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## **Modeling the Factors Influencing the Retention Decision of the Students of LPU-Laguna and LPU-St. Cabrini using Students Integration Theory**

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### **ABSTRACT**

*The study was conducted to determine the factors that influence the student retention at LPU Laguna and LPU-St. Cabrini. The study was guided by Tinto's Student Integration Theory focusing the students view on academic integration (faculty concern for student development and teaching and academic and intellectual development), social integration (peer group interaction and faculty interaction), and institutional and goal commitment. A total of 500 students were surveyed in this study. Stratified random sampling was used as sampling design and quantitative descriptive statistics was used as research design. The results revealed that majority of respondents were aged 20-22, female, 3rd year level, with more than 50,000 monthly income, and 2.01-2.50 general weighted average. In terms of assessment on factors influencing the student retention, institutional and goal commitment had highest assessment while academic and intellectual development had the lowest assessment. Findings showed that the measurement model satisfies the requirement of exploratory and confirmatory factor analysis. Furthermore, faculty concern for student development and teaching, peer group interaction, faculty interaction and institutional and goal commitment were found significant factors of student retention. While in terms of factors of retention decision and demographic profile, sex and GWA/GPA had significant relationship on the student retention. The researchers suggested to continue faculty and student consultation, student's tutorial and enhanced student engagement activities to further improve the satisfaction level of the students and longer stay in the institution.*

**Keywords:** *Student retention, social integration, academic integration, institutional and goal commitment*

### **INTRODUCTION**

For academic institutions, retention of students has become a challenging issue. One of the most frequently researched topics in higher education is student retention (Seidman, 2005). Higher education institutions have long been concerned with trying to ensure that students stay and finish their studies once enrolled and that they get as much out of them as they can (Tight M., 2019). Institutions also talk about levels of retention or graduation rates. Only if they know their students' intentions, the institution can measure a realistic retention rate.

In many distinct aspects, including their academic and financial plans, low student retention rates could impact tertiary institutions (Aljohani, 2016). Therefore, it is crucial for educators and policymakers pursuing solutions to this issue to have an understanding of the context of the phenomenon of student retention and the most common factors that lead students to leave their study programs.

The relevance of student retention problems is known to private higher education institutions (HEIs) because the experience of students is a concrete demonstration of the validity and sense of the institutional purpose (Scholder and Maguire, 2009). Therefore, it is important to request input from students to determine retention factors about specific areas of the institution such as importance, resources, academics, teachers, advisory / support services, social life, extracurricular activities, educational objectives, and preparation for the future.

The process of student admission should be considered in order to see the retention rates in the higher education institutions and this will be important in deciding how the students remain in the university. Lyceum of the Philippines University-Laguna (LPU-Laguna) and LPU-St Cabrini School of Health Sciences (LPU-St. Cabrini) are both higher education institutions in the Philippines that have an average of 2500 undergraduate students per year and consistently competing with other nearby

institutions. Similar with other institutions, LPU-Laguna and LPU-St. Cabrini are private education institutions generate their income mainly on the fees paid by the students. This income is largely dependent on the number of enrollees it attracts and supports all the institution's operations. Fortunately, both institutions are ISO 9001:2015 certified and as part of the institutional quality objectives, the student feedback and student retention rating have been monitored regularly. Both institutions had an overall retention rate of 92 percent higher than the institutional target of 88 percent in the last academic year 2019-2020 and this was a product of the institutional mission of providing students with quality service.

This study aimed to develop a model based on factors that influenced the retention decisions of the students in LPU-Laguna and LPU St. Cabrini School of Health Sciences. This study was guided by Tinto's student integration theory. The result of the study will guide the administrators of the institutions in identifying the factors that would make students retain in the institutions using the variables suggested in Tinto's Model.

## **Review of Literature**

The definition of retention in educational settings refers to "students' continued study until successful completion" (Fowler & Luna, 2009). Student retention has been an issue facing higher education for more than 70 years (J.M. Braxton, 2000). Tinto's (1993) Student Integration Model is one of the oldest student retention models, in which he suggested an interaction model that laid the theoretical basis for student attrition research (Weng et al., 2015). The main concept of Tinto's model is the level of a student's integration into the social and academic systems of the college, which determines persistence or dropout. Tinto (1993) has categorized student retention theories into three types: psychological, environmental, and interactional. Psychological theories focus on individual personality attributes and view student attrition as reflecting some shortcoming and/or weakness in the individual. Environmental theories focus on the social, economic, and organizational forces impacting on student retention. Societal theories emphasize the importance of social forces that are external to the higher education institution on student retention such as social status, race, prestige, and opportunity.

