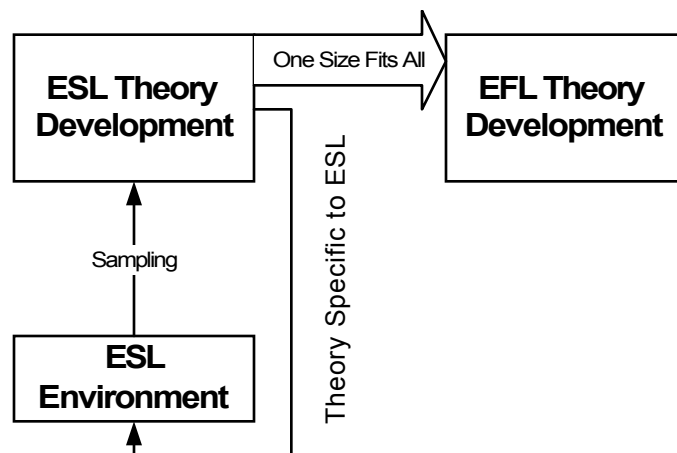
While not always so clearly stated, research papers on motivation often conclude with a statement similar to Noels et al. (2000, 75), . . . *it may not be sufficient to convince students that language learning is interesting and enjoyable; they may need to be persuaded that it is also personally important for them.* Warden and Lin (2000) also conclude that the non-existence of a strong integrative motivation in Taiwan EFL learners means that teachers should convince their students of the instrumentality of the subjects they are learning. These assertions assume a causal link between the classroom environment and students' motivations. But there is no evidence that students' motivations are formed in the classroom, nor that they can be influenced by instruction. Tremblay and Gardner (1995, 516) ask, *To what extent can one alter goal setting, valence, self-efficacy, causal attributions, language attitudes, and motivational behavior?* This gets at the core of the question. If we have made progress in understanding EFL students' motivations, what use is it? Teaching material has, throughout the 1990's undergone changes that reflect the assumption that first, students are motivated by a

desire for integration with the target language, and second, that students' motivations can be influenced and/or reinforced by such material. While students may respond positively to user friendly textbooks full of colored pictures and conversations in social situations, it may be that students are responding from the required motivation, and such materials make the required course more comfortable to complete, while not increasing uptake.

### ***Purpose of English Study***

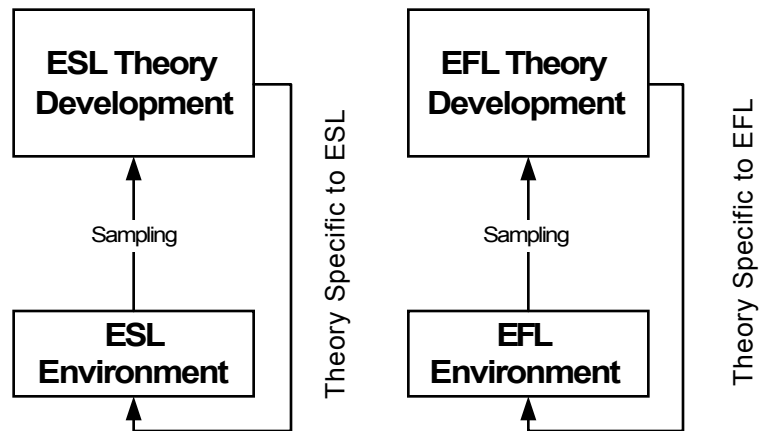
Teacher training for ESL instructors often does not consider the special context of EFL teaching (Hudson, 1994). While the settings for EFL instruction can be very different from ESL ones, just what is the importance of the teacher in influencing motivations? If teachers can confidently influence students' motivation orientations, then a centralized training program can be implemented for ESL instruction, which does not consider EFL to have any special status separate from general ESL. Teachers can simply influence or even change students' motivations to match the assumed ESL standard motivations (see **Error! Reference source not found.**).

Figure 2. ESL theory fits all situations



Somewhat less extreme is the situation where EFL students may have motivations highly similar to, but not exactly the same as their ESL cousins. In this case, the instructor can be trained to help students understand how the language class fits into their motivation (see **Error! Reference source not found.**), i.e., this class can help you get a better job (instrumental motivation), or this class will fulfill your graduation requirement (required motivation).

