Student Attrition: A Study of Risk Factors in an International University

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Abstract

Increasing pressure on Thai private universities to retain their students in the wake of decreasing student enrollment, demographic changes, and direct competition from public universities calls for them to address more systematically plans and action for student retention. The purpose of this study was to determine risk factors that affect student retention at an international university in Thailand. First year undergraduate students (N=2,193) were surveyed for factors related to student attrition. The survey was conducted both online and distributed on campus to a cohort of first year students. A 5-point scale survey instrument was constructed around five categories of factors related to student attrition according to the theoretical literature: Academic Factors, Social Factors, Motivational Factors, Faculty Factors, and University Factors. A multiple regression model was employed to assess the predictive ability of the five factors plus students’ reported high school GPA and their concern with ability to pay tuition. The multiple regression analysis yielded significant results for the following factors: Social, Motivational, and University factors, entering GPA, and concern with ability to pay tuition. Results suggest that a combination of attention to traditional components of student attrition factors and a systematic review of institutional specific factors may be be the optimal approach to inform institutional retention practice.

Keyword: student retention, attrition, international university

Introduction

Student retention remains an important concern for the higher education sector in Thailand. Changing demographics, reduced public spending, and decreased enrollment continue to have effects on the bottom line for many institutions. The Thai higher education system has undergone significant changes in the past two decades that have affected both public and private universities in the country. Modernization and internationalization in Thai higher education, influenced by the global movement towards a more autonomous and commercialized education system has been encouraged at the national level. The 1999 National Education Act called for Thai public universities to become autonomous universities and more accountable for their operations and budgets than in the past (Kirtikara, 2001). These changes to the public university sector have had implications for private universities.

Traditionally, in Thailand, private universities have been seen as less prestigious by the public. Top students have tended to vie for limited seats at a handful of prestigious public universities. Private universities were seen as second choices and thus the recipients of the overflow of students unable to gain admission to public universities. However, the introduction of the autonomous university policy in 1999 which in effect put public universities in direct competition with private universities, has had ramifications on private university enrollments (Savatsomboon, 2006). Decreased government funding, increasing calls for accountability for the bottom line, and pressure for financial reform has forced public universities to find more ways to increase their financial viability. Public universities have responded by setting up new programs with direct admissions and offering international (English) programs and joint degree programs with other universities that directly compete for students with private universities (Pimpa, 2011).

In addition, demographic trends in Thailand show a low population growth rate in comparison to neighboring countries. Thailand’s ageing society has ramifications for the number of college-aged population, which is predicted to shrink by around 20 percent between 2012 and 2025 (ICEF Monitor, 2016). According to Worasinchai, Ribiere & Aurelie (2008), the increase in competition among Thai universities themselves, from foreign university partnerships operating in Thailand, and the decreasing number of students applying for higher education has made the education sector more competitive and administration more difficult in the face of rising or fixed costs and a decline in students and conversely, tuition revenues. Drops in enrollment have consequences for all universities and its affects are felt not only at the administrative level, but at all levels and positions in the university. Therefore
the necessity for attention to administrative policy to increase student retention is a must for private universities if they are to maintain viability and fiscal well being. The following exploratory research was conducted with the objective of obtaining data that would assist a private international university in evaluating and monitoring its enrollment for maximum efficiency by collecting data from its freshman year students as to their opinions on various issues that would affect their intent to stay at the university.

Overview of Student Retention Theories

Student attrition or conversely student retention, if viewed from the institutional standpoint, has been studied extensively for almost five decades since the early 1970’s. Several theoretical frameworks have been postulated and researched concerning why college students leave before completing a degree, nonetheless, no single theory or approach is comprehensive enough to account for all of the factors that influence student departure. The most often cited theories define student success as persistence or educational attainment and emphasize the importance of academic preparation and the quality of students’ experiences during college (Kuh, Kinzie, Cruce, Shoup & Gonyea, 2006).