As a result, they are insensitive to individual and institution specific forces that affect student retention decisions. Economic theories emphasize the importance of individual finances and financial aid in student retention. However, there is little empirical evidence to support the connection that financial forces are primary influences for most students' retention decisions. Tinto (1993) suggests that financial variables appear to be of secondary significance to most students' choices. He suggests two reasons for this; first the influence of finance on retention is more influential in college entry decisions than college retention decisions. Secondly, while students often discuss financial reasons for leaving, other factors not associated with finance are often their key reasons. When students have a positive experience at university, they are often more likely to cope with financial problems in order to continue their study. Organizational theories focus on the effect of organizational factors on student retention. Factors studied within these theories include bureaucratic structure and size, faculty student ratios, and institutional resources and goals. Organizational theories are useful in explaining student retention between higher education institutions.

According to Tinto's theory (1993), students enter university with a set of background characteristics including: family backgrounds (e.g., family social status, parental formal education, and parental expectations); individual attributes (e.g., gender, race, age, and academic aptitude); and, pre-college schooling (e.g., high school achievement, academic course work). These background characteristics combine to influence the initial goal and institutional commitments that the student brings to the university environment. Goal commitments represent the degree to which the student is committed, or motivated, to get a university degree in general. Institutional commitments represent the degree to which the student is motivated to graduate from a specific university. These commitments change during the student's time at university as a result of the degree of integration into the academic and social

systems of the university. In turn, these two types of integration lead to new levels of goal and institutional commitments. In addition, the student's initial goal and institutional commitments influence their later goal and institutional commitments. Tinto states that 'in the final analysis, it is the interplay between the individual's commitment to the goal of college completion, and his commitment to the institution that determines whether or not the individual decides to drop out from college.

Another influential model is Bean's model (1980) which was derived from theories of organizational turnover and planned behavior. Student attrition is viewed as similar to turnover in business organizations. A complex interaction of internal and external variables influences the direction of the student's intentions and ultimately the decision to leave or persist. The model recognized that factors external to the institution can play a major role in affecting student decisions. Individual higher education student attrition is viewed as resulting from the following variables: student background variables, organizational variables, academic integration, social integration, environment variables, attitudes, grade point average (GPA), institutional fit, institutional commitments/ loyalty, and intention to leave or persist. Studies using Student Integration Theory suggest that academic integration, social integration, institutional commitment and goal commitment have the strongest impact on student retention

Finally, an integrated model which combined both Tinto's and Bean's models, was developed (Cabrera, et al, 1993) to offer an integrated framework for understanding the higher education persistence process. The two models claimed that persistence was affected by the integration between the students and the institution. Overall, the results of the integrated model support the propositions claimed in both models. For example, the relationships among academic and social integration constructs, as well as those among commitment constructs, are consistent in both models. Furthermore, support was also found for external factors influencing.

## **Conceptual Framework**

Figure 1 shows the research framework of which the individual characteristics such as age, sex, year level, GWA/GPA, and monthly family income. The faculty concern for student development and teaching, academic and intellectual development, peer group interaction, interaction with faculty and institutional and goal commitment were the identified variables used in Tinto's Student Integration Theory. Social and academic integration in relation to the engagement of a student to the university is the principal point of Tinto's theory. It is also very important that students in both informal and formal ways will develop social and academic integration skills. Academic integration refers to an assertion that the integration of a person can be evaluated during the college year in terms of both grade performance and intellectual growth. The extent and degree of congruence between the person and his or her social environment refers to social integration (e.g., extracurricular activities and peer-group interactions). Social integration refers to the informal education of students, unlike academic integration. It focuses on the relationships of students with peers, faculty, and staff that exist entirely beyond the institution's education environment (Lyons, 2007).

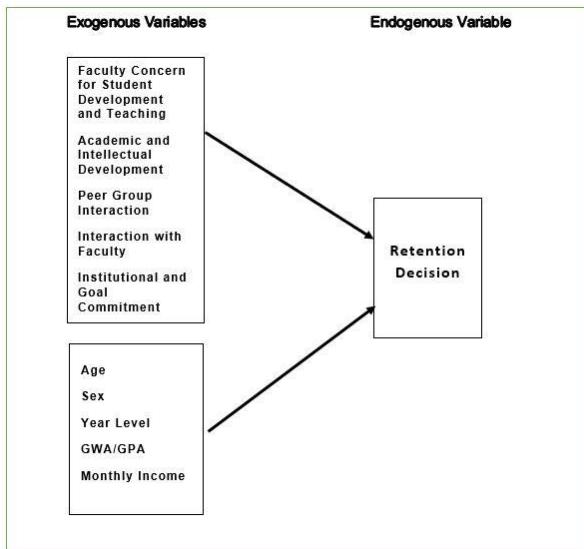


Figure 1. Research Framework

While the target commitments of the students address the degree to which they are driven to enter university, the institutional commitments of the students define the extent to which they are committed to graduating from a specific university, resulting in the retention decision of the student to remain in the institution.

### Objectives of the Study

The main objective of the study is model the factors that influence the retention decision. Specifically aimed to answer the following objectives: to present the demographic profile of the students; assess the factors influencing the retention decision of the students; verify the factors that influence the retention decision of the students and develop action plan based on the findings of the study.

