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FACTORS INFLUENCING UNDERGRADUATES' ACADEMIC MOTIVATION IN PRIVATE TERTIARY EDUCATION IN SRI LANKA

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ABSTRACT

In Sri Lanka, the limited capacity of the state higher education system has created an insistent requirement for private sector contribution. There is a lack of research on the private higher education service category as there is a lack of regulation demanding to provide statistics to a central authority. This study examined the academic motivation of undergraduates from private higher education institutes to determine the factors which influence their academic motivation. The objectives of the study were to identify the level of motivation, identify the critical factors that affect academic motivation and identify the relationship between identified critical factors and academic motivation. The study concludes that self-efficacy is one of the most influential factors for academic motivation in undergraduates from private higher education institutes in Sri Lanka.

Keywords: Undergraduate, Academic, Motivation

INTRODUCTION

Currently, Sri Lanka faces a challenge as the higher educated human capital is not sufficient to meet the demands of the market. According to the population census 2012, only 2.7% of the population have degree-level qualifications (Department of Census and Statistics, 2014). According to Dr. Saman Kelegama, the Executive Director of Institute of Policy Studies of Sri Lanka, due to the capacity limitations of the state higher education system there is a pressing need for private sector contribution. State university intake has become competitive throughout the years due to the limited number of placements available. Of the 149,489 students who were eligible for university entrance from the A-level 2014/2015, only 17% were admitted to state universities and each year, about 120,000 students who qualify for university admission have to abandon their ambitions to enter a university (Daily Mirror, 2017).

Therefore, the formation of private institutes of higher education has been acknowledged as a solution for the challenges faced by the country's higher education (Abeyratne and Lekamge, 2012). Today, several foreign universities are offering affiliated degrees and other qualifications in Sri Lanka. Majority of students who enroll for these courses are ones who could not enter the state higher educational institutes (Nawaratne, 2012). And there is a clear lack of research on the undergraduate population of these institutes. In Sri Lanka, there are 15 state universities under the University Grants Commission, 2 universities under Ministry of Higher Education. There are 3 campuses, 17 institutes under University Grants Commission. There is one university under Ministry of Defense, One university under Ministry of Vocational & Technical Training (Mohe.gov.lk, 2018). Apart from those there are numerous public and private campuses and higher education institutes (Ugc.ac.lk, 2018).

On the supply of private tertiary education institutes in Sri Lanka, no detailed data are available. This is because there is no obligation to provide statistics to a central authority and a formal study has not been undertaken (Nawaratne, 2012). In 2012, there were about 46 institutions offering more than 200 degrees in Sri Lanka in partnership with foreign higher education institutions (LIRNEasia, 2012). Higher education is being recognized as a service industry, where greater emphasis is placed on meeting the expectations of their customers, that is, the students. The fast growth of universities and other higher education institutes forces these institutes to focus on student satisfaction for their survival and competitive advantage. (Kotler and Fox, 1995).

The main function of higher educational institutions is completion and enhancement of students' education. But, institute management have a tendency to concentration more time on attracting and admitting students rather than managing student satisfaction. Since it is important to satisfy customers to retain them, satisfying admitted students is important for student retention. According to a report published by the Department of Census and Statistics out of 161661students admitted to 11 Vocational and Technical Institutes in Sri Lanka in 2019, 31613 have dropped out. That is a percentage of 19.6% (Department of Census and Statistics, 2020).

Higher Education is a form of investment is now an established idea. Like other investments it is critical to understand whether the benefits from education are worth the costs. There are many factors that contribute to the effectiveness in higher education. As undergraduates are one of the key elements in higher education there is substantial focus on improving their motivation to study, to improve higher education standards. Therefore, there is significant concern on how undergraduates' motivation to learn and research impact effectiveness in higher education.