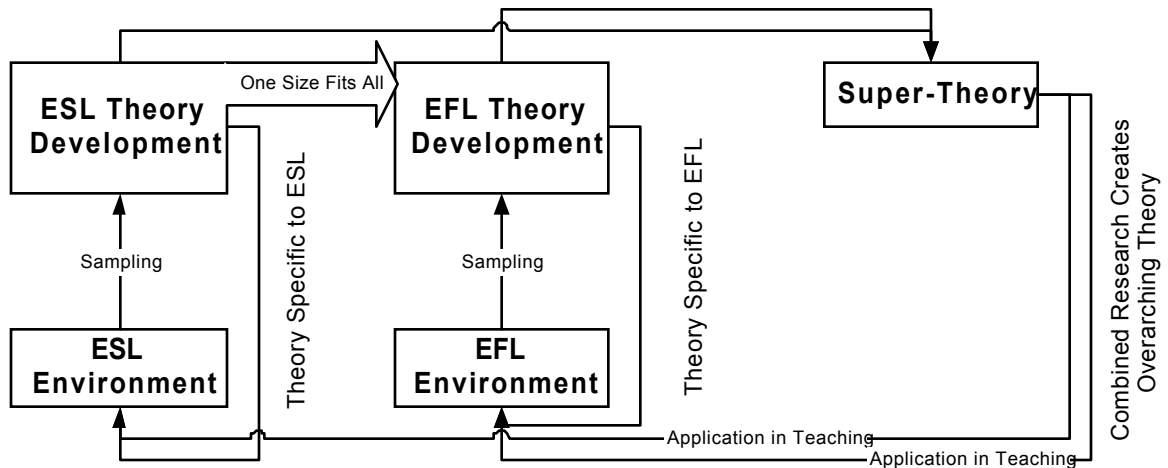
Figure 3. EFL theory is independent of ESL



It is also possible that motivations simply cannot be influenced by the actions in the classroom. EFL students' motivations may actually be derived from the sociocultural environment and short of changing that motivations cannot be modified. In this case, EFL instructors must adapt their teaching methods to match the goals of the students. One size does not fit all in this scenario, and the universal use of standardized textbooks is a mistaken undertaking that at best causes students to glaze over and at worst causes alienation or strong dislike as the motivation supported is interpreted as undermining social values. A possible solution is an expanded theory of motivation, while also integrating the EFL and ESL aspects into an overall arching or super-theory that can act

as input to both ESL and EFL teaching successfully without being dominated by any single sample group or culturally specific theory (see **Error! Reference source not found.**).

Figure 4. Possible paths of theory development and application



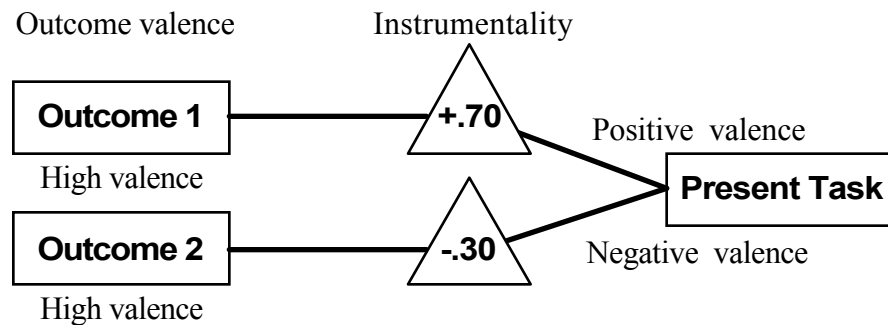
### ***Expanding EFL Motivation Theory***

Within organizational psychology literature expectancy theory has obtained wide acceptance both for its ease of understanding and empirical support (Fudge & Schlacter, 1999). First developed by Vroom (1964), this theory contains three parts: valence, instrumentality, and expectancy (often referred to as VIE theory). Valence of an outcome is equal to the satisfaction a person expects to experience if the outcome is received and ranges from 0 to 1. For an EFL student this could include any of the orientations previously mentioned, such as an opportunity for a higher paying job. Future outcomes are obtained only through present actions (first and second-level outcomes, Galbraith & Cummings, 1967), thus the EFL student must consider that completing an English class at school this semester may lead to the higher paying job in the future. The valence of



taking the English class now is dependent on the valence of the future goal as well as the perception that taking the class will actually improve the chance to obtain the future goal. The probability that the current action will lead to the desired future goal is labeled instrumentality and can range from  $-1$  to  $+1$ . The product of the outcome valence and the instrumentality is equal to the valence of the present behavior.