### METHODOLOGY

This research utilized a quantitative approach and descriptive method to determine the outcomes of the study. The descriptive research design is a scientific method which involves describing the behavior of a subject matter while not influencing it in any process. The survey questionnaire was used to gather data to students from LPU-Laguna and LPU-St. Cabrini currently enrolled in flexible learning scheme. In this research, stratified random sampling was used. The total surveyed was 500 respondents, 63 from College of Arts and Sciences (CAS), 94 from College of Business and Accountancy (CBA), 100 from College of Engineering and Computer Studies (COECS), 100 from College of International Tourism and Hospitality Management (CITHM), and 143 from LPU-St. Cabrini's College of Allied Medicine (CAM). The total number of respondents is acceptable since the minimum number of respondents for structural equation modelling is 200 (Kline, 2011).

The survey questionnaire was divided into two parts. The first part encompassed the demographic profile of the respondents such as age, sex, year level, general weighted average, and monthly income. While the second part includes the factor variables of Tinto's Students Integration Theory such as the faculty concern for student development and teaching, academic and intellectual development, peer group interaction, interaction with faculty, and institutional and goal commitment. The researchers asked the approval of the management to conduct this study. The survey questionnaire was distributed to respondents via Google forms. The results obtained were tabulated, organized, and analyzed using

Statistical Package for Social Sciences (SPSS) software version 23 and AMOS version 24. The analysis of the factors influencing the retention decision of the students utilized the structural equation modeling as statistical treatment of the study. Structural equation modeling refers to a multivariate statistical analysis technique that is used to analyze structural relationships. This technique is the combination of factor analysis and multiple regression analysis, and it is used to examine the structural relationship between measured variables and latent constructs.

## RESULTS AND DISCUSSIONS

### Demographic Profile of the Respondents

Demographic information provides data regarding the participants of the study. Hammer (2011) noted that the thorough description of the participants allows the readers and researchers to determine to whom the research findings were generalized and the gap of the existing bodies of research can be identified.

In this context, the researchers determined the profile of the respondents in terms of age, sex, year level, monthly income, and general weighted average.

Table 1. Demographic profile of the respondents

	Frequency	Percent
<b>Age</b>		
17-19	125	25
20-22	349	70
23 and above	26	5
<b>Total</b>	<b>500</b>	<b>100</b>
<b>Sex</b>		
Male	143	29
Female	357	71
<b>Total</b>	<b>500</b>	<b>100</b>
<b>Year Level</b>		
2nd year	232	46
3rd year	234	47
5th year	34	7
<b>Total</b>	<b>500</b>	<b>100</b>
<b>Monthly Income</b>		
10,000-20,000	98	20
20,001-30,000	87	17
30,001-40,000	95	19
40,001-50,000	80	16
more than 50,000	140	28
<b>Total</b>	<b>500</b>	<b>100</b>
<b>General Weighted Average</b>		
1.00-1.50	106	21
1.51-2.00	190	38
2.01-2.50	153	31
2.51-3.00	51	10
<b>Total</b>	<b>500</b>	<b>100</b>

Table 1 shows the demographic profile of respondents. The results showed that in terms of age, 349 out of 500 or 70 percent were 20-22 years old, 125 out of 500 or 25 percent were 17-19 years old, and

26 out of 500 or 5 percent were 23 years old and above. In terms of sex, 357 out 500 or 71 percent were female, and 143 out of 500 or 29 percent were male. In terms of year level, 234 out of 500 or 47 percent were 3rd year level, 232 out of 500 or 46 were 2nd year level and 34 out of 500 or 7 percent were 5th year level. In terms of monthly income, 140 out of 500 or 28 percent had more than 50,000, 98 out of 500 or 20 percent had 10,000-20,000, 95 out of 500 or 19 percent had 30,001-40,000, 87 out of 500 or 17 percent had 20,001-30,000, and 80 out of 500 or 16 percent had 40,001-50,000. In terms of general weighted average, 190 out of 500 or 38 percent had 1.51-2.0, 153 out of 500 or 31 percent had 2.01-2.50, 106 out of 500 or 21 percent had 1.00-1.51 and 51 out of 500 or 10 percent had 2.51-3.00.

The results of individual characteristics interplay between the individual's commitment to the goal of college completion, and his commitment to the institution determines whether or not the individual decides to drop out from college (Tinto, 1993). Stratton et al. (2007) used demographic variables as potential explanatory variables for the variance in student retention in institutions of higher education.

### Factors Influencing the Retention Decision

Table 2 shows the factors influencing the retention decision in terms of faculty concern for student development and teaching. The results showed that the respondents agreed in the overall assessment having a composite mean of 3.09. The indicator, "The faculty members I had encountered with are genuinely interested in teaching" had highest mean of 3.15 and standard deviation of 0.64. While the indicator, "The faculty members I had encountered with are willing to spend time outside of class to discuss issues of interest and importance to students" had lowest mean of 2.97 and standard deviation of 0.66. The results supported the study of Cass, Cowie, and Campbell (2009), which says that the lecturer attributes and abilities may influence the enthusiasm of the students to the subject and the decisions they make for their future careers crucially important for retention. There is abundant evidence that informal student-faculty contact outside the classroom correlates positively with student retention. Such interactions can have a normalizing effect on students' socialization to the attitudes and values of their institution. Interactions like these can also lead to an increased bond between students and their university (Cox, McIntosh, Terenzini, Reason, & Lutovsky Quaye 2010).