A key reason for the interest in student motivation would be the need to lessen the prevailing discrepancies in investments in higher education and the actual outcomes (Organization for Economic Co-operation and Development, 2001). These findings can lead to better policy making and improvements in higher education systems. There is no single method for motivating students. Many factors affect a given student's motivation to work and to learn (Sass, 1989). Sri Lanka maintains some of the highest literacy rates in South Asia. Since the end of the war, Sri Lanka has obtained extensive support from international community to develop its education system. In 2017, for instance, the country obtained a USD $100 million World Bank loan to expand the tertiary level education in Sri Lanka, and to improve the quality of degree programs (The World Bank, 2017). Even though the number of inbound students to Sri Lanka is slight currently, the Sri Lankan government also has set goals to join other Asian countries in becoming a significant education destination regionally. The fastest growing host countries for foreign students have been in Asia – Singapore, Malaysia, China and South Korea (The World Bank, 2012). In 2014, the government declared plans to open its higher education industry to private foreign investors as an effort to attract international students. Sri Lanka expects to make higher education one of its principal exports in future along with tourism, aviation, naval bases, and energy and research hubs (Duncan, 2014).

World Bank has listed Sri Lanka's advantages as the option of education in English medium, modest rates, and progressive government policies. World Bank also notes that students may face flaws in the Sri Lankan education system,

like regular strikes, inadequate quality information, and limited reputation for academic research (The World Bank, 2012). Private higher education institutes in Sri Lanka and even state owned universities try to be competitive and be the market leaders.

Even though there is increased interest in the improvements in Sri Lankan higher education industry, there is a lack of research conducted. Therefore, it would be beneficial to investigate factors that affect Sri Lankan undergraduates' study motivation. A study that examines factors that affect student motivation in private higher educational institutions can add additional dimension to the educational planning and policy setting activities of both private and state higher education institutes.

The major research questions this study aims to address are the following.

a. What are the critical factors influencing undergraduate study motivation in Sri Lanka?

b. What is the impact of those factors on undergraduate motivation?

LITERATURE REVIEW

The word motivation may mean different things, the purpose of motivation is, to stimulate, influence, trigger or push (Manzoor 2012). However, there is a vast variety between interpretations of motivation. In the fields of education, there is an extended practice of interest in motivation (Çeliköz, 2010). Various theories offer insights into motivation from diverse viewpoints and are applied in current organizations (Frick and Drucker, 2011). Extrinsic motivation is seen when individuals perform activities to gain external rewards related to the complexion of an event (Ryan, 2000). These external rewards are tangible or psychological. As examples for extrinsic rewards; good grades, approval from peers, praise from lecturers can be listed.

Intrinsic motivation occurs when an individual act without any apparent external reward, and purely like an activity or perceive it as a chance to explore, learn, and realize one's potential (Coon and Mitterer, 2010).

One of the earliest and most widely known theories of motivation, developed by Abraham Maslow is Hierarchy of Needs. This theory summarizes needs into five basic categories. Beginning with the basic psychological needs and continuing through safety, belonging and love, esteem and self-actualization. The lowest unsatisfied need becomes the significant need. The foremost need stimulates an individual to fulfil it. Fulfilled needs do not motivate an individual. Individual seeks a higher need when lower needs are fulfilled (Cutler, 2014). Even though being a psychological theory, this theory has been adapted in educational context (Mittleman, 1991).

The physiological need of the students is of significantly importance. A lecturer should make sure adequate space, ventilation, lighting, breaks are provided to the students. Safety needs play a major role in motivating students. Students should feel physically, emotionally and psychologically safe in the lecture room for them to be motivated to learn. The lecture room should be a place where students feel free to ask questions and share ideas without being ridiculed or reprimanded by the lecturer or other students. Furthermore, students need to feel a sense of belonging and care. The student should feel that he is a valuable part of the class. When these needs are met, the students will be interested in learning the subject and will work to attain recognition and academic achievement. Students will strive for greater learning aims and achieve them (Burleson and Thoron, 2014). One criticism on this theory is regarding deprivation (Wicker et

al., 1993). This proposition suggests that a high deprivation of a need would create an amplified strength in a need.

Hofstede argued that the hierarchy was based upon a Western ideology and the hierarchy of needs alone does not account for dissimilarities in the cultural needs of societies (Hofstede, 1984). The hierarchy of needs theory is considered to be too simplistic and does not account for social needs at a specific period, such as economic recession or war (Cianci and Gambrel, 2003). Other criticisms of the theory view the approach used as unrepresentative. This is because Maslow used the top 1% achievers of populations and high achievers in his research, making it difficult to generalize his findings to the wider population (Mittleman, 1991).