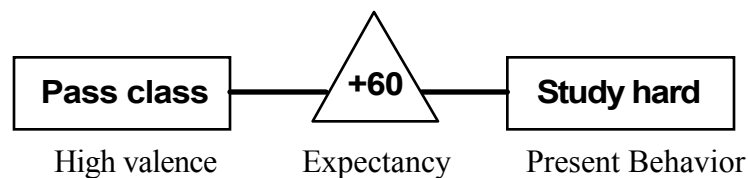
Figure 5. Valence construct



A negative valence means that the person does not value the specific path's outcome or that the present task may not actually help in obtaining the desired outcome. While an English class may help to get a better job (high valence) the local class at the countryside high school may be perceived as not leading to the desired outcome (negative instrumentality) while the university in the city may (positive instrumentality). A positive valence for the present task does not predict the level of effort, that depends on the final component of VIE: expectancy. Expectancy is the belief that a specific behavior will have the expected outcome (range 0 to 1). Motivational force is increased when both the valence level and the expectancy are high. A student may have a high level of valence for attending an English class at the city university, but also lack confidence that the class can be completed (low expectancy). This combination will result in lower effort in the class. A student who may have had previous experiences that gave him/her

confidence in completing an English class may have a high level of expectancy, which can combine with the high valence and result in a high level of effort. Of course these examples are overly simplified and hide the radical heterogeneity that exist among real people when considering these factors. Rather than simply looking at the possibility to pass or fail a class, it is likely that a student who had a strong valence for completing a class, in order to obtain a better job, would consider a higher level of difficulty as a challenge that could improve the instrumentality of the activity. Thus the three factors do not exist in complete isolation, nor do all people give them the same weight.

Figure 6. Expectancy construct



Along side of process type motivation theories, content theories have received some attention in the education literature. The distinction between intrinsic and extrinsic motivation has been made by Deci and Ryan (1985) and shows that some motivations originate from outside the student, such as school requirements. While extrinsic and intrinsic are on a continuum, they may actually be interrelated in complex ways that have to do with other factors such as culture. Even so, it is relatively clear that students with an internalized orientations towards success or achievement will expend more effort.

Researchers have mathematically modeled the relationships of valence, instrumentality, and expectancy (Kanfer, 1990; Van Eerde & Thierry, 1996). Avery and Neel (1974) and Pritchard and Sanders (1973) have used models that use a mutiplicative relationship or an additive relationship. Combining these approaches to understanding

motivation, a model results that has three major influences on skill level of effort: 1) outcomes 2) present task and 3) expectancy. Valence is described as:

Formula 1. Valence construct

$$V_j = f \sum_{k=1}^n (V_k I_{jk})$$

where  $V_j$  = the valence of outcome  $j$ ;  $I_{jk}$  = the instrumentality of outcome  $j$  for attaining outcome  $k$ ;  $V_k$  = the valence of outcome  $k$ ;  $n$  = the number of outcomes.

The force of the behavior is described as:

Formula 2. Force construct

$$F_i = \sum_{j=1}^n (E_{ij} V_j)$$

where  $F_i$  = the force of the individual to perform behavior  $i$ ;  $E_{ij}$  = the strength of the expectancy that act  $i$  will be followed by outcome  $j$ ;  $V_j$  = the valence of outcome  $j$ ;  $n$  = the number of outcomes