Table 2. Factors influencing the retention decision in terms of faculty concern for student development and teaching

Faculty Concern for Student Development and Teaching	Mean	SD	Interpretation	Rank
The faculty members I had encountered with are...				
generally interested in students	3.11	0.52	Agree	2.5
generally outstanding or superior teachers	3.10	0.57	Agree	4
willing to spend time outside of class to discuss issues of interest and importance to students	2.97	0.66	Agree	5
interested in helping students grow in more than just academic areas	3.11	0.69	Agree	2.5
genuinely interested in teaching	3.15	0.64	Agree	1
<b>Composite Mean</b>	<b>3.09</b>	<b>0.62</b>	<b>Agree</b>	

Legend: 1.00-1.74- Strongly Disagree; 1.75-2.49- Disagree; 2.50-3.24-Agree; 3.25-4.00 Strongly Agree

Table 3 shows the factors influencing the retention decision in terms of academic and intellectual development. The results showed that the respondents agreed in the overall mean assessment having a composite mean of 2.89. The indicator, "My academic experience has a positive influence on my intellectual growth and interest" had the highest mean of 3.03 and standard deviation of 0.63. While the indicator, "My courses this term has been intellectually stimulating" had lowest mean of 2.80 and standard deviation of 0.65. The results confirm the findings of Lyons (2007) that the students' academic and intellectual growth would affect the students' dedication to earn degrees from the institution.

Table 3. Factors influencing the retention decision in terms of academic and intellectual development

Academic and Intellectual Development	Mean	SD	Interpretation	Rank
I am satisfied with the extent of my intellectual development from the time I enrolled in LPU	2.93	0.64	Agree	2
My academic experience has a positive influence on my intellectual growth and interest.	3.03	0.63	Agree	1
I am satisfied with my academic experience at LPU	2.82	0.71	Agree	3
My courses this term has been intellectually stimulating	2.80	0.65	Agree	4
<b>Composite Mean</b>	<b>2.89</b>	<b>0.66</b>	<b>Agree</b>	

Legend: 1.00-1.74- Strongly Disagree; 1.75-2.49- Disagree; 2.50-3.24-Agree; 3.25-4.00 Strongly Agree

Table 4 shows the factors influencing the retention decision in terms of peer group interaction. The results showed the respondents agreed in the overall assessment having a composite mean of 3.17. The indicators, "The student friendship I have developed at this institution have been personally satisfying" and "My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest" had the highest mean of 3.27 and standard deviation of 0.67 and 0.60 respectively. While the indicator, "It has been easy for me to meet and make friends with other students" had lowest mean of 2.90 and standard deviation of 0.75. The results of Pascarella & Terenzini (2005) confirm that the effect of peers on persistence has become more consistent in suggesting that positive experiences between peers have a positive impact on the decision to stay in school.

Table 5 shows the factors influencing the retention decision in terms of interaction with faculty. The results showed that the respondents agreed on overall assessment having composite mean of 2.97. The indicator, "My interaction with faculty have positive influence on my career goals and aspirations" had highest mean of 3.10 and standard deviation of 0.61. While the indicator "I have developed a close, personal relationship with at least one faculty members" had lowest mean of 2.81 and standard deviation of 0.77. According to Tinto's model of student attrition, student-faculty interaction should increase not only the students' social integration but also their academic integration and this will lead to higher rate of retention (Pascarella & Terenzini 2005). Positive experiences can boost the academic performance of students, increase college satisfaction, enhance intellectual and personal growth, increase learning motivation, and also affect student persistence (Karaivanova, 2016).

Table 4. Factors influencing the retention decision in terms of academic and intellectual development

Academic and Intellectual Development	Mean	SD	Interpretation	Rank
Since coming to this institution I have developed close personal relationship with other students	3.24	0.68	Agree	4
The student friendship I have developed at this institution have been personally satisfying	3.27	0.67	Strongly Agree	1.5
My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes and values	3.26	0.64	Strongly Agree	3
My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest	3.27	0.60	Strongly Agree	1.5
It has been easy for me to meet and make friends with other students	2.90	0.75	Agree	7
Most of the students I know would be willing to listen to me and help me if I had a personal problem	3.04	0.70	Agree	6
Most students at this institution have values and attitudes different from my own	3.17	0.61	Agree	5
<b>Composite Mean</b>	<b>3.17</b>	<b>0.67</b>	<b>Agree</b>	

Legend: 1.00-1.74- Strongly Disagree; 1.75-2.49- Disagree; 2.50-3.24-Agree; 3.25-4.00 Strongly Agree