Clayton Alderfer distinguished three classes of needs. Those are existence, relatedness and growth (Alderfer, 1969). Existence needs include needs for basic requirements. Relatedness needs imply that individuals have substantial need for association, love and belongingness. And they lead towards acceptance, fame and popularity. Growth needs are the needs for self-development, growth and advancement. Alderfer also suggests that individuals usually move up the classes when they satisfy their needs. Individuals usually satisfy lower-order needs before moving on to higher-order needs (Cheng-Liang Yang, 2011). These can be mapped to categories of hierarchy of needs. Maslow's physiological and safety needs can be mapped to existence needs. Relatedness can be matched with belongingness and esteem needs. Growth can be mapped with self-esteem and self-actualization needs. Both Maslow and Alderfer tried to describe how these phases of needs become important to individuals, motivation (Arnolds and Boshoff, 2002).

Alderfer suggested that individuals increase the efforts in a lower category need when higher categorized needs are not resulting. This event is known and called as the frustration-regression process. This is a more realistic approach as it recognizes that, because when a need is met, it does not mean it will always remain met (Alderfer, 1969).

The theory of ERG was also applied to explain observance of students in a vocational school in the Netherlands. It was found that students seemed to be trapped in a frustration-regression phase called Demotivation Cycle. Student relatedness needs were tied to their existence needs. Need to belong has placed an emphasis on belongings and keeping up with trends. It was identified that frustration-regression may also be caused by academic failure (Mulder, 2007). McClelland has proposed a theory which proposes that when a need is strong in a person, its effect will motivate the person to act in a way which leads to satisfaction of the need. The main theme of McClelland's theory is that needs are learned through copping with one's environment. Since needs are learned, behavior which is rewarded tends to recur at a higher frequency (McClelland, 1962).

Three of these learned needs are the need for achievement, the need for affiliation, and the need for power. To assess individual differences in the three proposed needs, the Thematic Apperception Test (TAT) is used. According to McClelland a society's economic development is based on the level of need achievement in its population. Economically backward nations can be improved by inspiring the need for achievement in the population (Gibson et al., 2012). There are several criticisms of McClelland's work. First, use of the projective TAT to determine the three needs has been questioned. The interpretation and weighing of a story are an art and subjective. Validation of such analysis is important and often neglected (Spangler, 1992).

Frederick Herzberg developed the two-factor content theory of motivation. The two factors are the dissatisfiers – satisfiers, or hygiene factors – motivators (Herzberg, Mausner and Snyderman, 2011). There are extrinsic circumstances, like salary, and working conditions. These factors might not necessarily motivate an individual, but lack of these conditions can cause dissatisfaction. Therefore, these factors are needed to maintain at least a level of no dissatisfaction. These set of factors are called hygiene factors. Second set of conditions include feelings like sense of achievement, personal growth, improving competency and recognition. The absence of these conditions might not cause a feeling of dissatisfaction. But when these factors are present, they create high levels of motivation. These are called motivating factors.

Herzberg's model reveals similarity to that of Maslow's. (Sandhya and Kumar, 2011). For example, the hygiene needs in Herzberg match with Maslow's lower order needs and the motivator needs represent the higher order needs in Maslow's model (Sahoo et al., 2011). The theory was based on a sample of accountants and engineers from USA. Critics question whether this restricted sample can rationalize generalizing it to other professions and cultures. (Schneider and Locke, 1971). A broadly mentioned process theory of motivation is the expectancy theory. As per this theory motivation is defined as a process governing choice from several options of voluntary activity. The key reasoning behind this theory is that motivation branches from the conviction that choices will have their anticipated results (Lee, 2007). There are few key terms included in this theory. Those are as follows: Instrumentality is an individual's belief that there is a connection between activity and goal. For example, "Doing past papers can lead to a good result in this subject".

Expectancy refers to the individual's confidence on the probability that a particular behavior will be followed by a particular outcome. For example, "If I do 10 past papers before the exam, I can get an A for this subject". The preference for outcomes, as seen by the individual, is termed valence. For example, "I very much like to get an A for this subject".