Within the psychology field, numerous researchers have argued for expectancy theory to be combined with other motivational theories (Kanfer, 1987; Kernan & Lord, 1990; Klein, 1989; Landy & Becker, 1990). The training literature shows that numerous personality variables have been linked to improved learning, skill obtainment, and job performance. Trainees with high levels of achievement motivation were found to have higher levels of motivation to learn (Mathieu et al., 1993), while increased career commitment and job involvement can also have positive influences (Brown, 1996; Lodahl & Kejner, 1965). Colquitt et al. (2000) confirmed the importance of the self-efficacy construct (belief in one's capabilities) in meta-analysis of 20 years of training motivation literature and suggested, along the lines of Kraiger (1999), that training programs move beyond simple skill measures as the sole criteria and include cognitive and non-behavioral factors. Thomas (2000) and Senge (1994) have pointed out the importance of intrinsic motivation in order for employees to internalize their work.

These intrinsic, internalized/cognitive, behaviors are parallel to the self-determination/intrinsic ideas already mentioned.

Thomas (2000) states, *Motivation is about pursuing something worthwhile—and enjoying the trip*. Complimenting the VIE model (*worth*) it is likely that intrinsic/extrinsic levels of motivation (*enjoying the trip*) can combine with the outcome valence to increase effort. A student could have a low, or even negative, force level due to negative valence, negative instrumentality, or low expectancy. However, due to high levels of intrinsic motivation and self-determination such a student could still exert effort to obtain language skills. Deci and Ryan (1985, 1995) have written of the intrinsic and extrinsic motivations as describing ends of a scale that ranges from self-motivated and interested to dependent on outside pressures (*external regulation*). In numerous ways, the intrinsic/extrinsic motivation model overlaps with the VIE model. Noels et al. (2000) observe that extrinsic motivation's lowest level, *external regulation*, is similar to the Gardner and MacIntyre's (1991) instrumental motivation, i.e., performance of the current task is dependent on the value of some other outcome linked to completion of the current task and this is in line with VIE's outcome valence value. If the outcome valence value is zero, the valence for the current activity will immediately drop to zero also and the current task will be halted. Where the two models differ most is in the self-determination model's emphasis on the individual's interest in performing the current task for its own sake, because it feels good to do, because it is a challenge, or because it has an associated aesthetic value (Vallerand, 1997; Vallerand et al., 1992, 1993). This internal drive is hypothesized here to have a separate influence on final skill obtainment in EFL learning.



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## Methodology

The level of influence on skill obtainment from self-determination is modeled in this study as a summation of self-determination (scoring from 0 to 1 for intrinsic levels and 0 to -1 for extrinsic levels) and outcome valence. Thus it is possible that a student could have little value for the outcome of a language class, but because doing *well* may have meaning in and of itself. As the valence of the outcome decreases into the negative range, actually seen as having some harm, the level of self-determination will have to increase if any constructive effort is to be undertaken. If the outcome of working hard in an English class is not seen as having any value, and the student's only reasons for attending the class, and to a wider context studying in general, are extrinsic (*because my parents made me do it*) then the level of self-determination may actually increase in the negative range meaning no constructive effort is made and that behavior in the class may even become dysfunctional, i.e., *I see no use for this and I don't want to do it anyway*. At minimum, this type of situation will lead to negative feelings towards the activity and decrease future attempts.

Formula 3. Self-determination construct

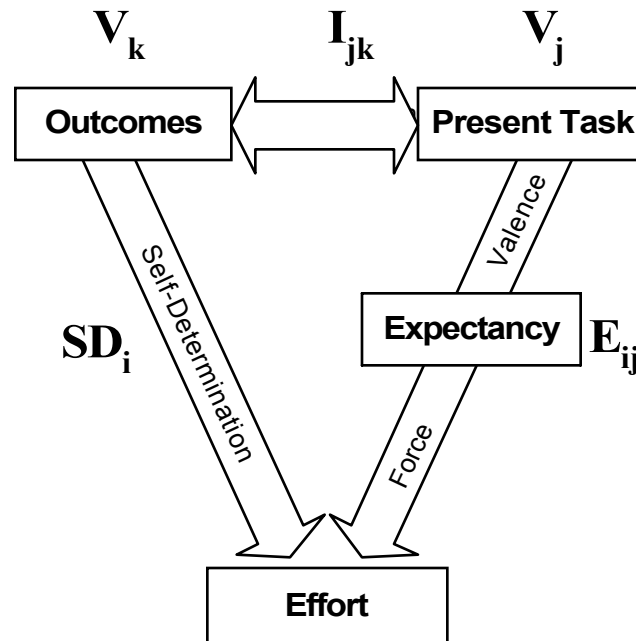
$$S_i = f \sum_{j=1}^n \left( \frac{SD_i + V_j}{2} \right)$$