Table 5. Factors influencing the retention decision in terms of interaction with faculty

Interaction with Faculty	Mean	SD	Interpretation	Rank
My interaction with faculty have positive influence on my personal growth, values and attitudes	2.99	0.59	Agree	3
My interaction with faculty have positive influence on my intellectual growth and interest in ideas	3.01	0.60	Agree	2
My interaction with faculty have positive influence on my career goals and aspirations	3.10	0.61	Agree	1
Since coming to this institution I have developed a close, personal relationship with at least one faculty members.	2.81	0.77	Agree	5
I am satisfied with the opportunities to meet and interact informally with faculty members	2.95	0.65	Agree	4
<b>Composite Mean</b>	<b>2.97</b>	<b>0.64</b>	<b>Agree</b>	

Legend: 1.00-1.74- Strongly Disagree; 1.75-2.49- Disagree; 2.50-3.24-Agree; 3.25-4.00 Strongly Agree

Table 6 shows the factors influencing the retention decision in terms of institutional and goal commitment. The results showed that the respondents agreed in the overall assessment having a mean of 3.19. The indicator, "Getting good grades is important to me" had highest mean of 3.59 and standard deviation of 0.57 while the indicator, "I am confident that I made right decision in choosing LPU" had lowest mean of 2.89 and standard deviation of 0.69. According to Alexandros, Ejaz, and Rupert (2017), students' goal commitments address the extent to which they are motivated to enter university and students' institutional commitments describe the extent to which they are committed to graduating from a particular university.

Table 6. Factors influencing the retention decision in terms of institutional and goal commitment

Institutional and Goal Commitment	Mean	SD	Interpretation	Rank
I am confident that I made right decision in choosing LPU	2.89	0.69	Agree	4
It is likely that I will still enroll in LPU next term	3.10	0.63	Agree	3
It is important to me to graduate from this institution	3.17	0.71	Agree	2
Getting good grades is important to me	3.59	0.57	Strongly Agree	1
<b>Composite Mean</b>	<b>3.19</b>	<b>0.65</b>	<b>Agree</b>	

Legend: 1.00-1.74- Strongly Disagree; 1.75-2.49- Disagree; 2.50-3.24-Agree; 3.25-4.00 Strongly Agree

## Modeling the Factors Influencing the Retention Decision

### Exploratory Factor Analysis

The research had tested the measures of sampling adequacy using Kaiser- Meyer- Olkin (KMO) which indicates the proportion of variance in the variables caused by underlying factors. The Bartlett's test of sphericity is a statistical test used to measure the presence of correlations among the variables. It generates the correlation matrix has significant statistical relationships among at least some of the variables (Hair et al., 2014).

Table 7 presents the test of sampling adequacy and the result of KMO is 0.9370 and Bartlett's test of sphericity resulted to a significance value of .000 and approximate chi-square value of 7245. The result shows the acceptance of factor analysis was satisfied. The measure can be interpreted with the following guidelines: .80 or above, meritorious; .70 or above, middling; .60 or above, mediocre; .50 or above, miserable; and below .50, unacceptable. The measurement of sampling adequacy value should be above .50 before proceeding with factor analysis. A statistically significant Bartlett's test of sphericity (sig. < .05) indicates that sufficient correlations exist among the variables to continue (Hair et al., 2014).

Table 7. Test of sampling adequacy

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.9370
Bartlett's Test of Sphericity	Approx. Chi-Square	7245
	df	300
	Sig.	0.000

## Construct Validity and Confirmatory Factor Analysis

Construct validity was used to determine the extent to which a set of measured items reflected the latent theoretical, and it deal with the accuracy of measurement (Hair et al., 2014).

Table 8 displays the construct reliability (CR) and average variance extracted (AVE). The construct reliability measures the reliability and internal consistency of measured variables representing the latent construct while the average variance extracted measures the convergence among sets of items representing a latent construct. The result showed that the CR values were greater than 0.7 while the AVE values greater than 0.5. Hair et al. (2014) used the rule of thumb for construct validity; AVE must be 0.5 or greater to suggest adequate convergent validity and construct reliability (CR) should be 0.7 or higher to specify adequate convergence or internal consistency. The construct validity of this research satisfied the acceptance requirement.

Table 8. Construct reliability and average variance extracted

	CR	AVE	MSV	MaxR(H)
<b>IF</b>	0.826	0.520	0.759	0.698
<b>FC</b>	0.814	0.524	0.597	0.823
<b>AD</b>	0.865	0.617	0.612	0.879
<b>IG</b>	0.781	0.642	0.529	0.791
<b>PG</b>	0.895	0.591	0.271	0.911

The researchers evaluated the model fit on the basis of multiple indices – chi-square, chi-square/df, Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Normal Fit Index (NFI), Comparative Fit Index, Tuker-Lewis Index (TLI) and Root mean squared error of approximation (RMSEA). The result of the model fit shown in the table below.