Difficulties are met when testing the model. The theory tries to predict choice or effort. Without a clear description of the meaning of effort, the variable is difficult to be effectively measured. Usually, self, peer, or supervisor evaluations of effort are used. But each research appears to have different definitions, measurements, and research designs (Steel and Konig, 2006). The expectancy theory to motivate seems to be culturally biased. In cultures where employees have control over the work and their own behavior (e.g., USA) expectancy theory seems to have more validity. In cultures where the individual control is minimal (e.g., Japan) the validity of the theory seems less clear (Tinsley and Brett, 2001).

The equity theory suggests that employees compare efforts and rewards with others in similar work situations. This theory of motivation assumes that individuals, who work in exchange for rewards, are motivated by being equitably treated. Equity exists when individual's see that the ratios of their efforts to their rewards are equal to the ratios of other similar individuals. Inequity exists when these ratios are not equivalent (Adams, 1963). Equity theory has been tested in education context as well. One exploratory study conducted applying equity theory to students' perceptions of research participation requirements provided support for equity theory. "Students may feel that they reach a ceiling in what they can learn from research experiences after a couple of hours of participation. If they are required to complete many research hours, the requirement may be perceived

as less educational and more coercive. This perceived inequity speaks to the idea that a maximum limit to research hours in a given semester could reduce the perceived costs associated with research." (Miles, Cromer and Narayan, 2015)

It is argued that individuals might see equity not only in as efforts and rewards, but also by the procedure used to determine the rewards. A person might perceive that his effort: rewards ratio is equitable to others, but the entire reward determination procedure is not fair (Carrell and Dittrich, 1978). Reinforcement theory is based on the principle that a lasting change in behavior is accomplished from reinforced practice. The idea is that behavior grows in strength and/or probability when it is reinforced (Kessler, 2013). For example, lecturers reward students for good behavior and good academic performance using social rewards (e.g., praise) and academic rewards (e.g., good grades). Students who involve in behavior that is unproductive will not be rewarded. Student behavior is therefore a function of contingent consequences.

A positive reinforcer strengthens the probability of a behavior. In higher education context, these may include praise, high marks, or recognition. However, positive reinforcers are not universal. A positive motivator for one may not be so for another. Another way to stimulate preferred behavior is to eliminate disagreeable consequences when the desired behavior occurs. An example would be criticism from the lecturer when a student comes to class late. The lecturer might continue to do so until the student starts coming to classes on time. This is called avoidance learning. When a positive reinforcer used before is removed to weaken undesired behavior that is called extinction. The application of a disagreeable consequence to eliminate undesirable behavior is known as punishment. A student who copies his work from colleagues may receive a lower grade. This punishment may encourage him to attempt work on his own.

It is argued that a reinforcement model trains individuals to expect rewards to a great extent that they are unable to find motivation without a reward. A "carrot-and-stick" method of motivation has invaded education in the USA mostly due to the efforts of Skinner and successors and rewards turned into an expected part of the classrooms and workplaces that people here have become trained to expect them all the time, without seeking intrinsic motivation (Kohn, 2010).

Goal setting theory highlights that setting precise, challenging goals and commitment to these goals are determining factors of motivation. Goals define an anticipated future, and these goals can drive behavior. Achieving the goals further motivates individuals to perform (Tosi, Locke and Latham, 1991). The maximum performance is achieved when goals are specific (generally quantitative) and challenging. The key mediators of goal setting are feedback, commitment to the goal, task complexity, and situational constraints. Goals can come from different sources; assigned by others, set jointly through participation or self-set (Locke and Latham, 2006). Extensive literature is on participation in decision making. It was found that participative set goals are not any better than assigned goals, if the assigned goals are not set brusquely or randomly without a rationale (Kessler, 2013). There are several factors involved on deciding how many goals should one individual have. For example, an ability and knowledge, the time span, interconnections between the goals, the ability to delegate, the hierarchy of importance, complexity, etc. There has not been extensive research on the subject. A few researches demonstrate people can pursue multiple goals at work. Whichever goal with the highest priority

has the strongest effect on a person's performance (Kessler, 2013).