where  $S_i$  = the skill obtainment potential for behavior  $i$ ,  $S_i$  = strength of self-determination in behavior  $i$ ,  $V_j$  = the valence of outcome  $j$ ,  $n$  = the number of outcomes

The resulting model (see **Error! Reference source not found.**) depicts outcomes and the present task to have a relationship that together forms the valence level for the

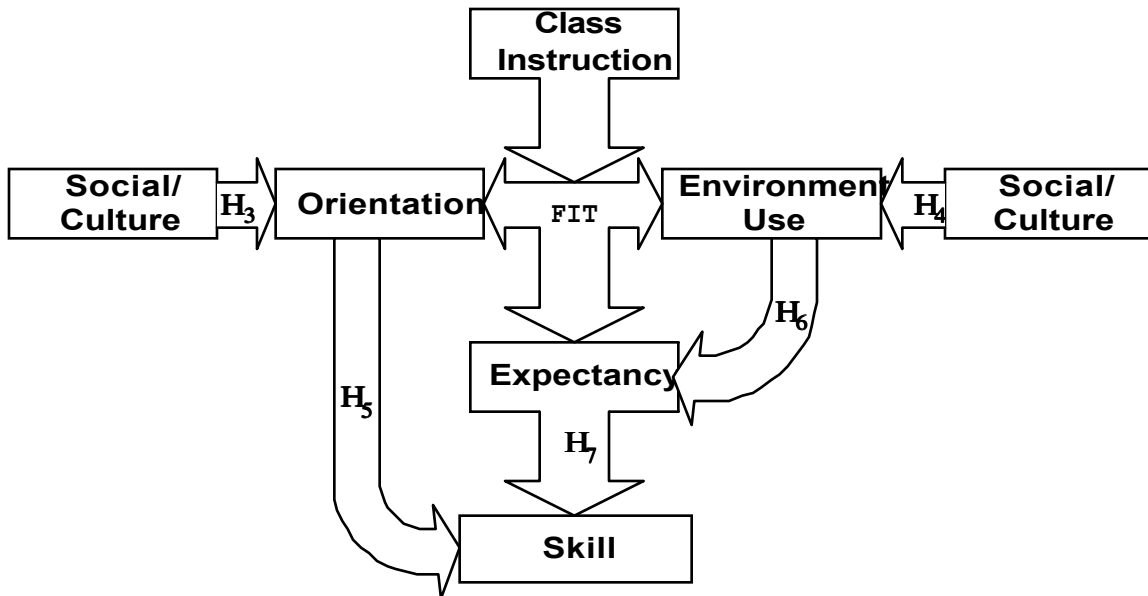
present task. Valence then acts as the input to expectancy, which is converted to force level, and separately to self-determination.

Figure 7. Motivation constructs combined for study in this proposed project



Re-labeling the model in terms of the present proposed project, the outcomes are the motivation orientations, the present task becomes environmental use of English, and effort becomes skill. Including the social context of the EFL environment acts as inputs to the environmental use and orientation variables. The central question of this experiment is just how large an influence is played by class instruction between environmental use and orientation (this combination is here labeled *fit*) and what is the nature of the sociocultural context (see **Error! Reference source not found.**).

Figure 8. Study's model



## Hypotheses

The first two hypotheses center on the previous finding of Warden and Lin (2000) where an independent integration motivation was not supported, for Taiwan EFL students, but an instrumental and required motivation were. This finding is similar that of Ely (1986) where instrumental and required-like motivations were found, in addition to an integrative motivation. In this study the distinction is made that these are orientations and not motivations in and of themselves, they are the ultimate reasons the language is being studied.

H<sub>1</sub> Instrumental and required motivation orientations will be exhibited by Taiwan EFL students.