Table 9 presents the summary of model fit indices. The results showed the chi-square/degrees of freedom value of 1.866, a goodness of fit index value of 0.946, and adjusted goodness of fit index of 0.927, NFI value of 0.949; TLI value of 0.970 and CFI value of 0.976 and RMSEA value of 0.042. The results supported the standard values recommended for chi-square/degree of freedom should exceed "1" and should be less than "5" (Salisbury, Chin, Gopal, & Newsted, 2002). The GFI > 0.80 and AGFI > 0.80 (Hair, Anderson, Tatham, & Black, 2014), NFI > 0.90 or value > 0.80 (Schumacker and Lomax, 2010) and TLI > 0.90 and RMSEA < 0.05 (Hair et al. 2014) were considered.

Table 9. Summary model fit indices of confirmatory factor analysis

Model Indices	Values	Standard
Chi-square/degrees of freedom	1.866	< 5
Goodness of Fit Index	0.946	> 0.80
Adjusted Goodness of Fit Index	0.927	> 0.80
Normal Fit Index (NFI)	0.949	> 0.80
Tuker- Lewis Index (TLI)	0.970	> 0.90
Comparative Fit Index (CFI)	0.976	> 0.90
Root mean square error of approximation	0.042	< 0.05

## Structural Equation Model

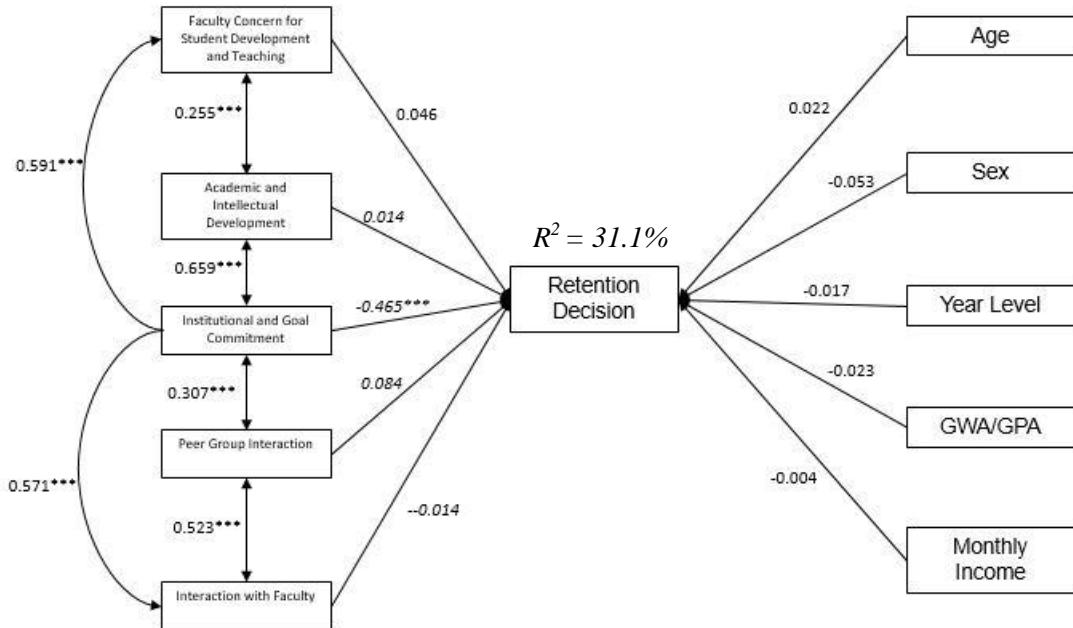


Figure 2. Standardized Regression Weights for Factor Influencing the Retention Decision

Figure 2 illustrates the Standardized Regression Weights for the factors influencing the retention decision. The researchers evaluated the model fit on the basis of multiple indices – chi-square, chi-square/df, Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Normal Fit Index (NFI), Comparative Fit Index, Tucker-Lewis Index (TLI) and Root mean squared error of approximation (RMSEA). The result of the model fit shows in the table below.

Table 9 presents the summary of model fit indices. The results showed the chi-square/degrees of freedom value of 2.012 a goodness of fit index value of 0.921, and adjusted goodness of fit index of 0.899, NFI value of 0.911; TLI value of 0.944 and CFI value of 0.953 and RMSEA value of 0.045. The results supported the recommended values for chi-square/degree of freedom which should exceed "1" and should be less than "5" (Salisbury, Chin, Gopal, & Newsted, 2002). The GFI > 0.80 and AGFI > 0.80 (Hair, Anderson, Tatham, & Black, 2014), NFI > 0.90 or value > 0.80 (Schumacker and Lomax, 2010) and TLI > 0.90 and RMSEA < 0.05 (Hair et al. 2014) are the acceptable values based on the standards. The values identified in this research for different model indices satisfied the acceptable levels.