Sociological theories such as Tinto’s Theory of Student Departure and Astin’s Theory of Student Involvement explain student departure through the process of student interactions with the environments of the institution. Tinto’s theory has arguably been the most researched and considered to be paradigmatic in stature (Braxton, Hirschy, & McClendon, 2004). According to Tinto, the main sources of student departure occur in three specific areas: academic problems, failure to become socially integrated and intellectually integrated, and low levels of commitment to the institution. Academic problems may include grades, studying habits, and identification with the academic norms and values of the university. Social aspects such as the daily life of students at university, social interactions with peers, and participation in activities can also affect the level of integration. Students’ ability to become integrated into these environments of the institution influence their commitment and thus, influence decisions to persist (Tinto, 1993).

Alexander Astin’s Theory of Student Involvement was developed from an initial longitudinal study of college dropouts. According to his theory, involvement is the students’ investment of physical and psychological energy that the student devotes to the academic experience. Students who spend time studying, participating in campus activities and student organizations and interacting frequently with other students and faculty members are considered to be involved to a certain degree. There are five basic postulates to Astin’s theory: a) involvement is the investment of physical and psychosocial energy in different “objects” that range in degree of specificity; b) involvement occurs along a continuum, with students investing different amounts of energy in various objects at various times; c) involvement includes both quantitative and qualitative features and are measurable; d) the amount of student learning and personal development is directly proportional to the quality and quantity of involvement; and e) the effectiveness of any educational practice is directly related to the capacity of that policy or practice to increase involvement (Astin, 1999).

Psychological models and psychosocial influences on student persistence have also been proposed to explain student departure. Bean and Eaton proposed a model of student retention that incorporates the psychological processes that lead to academic and social integration. The premise of their theory is that students enter an institution with different psychological attributes that have been shaped by the students’ own experiences, abilities, and self-assessments. These include self-efficacy assessments, normative beliefs, motivation, and past behavior. During the students’ interaction with the institution, other students, faculty and various institutional processes, the students engage in self-assessments that influence how they feel about the institution. Individuals who become self-confident and levels of self-efficacy increase and develop higher levels of persistence. As the individual’s academic and social self-efficacy are increased, their overall academic and social integration also increases (Bean and Eaton, 2001).

Student Retention Research

Research based on the various models and theories have attempted to attribute student attrition to various causes, but limitations in methodology and research assumptions; difficulty in operationalizing concepts such as academic and social involvement or engagement; external influences that are not under the institutions ability to affect, and differences in the definitions of what constitutes student retention and persistence are some of the reasons why there has yet to be a comprehensive theoretical
model that is able to translate into definite action to increase retention in institutions (Tinto, 2010). Nonetheless, finding the causes and cures for student attrition still remains an important focus for institutions as the importance of keeping students is more cost effective and beneficial for both students and universities. Notwithstanding, even though there is no consensus on what theoretical viewpoint is most appropriate for understanding why students drop out, the research literature has demonstrated several common factors related to retention. These factors can be generally designated as: academic preparedness, campus climate, student commitment to educational goals and the institution, social and academic integration, and financial aid or financial concerns (Swail, 2004). Similarly, Bean identifies nine themes that have an effect on retention: the students’ background, money and finance, academic performance, social factors, bureaucratic factors, the external environment, psychological and attitudinal factors, institutional fit and commitment, and intentions (2005).

Demographic factors and students’ background have been widely studied in relation to retention. Research has shown that factors including students’ age, gender, socioeconomic status, first-generation status, ethnicity, high school academic performance, and parents’ educational background have an affect on persistence. In general age and gender are generally considered to have some affect on student persistence and studies on older, non-traditional students have shown that increased age is associated with decreased persistence. Alternately, some research studies have found that older students may begin with a greater commitment towards the goal of earning a degree and possibly greater financial resources. Gender also has a small effect on persistence, with some research showing that females have a slightly higher rate of persistence than males. (Burris et al. 2013; Haemmerlie and Montgomery, 2012). Race and ethnicity have also been demonstrated to be related to persistence. Research has shown that racial and ethnic differences have different persistence rates and some groups showing differences in gender. Generally, studies originating from the west show that ethnic minority groups such as African Americans, Hispanics, and Native Americans show a greater risk of withdrawing. Socio-economic and first generation status also have influence on persistence as studies have found that moving a quintile up in socioeconomic status increased students’ likelihood of receiving a degree by more than six percent. Students whose parents went to college and attained a degree are also more likely to persist. (Peltier, Laden, & Matranga, 1999; Wohlgermuth et al. 2006; Fike and Fike, 2008; Reason, 2009).