H<sub>2</sub> An integration motivation will not be exhibited independently of the other two orientations.

Expanding on the Warden and Lin (2000) preliminary results, this study compares two samples of students from differing educational tracks that have differing implementations of English instruction. Hotho (2000) found that many factors related to motivation remained constant across languages and skill levels, inferring that the larger sociocultural context has a large influence. Hinenoya and Catbonton (2000) found that cultural traits do play a role in L2 learning. Since social context plays an important role on both teachers and students, it is asserted here that the motivation orientations will not undergo change among any of the samples. In a wider context, the sociocultural environment will be the main determinant of the amount of language use, past, present, and future. While a class assignment may increase target language use, the areas of use will remain constant no matter what the class instruction attempts.

H<sub>3</sub> Irregardless of differences in educational emphasis, the main motivational orientations of students will remain constant.

H<sub>4</sub> Irregardless of differences in educational emphasis, the environmental use variables will remain constant.

While any motivational orientation can play a positive role in causing a person to actually *do it*, it is likely that some orientations are more useful for skill obtainment. The required motivation may get a person into a classroom and even to a level of skill that can pass an exam, but that may be its limit. An integration motivation, for example, may lead to a student that takes fuller advantage of the class, to the point of even seeking out language use opportunities. This influence is labeled self-determination and is asserted to

have more positive influence when intrinsic levels are higher and negative influence when extrinsic levels are high.

H<sub>5</sub> Motivation orientation has a direct influence on skill.

In an EFL setting it is not unusual that all the opportunity to use the target language is in class, at least during the time as a student. Previous success in the classroom can lead to higher levels of expectancy of success in the future. An increase in expectancy should lead to increased force in the behavior and better skill enhancement.

H<sub>6</sub> Environmental use, as influenced by class instruction, directly influences students' expectancy.

H<sub>7</sub> Expectancy has a direct influence on skill achievement in the present.

A teacher's influence on matching the students' motivation orientations with the environmental use includes such activities as providing a class emphasis that aligns with students' orientations. Simultaneously, students may be influenced to change their orientations somewhat to better match the assignments. For example, students oriented towards integration may find exercises involving simulating realistic conversations more useful (an increase in instrumentality in the VIE model). This increased fit can lead to reinforcing positive behaviors that increase expectancy and act as an input to the force model which leads to skill improvement.

H<sub>8</sub> Improved fit between motivation orientation and instructional emphasis will lead to improved expectancy in the present.

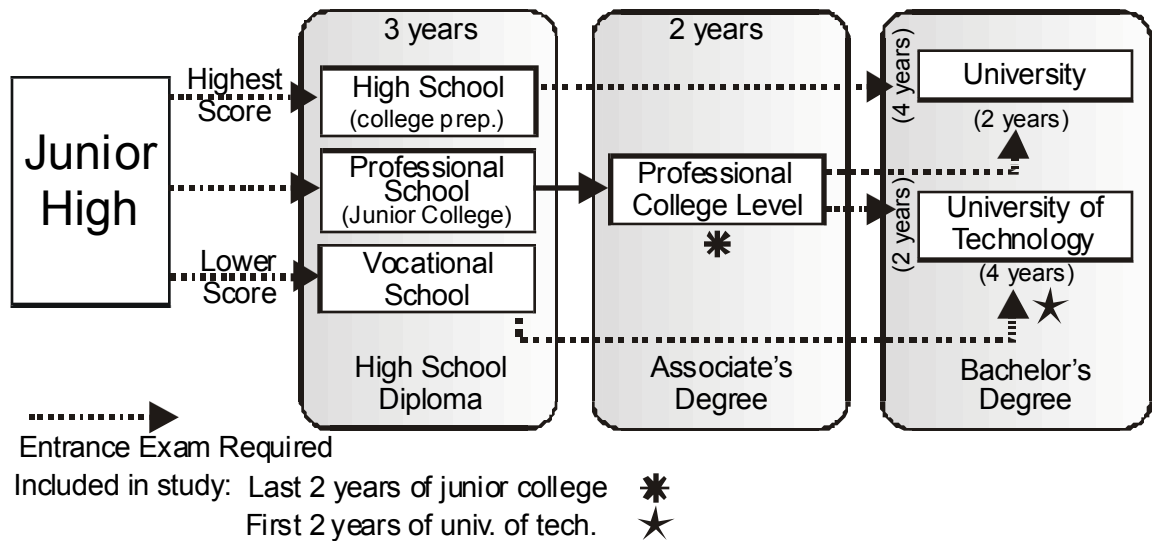
H<sub>9</sub> Improved fit between motivation orientation and instructional emphasis will lead to improved expectancy towards the future.