Table 10. Summary model fit indices of confirmatory factor analysis

Model Indices	Values	Standard
Chi-square/degrees of freedom	2.012	< 5
Goodness of Fit Index	0.921	> 0.80
Adjusted Goodness of Fit Index	0.899	> 0.80
Normal Fit Index (NFI)	0.911	> 0.80
Tucker-Lewis Index (TLI)	0.944	> 0.90
Comparative Fit Index (CFI)	0.953	> 0.90
Root mean square error of approximation	0.045	< 0.05

### Hypothesis 1: Factors of Student's Integration Theory affects the Retention Decision

This hypothesis was aimed to test the influenced of student's integration theory in the retention decision.

Table 11 presents the relationship between the student's integration theory and retention decision. Results showed that the faculty concern for student development and teaching positively influenced the retention decision and statistically significant ( $b = 0.078$ ,  $p < 0.05$ ). The sets of interactions among students, faculty, and staff that take place largely outside of the formal academic setting (Tinto, 1993). Academic and intellectual development positively influence the retention decision and not statistically significant ( $b=0.025$ ,  $p > 0.05$ ). Peer group interaction positively influence the retention decision and statistically significant ( $b= 0.152$ ,  $p$  value  $< 0.05$ ). The results of Pascarella & Terenzini (2005) confirm that the effect of peers on persistence has become more consistent in suggesting that positive experiences between peers have a positive impact on the decision to stay in school. Interaction with faculty negatively influence retention decision and statistically significant ( $b= -0.019$ ,  $p$  value  $< 0.05$ ). According to Tinto's model of student attrition, student-faculty interaction should increase not only the students' social integration but also their academic integration and this will lead to higher rate of retention (Pascarella & Terenzini 2005). Institutional and goal commitment negatively influence the retention decision and statistically significant ( $b = -0.853$ ,  $p$  value  $< 0.001$ ). The stronger the goal and institutional commitment the more likely the student will graduate. Research shows that congruence between student goals and institutional mission is mediated by academic and social components, and that increased integration into academic and social campus communities causes greater institutional commitment and student persistence (Tintos, 1993).

Table 11. Relationship of students integration theory in the retention decision

Variables	Exogenous	Endogenous	Unstandardized			Standardized	
			Estimate	S.E	C.R	P	Estimate
H1a. Faculty Concern for Student Development and Teaching			-0.174	0.087	-1.989	0.047	0.078
H1b. Academic and Intellectual Development			-0.037	0.051	-0.728	0.467	0.025
H1c. Peer Group Interaction		Retention Decision	0.084	0.026	3.221	0.001	0.152
H1d. Interaction with Faculty			0.395	0.128	3.076	0.002	-0.019
H1e. Institutional and Goal Commitment			-0.462	0.040	-11.615	***	-0.853

\*\*\* $p$  value  $< 0.001$ ;  $p$ -value  $<0.05$  - Significant

### Hypothesis 2: Demographic Profile affects the Retention Decision

Table 12 presents the relationship between the demographic profile and retention decision. Results showed that the Age positively influenced the retention decision and statistically significant ( $b = 0.034$ ,  $p > 0.05$ ). The findings supported by Purdie (2007) that age could be used as predictor of student retention. The age of college students may impact retention in a variety of ways including maturity of student, work and life requirements, teaching methods, and whether or not the student has time to be engaged in the campus. Sex negatively influence the retention decision and statistically significant ( $b= -0.074$ ,  $p < 0.05$ ). Grebennikov and Skaines (2009) found that women find academic goals more important than men and they place a greater value on higher education, mainly because women need to better prepare themselves in order to have the same chances on the job market. Year Level negatively influence

the retention decision and not statistically significant ( $b = -0.041$   $p$  value  $> 0.05$ ). GWA/GPA negatively influence retention decision and statistically significant ( $b = -0.065$ ,  $p$  value  $< 0.05$ ). This results confirmed that grades is important predictor of student retention especially from first to second year (Monday, 2015). Monthly income negatively influence the retention decision and not statistically significant ( $b = -0.017$ ,  $p$  value  $> 0.05$ ). Higher annual and lifetime earnings are most frequently compensated for attending college and continuing to complete a degree. But admission and persistence decisions are guided by the availability of financial assistance for many low-income and minority students (Educationalpolicy.org, 2004).

Table 12. Relationship of demographic profile and retention decision

Variables		Unstandardized			Standardized	
Exogenous	Endogenous	Estimate	S.E	C.R	P	Estimate
H2a. Age		0.022	0.023	0.947	0.343	0.034
H2b. Sex		-0.054	0.023	-2.417	0.018	-0.074
H2c. Year Level	Retention	-0.019	0.015	-1.248	0.261	-0.041
H2d. GWA/GPA	Decision	-0.022	0.011	-1.917	0.041	-0.065
H2e. Monthly Income		-0.003	0.007	-0.423	0.566	-0.017

\*\*\* $p$  value  $< 0.001$ ;  $p$ -value  $< 0.05$  - Significant

## CONCLUSIONS

Based on the findings of the study, the following conclusion were drawn: Majority of the respondents were aged 20-22, female, 3<sup>rd</sup> year level, more than 50,000 monthly income and 2.01-2.50 general weighted average.