Academic and social integration has also been well studied in the research. According to Morrison and Silverman (2012) the basic tenet of Tinto’s theory is that student departure from college is based on their ability to become integrated into the environment of the college. The more the student was able to integrate into the academic and social communities of the college, the more likely that they would persist towards their academic goals. As this theory has been one of the most widely researched, academic and social integration and the institutional practices that facilitate them have been some of the most studied variables. Academic systems of college include those factors that relate to the formal education of the student, studying, grades, faculty contact and other factors that involve academics. The social systems of college includes the students’ daily life, interactions with other students, and social activities. Institutional practices that have an affect on persistence include those institutional processes that facilitate the students’ adaptation to their new learning environments (Gerdes and Mallinckrodt, 1994; Lau 2003; Zepke and Leach, 2005). A study of community college students showed that students who reported being more integrated or had a sense of belonging on campus and an effect on their rates of persistence. Students who learned about the campus through social relationships and participated in courses offered to acclimatize them to the college environment had high higher rates of persistence (Karp, O’Gara, & Hughes, 2008).

Studies that specifically focus on motivation as a important component of student adjustment and integration have shown that the absence of motivation had negative effects on psychosocial adjustment to university life and contributed to stress and negative well-being (Baker, 2004). A meta analysis of research on student retention has shown the psychosocial factors do play an important role in influencing student retention (Habely, Bloom & Robbins, 2012). A research synthesis on community college students that examined relationships between psychosocial factors and student persistence concluded that psychosocial factors, especially motivation and self-perception, where influential predictors of achievement and persistence for college students (Fong, Davis, Kim, Marriot & Kim 2016).

Financial issues have also been demonstrated to have an affect on retention. Financial issues have an impact on retention both at entry and during the college experience, especially for students who have
limited financial resources to start with and are more likely to affect decisions to persist in the early stages of starting college when the potential benefits of a college degree are still remote and subject to uncertainty (Tinto, 1993). Generally, studies have shown that students who receive financial aid or assistance have higher graduation rates and that higher tuition is associated with lower persistence (Burrus et. al. 2013). A UK study of retention in higher education identified financial issues as one of the reasons students were likely to withdraw or drop out of university (Thomas, 2002).

Student and faculty interaction, teaching techniques that facilitate active and collaborative learning, positive faculty behaviors, and enriching activities have an impact of student engagement and thus, on student persistence (Umbach and Wawrzynski, 2005). As faculty members have more contact with students, are in a position to evaluate students and observe those that may have potential for attrition, they should be considered to have quite a strong impact when it comes to student retention given the strong evidence supporting effective college teaching and student retention (Cuseo, 2001). Tinto stated that faculty action in the classroom should be considered critical to institutional efforts to increase student retention and linkages to faculty pedagogy and student retention should be more fully explored (Tinto, 2006).

Method

Sample

This retention study was conducted at large, international university with a total enrollment of over 19,000 students located in Thailand. The sample for this study was taken from a cohort of first year students entering university for the first semester of 2016. Student ID and emails were obtained from the university database. The survey instrument was distributed both by email and distributed directly to students through their enrollment in general education courses. A check of student ID numbers ensured that there were no duplicate responses. The total number of responses received were 2,193 responses.