H<sub>10</sub> Improved fit between motivation orientation and instructional emphasis will lead to improved skill.

### ***Different Educational Tracks***

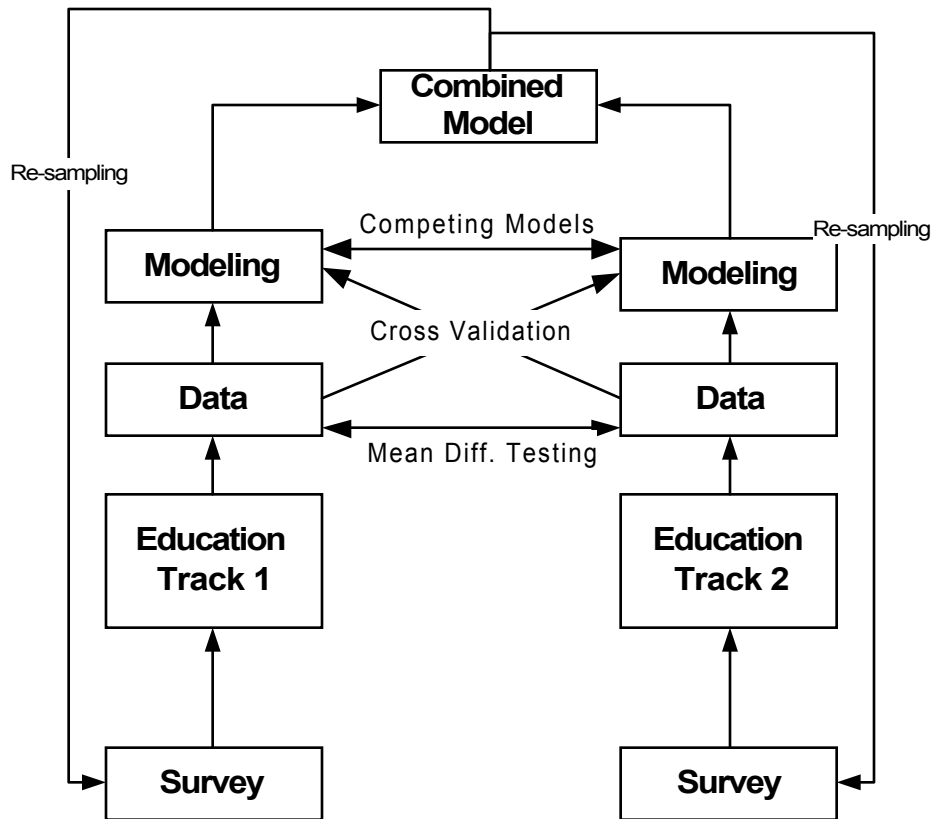
For this study, students will be contrasted who are from two different educational tracks in Taiwan. The first group is made up of students at a university of technology which admits students from the vocational track. They have three years of high school often with some emphasis in a work related field such as secretarial skills. Vocational track students enter a university of technology where they have two years of work that puts them on an equal footing with the professional track graduates. The second group will be made up of students in the professional track. These two groups are approximately equal in their level of total education, both are post high school in the first and second year of college/university (see **Error! Reference source not found.**). Vocational students in the first and second year of a university of technology will be surveyed along with professional students in their fourth and fifth year of junior college.

Figure 9. Educational tracks providing sample groups



By sampling these two groups, differences between the groups can be tested in simple mean differences. Each groups' motivations can then be modeled using structural equation modeling. Models can then be tested with data from the other group, so that the amount of actual difference between the groups in model fit will represent differential influences from the educational treatment. An overall model can be formed that only contains lines of influence (regression coefficients) that are significant and represent the total data set well (see **Error! Reference source not found.**). This model can then act as input to a re-sampling effort that will address external validity issues.