In the assessment of the factors influencing the retention decision of the respondents, institutional and goal commitment had highest assessment while academic and intellectual development had the lowest assessment. This means that means that students with high level of commitments were more likely to stay. Using the exploratory and confirmatory factor analysis, the results were found to be acceptable based on the standard requirements of the model indices. In terms of construct validity, all latent variables satisfy the acceptance requirement of the model.

Faculty concern for student development and teaching, peer group interaction, interaction with faculty and institutional and goal commitment were found to be the significant factors affecting the retention decision of the students. The results supported by (Tinto's, 1993) using student integration theory suggest that academic integration, social integration, institutional commitment and goal commitment have the strongest impact on student retention. While, sex and GWA/GPA in the demographic profile of respondents were found to be significant factors that influence the retention decision of the students.

## Recommendations

Based on the conclusion of the study, the researchers suggested to strengthen the faculty and student academic consultation and student tutorial services. The consultation will serve as venue between the students and faculty to discuss matters related to academic difficulties of the students and also to motivate the students to finish their degree on time while the student tutorial will help in motivating students to complete their schooling and stay until they graduate. The researchers also suggested to the Guidance Office in coordination with the faculty members to conduct regularly counseling to the students especially in this time of pandemic. Regular checking of student feedback is also suggested to further enhance the services offered by institution and to make the students fully satisfied during their entire stay in the institution

## REFERENCES

Alexandros Chrysikos, Ejaz Ahmed, Rupert Ward, (2017) *Analysis of Tinto's student integration theory in first-year undergraduate computing students of a UK higher education institution*, International Journal of Comparative Education and Development, Vol. 19 Issue: 2/3, pp.97-121, <https://doi.org/10.1108/IJCED-10-2016-0019>

Aljohani, O. (2016). *A Comprehensive Review of the Major Studies and Theoretical Models of Student Retention in Higher Education*. Higher Education Studies, 6(2), 1. doi:10.5539/hes.v6n2p1

Cox, B. E., McIntosh, K. L., Terenzini, P. T., Reason, R. D., & Lutovsky Quaye, B. R. (2010). *Pedagogical Signals of Faculty Approachability: Factors Shaping Faculty–Student Interaction Outside the Classroom*. Research in Higher Education, 51(8), 767–788. doi:10.1007/s11162-010-9178-z

Fowler, M., & Luna, G. (2009). *High school and college partnerships: Credit-based transition programs*. American Secondary Education, 38(1), 62-76. doi: 1898877321

Fumei Weng, France Cheong & Christopher Cheong (2010) *Modelling IS Student Retention in Taiwan: Extending Tinto and Bean's Model with Self-Efficacy*, Innovation in Teaching and Learning in Information and Computer Sciences, 9:2, 1-12

Grebennikov, L., & Skaines, I. (2009). *Gender and higher education experience: A case study*. Higher Education Research & Development, 28(1), 71–84.

Hair, J. F., Anderson R.E, Tatham R. L., Black W.(2014) *Multivariate Data Analysis with Readings*, 7th ed. Prentice-Hall, Upper Saddle River, NJ.

Karaivanova, Katerina, (2016), *The Effects of Encouraging Student-Faculty Interaction on Academic Success, Identity Development, and Student Retention in the First Year of College*. Doctoral Dissertations. 1355.

Kline, R. B.(2011) *Principles and Practice of Structural Equation Modelling*, 3rd edition, The Guilford Press, New York NY 10012

Lyons, Aundrea L (2007), *An Assessment Of Social And Academic Integration Among Track And Field Student-Athletes Of The Atlantic Coast Conference*, Dissertation, The Florida State University

Monday, Eric N. (2015) *The Impact of Financial Knowledge on Student Retention from the Second to the Third Year at a Public Research University* LSU Doctoral Dissertations. 2263

Otre-Cass, K., Cowie, B., & Campbell, A. (2009). *What determines perseverance in studying science?*.

Pascarella, E. T., & Terenzini, P. T. (2005). *How College Affects Students: A Third Decade of Research*. Volume 2. Indianapolis, IN: Jossey-Bass Publishing

Powell, P. (2009). *Retention and writing Instruction: Implications for access and pedagogy*. College Composition and Communication, 60(4), 664-682. doi: 1775753881

Schumacker, R. E.(2010), & Lomax, R. G., A beginner's guide to structural equation modeling (3rd ed.). New York, NY, US: Routledge/Taylor & Francis

Seidman, A, (2005). *College Student Retention*, Westport, CT: American Council on Education and Praeger Publishers.

Severiens, S., & ten Dam, G. (2011). *Leaving College: A Gender Comparison in Male and Female-Dominated Programs*.

Tight, M. (2019). *Student retention and engagement in higher education*. Journal of Further and Higher Education, 1–16. doi:10.1080/0309877x.2019.1576860

Tinto, V. (1975). *Dropout from higher education: A theoretical synthesis of recent research*. Review of Educational Research, 45, 89-125.