Questionnaire

The instrument was developed from review of the literature on student retention theories and reviews of related research that have been carried out in the past. The survey instrument contained 24 questions, with five questions containing subsets of questions making the overall responses to be answered a total of 60 questions. Responses were categorized into a 5-point rating scale. The instrument was comprised of fifteen descriptive items; ten items concerning academic factors; five items concerning social factors; seven items concerning motivation factors; twelve items concerning institutional factors; nine items concerning faculty factors; one item related to financial concern; and one item (the dependent variable) concerning students’ intent to stay at the university. Questions on the survey were made available in both English and Thai to ensure respondent understanding. The Thai translations of the English questions were checked and verified by two experts to ensure correct translation.

Five sets of independent variables were used for this study. They were: Academic Factors, Social Factors, Motivational Factors, Faculty Factors, and University Factors. Multiple items for each scale or factor were included on the survey to increase reliability of the data and the Cronbach’s Alpha Coefficient for Internal Consistency was applied to each of the scales and items to reduce the possibility of measurement error (Gliem & Gliem, 2003). A sample test was conducted on 60 students to assess for internal reliability. The Academic Factors scale consisted of 10 items (α = .72), the Social Factors scale consisted of 5 items (α = .78), the Motivational Factors scale consisted of 7 items (α = .84), the University Factors scale consisted of 12 items (α = .88), and the Faculty Factors scale consisted of 9 items (α = .92). A two step data analysis procedure was conducted for this study. First, the descriptive items were statistically analyzed to yield frequencies and percentages. Next, a regression model was employed to assess the predictive ability of the seven dimensions. The five factors plus students’ high school GPA and students’ Concern with Ability to Pay tuition were the independent variables while the dependent variable was the students’ Intent To Stay.
Results

According to the data obtained from this sample, the majority of students who took the survey were female (63 percent) and 90 percent of the respondents considered themselves to be non-native speakers of English. Over 40 percent of the respondents graduated from public high schools and highest self-reported grade point average was 3.00 to 3.49 (37 percent). When asked if they had any worries about their tuition fees, approximately 54 percent said they had some worries. Over 76 percent of the respondents intended to obtain at least a Bachelor’s Degree from the university. When asked about their parents’ educational levels, the majority of responses were Bachelor’s Degree for both their father and mother, at 38.2 and 42.1 percent respectively. The majority of students (36 percent) reported studying for approximately 5-10 hours per week. Students rated themselves as to their skills in English and mathematics capabilities in the medium range with 47 percent in English and 40 percent in mathematics. The major reason for selecting this specific university to attend (53 percent) was that it was an international university that uses English as the medium of instruction. When asked what they felt was the most important quality of a good university, 40 percent answered that it was the quality of education and knowledge that they received. Thirty-seven percent of students answered that they would consider leaving the university if their grades were lower than expected.

Regression Analysis

A multiple regression analysis was performed on the data using statistical application software. The independent variables were: Academic Factors, Social Factors, Motivational Factors, University Factors, Faculty Factors, High School GPA, and Concern of Ability to Pay. The dependent variable was the students’ Intent to Stay. A multiple regression analysis was used to test if the five factors, high school GPA, and Concern With Ability to Pay significantly predicted students’ Intent to Stay. When Intent To Stay was predicted it was found that Social Factors (β = .026, p < .05), Motivational Factors (β = -.013, p < .05), University Factors (β = .008, p < .05), High School GPA (β = .038, p < .05), and Concern of Ability to Pay (β = .077, p < .05) were significant predictors. Academic Factors (β = -.001, n.s.) and Faculty Factors (β = .008, n.s.) were not significant predictors. The overall model fit was R² = .031. See Table 1 for the beta coefficients for the independent variables used in the analysis.