Figure 10. Sampling and modeling procedure



### ***Model Testing***

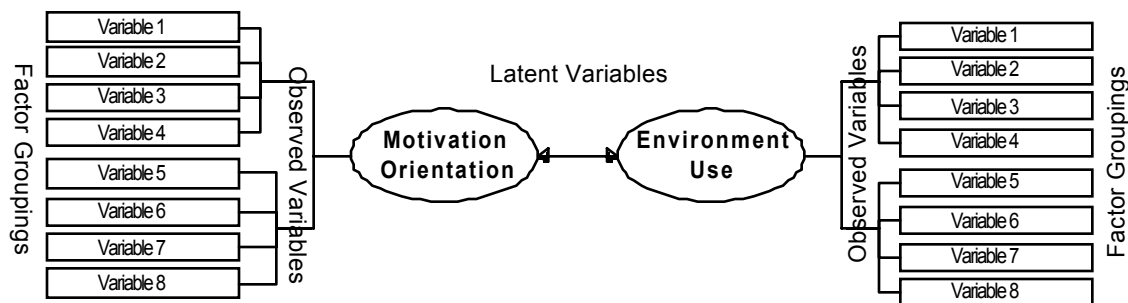
The overall model will be tested through the use of structural equation modeling (SEM) through the use of the AMOS statistical software package. Since large sample size and numerous variables make an SEM (Structural Equation Modeling) model overly sensitive and difficult to fit, a reduction in variables will be undertaken through factor analysis.

Survey variables will be sought that well represent the model constructs. For the motivation orientation latent variable, all three sections on motivation orientation were included: integration, instrumental, required (as found in earlier studies). Other variables will uncovered and purified in pre-testing. The fit construct will be tested in canonical



correlation which allows regression analysis on multiple dependent and independent variables. **Error! Reference source not found.** shows the fit construct which will allow testing of the hypothesis that the match between teaching, as it influences use, matches the students' motivation orientation. Motivation and use are not directly observable, and thus are represented by latent variables in the SEM model. Observable variables will be drawn from pre-testing and then survey results which will emphasize multiple item questioning in order to develop a robust model. This should lead to a large number of data points which will then be combined through the use of factor analysis, resulting in factor groupings.

Figure 11. Fit construct



## Results

Each stage of the research project and analysis will provide important results for the understanding of Taiwan non-English majors' motivations when studying a foreign language (see **Error! Reference source not found.**). Results that have important input into model building will provide the basis of an overall integrated model of language learning motivation as well as a theory that expands on previous research by including important elements of motivation theory from psychology and industrial training.

Table 1. Project expected results

| Project Topic  | Expected Results   | Application  |
|--|--|--|
| <p>Motivation orientations present in Taiwan non-English major students studying English</p>               | <p>Traditional Western theory of motivations will not be sufficient to explain Taiwan students' behaviors</p>                            | <p>The creation of an improved and more accurate motivation orientation that can act as input to future research as well as in class instructional practices</p> |
| <p>The degree of influence from socio cultural factors compared to in class instructional orientations</p> | <p>Changes in the classroom instructional method will have little impact when compared to the sociocultural influences on motivation</p> | <p>The creation of a better fit between EFL teaching approaches and the existing sociocultural factors that are not open to modification</p>                     |
| <p>The influence of motivation orientation on skill obtainment</p>   | <p>Higher levels of any motivation will improve skill</p>  | <p>A relaxing of the emphasis on integration motivation in the EFL classroom, allowing teachers to develop more home-grown approaches</p>                        |

|   |  |   |
|---|--|---|
| <p>Expectancy combined with valence and instrumentality will have a direct influence on skill</p> | <p>Decreased levels in these variables will lead to significantly lower skill obtainment</p> | <p>An emphasis on the need to orient class material and instruction to fit the students' motivations</p>      |
| <p>Model development of an overall motivation construct</p>                                       | <p>A SEM model that can be generalized to EFL settings</p>                                   | <p>Improved basis for the development of language learning motivation theory in both EFL and ESL settings</p> |
|   |  |   |