<table>
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<th>Model</th>
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<th>Standardized Coefficients</th>
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Discussion

This current research has as its objective to determine what factors affect student retention at the university. The results show that five variables had a significant effect on students intent to stay: Social, Motivational, University, high school GPA, and financial concern. Academic and Faculty variables were not significant. Upon evaluation of the results, Academic Factors (i.e. study habits, contact with faculty) had a negative beta coefficient, which is interpreted that an increase in strength of academically related factors actually resulted in a decrease in the students’ intent to stay at the university. In a study by Bean and Metzner, differences in types of institutions and students were established. Institutions were defined as residential and commuter. Students were defined as traditional
and non-traditional. Non-traditional students are defined as being older and usually not living on
campus and typically have less contact with faculty and peers (1985). Bean and Metzner suggested that
for these types of students environmental variables would be more important and if they have low
values for academic variables but high values for environmental variables, the student would stay in
college (Davidson and Wilson, 2013). Therefore, as the majority of research applying Tinto’s theory
was based on residential institutions and traditional students, assumptions of academic integration may
not be applicable given the type of students at this university. Differences in institutional
categorization and norms of cultural behavior may place students in this university in the non-
traditional student category in terms of behavior. Thus, this may explain the reason why academic
factors were found not to be significant. The non significance of Faculty Factors could also be
mitigated by cultural norms typical of the country where criticism of one’s teacher may not be typical.

The highest beta coefficient was found for Social Factors and the significance level at the \( p < .01 \) level
is indicated. In this study, Social Factors, such as involvement with peers, the joining of activities and
clubs on campus, appear to have a significant influence on the students’ intent to stay at the university.
University factors, such as the reputation and image, the ease and convenience of the various processes
involved (i.e. admissions and registration) also appear to have influence on students’ decisions to stay
according to this study. The psychosocial or Motivational Factors (the students’ level of motivation,
attitudes, and stress) were also shown to have an affect on their intent to stay. The significance of the
students’ reported high school GPA and their intent to stay which is also supported by the major reason
that they would leave the university was if their grades were lower than they expected, is supported by
the research that students who are more prepared academically will tend to do better in college and
thus, persist more (Cabrera, Burkum, La Nasa & Bibo, 2012). Nonetheless, although there are many
studies on psychosocial attributes, there is still a need for a comprehensive instrument to measure their
effects (Habley et. al., 2012). Financial concerns as stated previously, have been shown to influence
student persistence in many studies. This is a concern that has consequences on persistence to possibly
an even more extent in current times as we see the costs of tuition on the rise and lowered financial
support by external or government sources. As tuition in private universities tend to be higher than at
government universities, attention to addressing this issue will be of utmost importance.

Conclusions and Implications

The overall results of this study show that factors that have been reported to influence student retention
are also seen to influence retention at this particular university. As an initial study, there are limitations.
The results indicate that the regression model, although significant, has demonstrated that their may be
a need for subsequent research to explain more of the variance, and thus reasons for student leaving.
The addition of more variables or a breakdown of the factors into several subsets of variables could
enhance the predictive ability of the model. Regression analysis is a largely predictive rather than
explanatory procedure in social science research and thus may only provide limited information and
connection among variables. Subsequent studies may need to focus on causal modeling in order to
ascertain causal effects (Pascarella and Terenzini, 2005).

The results of this study have implications for university administrators in that it identifies several areas
that can be targeted to improve student retention. Firstly, identification of the factors that influence
retention is critical in being able to address those areas that will have the most affect as resources both
financial and human are limited. Second, identifying areas that the university has control over or the
resources to influence such as social and university factors, will allow administrators to implement
plans or processes that will have more timely results and impact. As for those factors that university
administrators may have less influence on such as motivational aspects, support services and processes,
even if already available, should be enhanced and promoted so that students can make use of them
more fully in order to help them through their first year before they drop out. External limitations and
influences, such as financial concerns, may also require creative problem solving by university
administrators not only in the form of financial aid and scholarships, but by assisting students in
locating external sources of funding. A final implication of this research is that it by focusing attention
not only on student characteristics and their integration to the university, but to the university itself, its
image, reputation, processes and activities that can attract and assist students, that is, looking internally
at what the university can do ‘better’ for its students, will efforts to increase retention have the most
impact and desired results.
References