Self-Determination Theory (SDT) is a theory of motivation that addresses extrinsic and intrinsic motivation. According to SDT People have inborn psychological needs such as Competence, Relatedness, Autonomy and if these universal needs are met, individuals will function and grow optimally. To actualize their inherent potential, the social environment needs to nurture these needs. With extrinsic motivation, a person tends to do a task or activity mainly because doing so will yield reward or benefit upon completion. Intrinsic motivation, is characterized by doing something because of enjoyment (Van Lange, Kruglanski and Higgins, 2011). The psychological growth described by SDT does not happen automatically. People oriented toward growth requires continual sustenance. According to Deci and Ryan, social support is the significant element. Through relationships and interactions with others, individuals either foster or prevent motivation for personal growth (Van Lange, Kruglanski and Higgins, 2011). The availability of infrastructure facilities and technology can be a motivating factor for undergraduates. A study carried out to examine the impact technology has on students' motivation involved the completion of two projects over the course of nine-weeks. One group of students was to create traditional storybook projects. Another group was to complete computer-based projects. A third group was given the choice of which project to complete. A pre-post-retention test, Likert scale surveys, and post project interviews were used to collect the data. The results of this study support the idea that when given the choice of project, students retain knowledge no matter which project is chosen, traditional or computer-based. It was discovered that students who chose to complete projects using available technology scored significantly better than students who were forced to use available technology. The study concludes that technology has the potential to be a powerful educational tool for those that have an interest in it and assigning a technology based learning randomly to a group of students will not necessarily generate high scores. (Granito and Chernobilsky, 2012).

Research conducted at two colleges affiliated to the Goa University has found that the time spent in LMS does not have a significant relation with Engagement, Motivation and Academic Performance. This indicates that amount of time spent using and LMS, may not be a crucial factor but the quality of time spent on the LMS could be helping the experimental group to get engaged, motivated and perform better (Falleiro, 2013). Instructional leadership can also play a part in undergraduates' motivation. There are some descriptive studies and outcome evaluations to identify effect of instructional leadership on student motivation and achievement (Bell, Bolam, & Cubillo, 2003). An outcome evaluation study conducted in 214 US metropolitan high schools analyzed the relationship between faculty, leadership and student achievement in mathematics. This study used a self-completion questionnaire and an independently validated student test. The study concluded a positive relationship between faculty relations, transformational leadership and student achievement (Wiley, 2001).

Not all studies conducted to identify instructional leadership effect on student motivation have reported a positive relationship. The mean estimate for transformational leadership was slightly reduced by the results of two studies that found a weak to small negative effect of teacher leadership on student identification (Leithwood & Jantzi, 2000). Research conducted in a New England Middle School on 353 students, tried to evaluate the relationship between student

motivation and students' perception of the social-emotional quality of the classroom, their sense of belonging and support from peers and teachers. The findings suggested that these school students tend to derive academic motivation from the perceived supportiveness of peers and others in the school environment (Goodenow, 1993).

Peer relationships at educational settings can be complex, peers influence on academic motivation and achievement can be significant and wide-ranging. Further research is needed to evaluate the relationship between peer relationships and academic motivation. Especially studies using designs that analyze changes over time, focus on multiple kinds (or combinations) of peers, etc. Peers are an essential part of educational contexts, whose effects on academic motivation are mostly positive (Kindermann, 2015). Students judge their capabilities against the course demands and values of school tasks, and decide to be motivated in engaging in the course or not. Different studies show that self-efficacy is one of the most powerful factors of student achievement and motivation. Students individual desire to achieve goals, interest in subjects and expectancies are also related to their motivation to learn. (Bandalos, Geske & Finney, 2003). In a longitudinal study conducted on first year college students, self-efficacy proved to be positively related to performance and commitment to stay in school. It was seen that the psychological orientations of the students are critical to their accomplishments and academic motivation in the academic setting. Confident and optimistic students are more likely to successfully adjust themselves. Such students have higher outlooks as they are confident in their capabilities (Chemers, Hu, Garcia, 2001).

METHODOLOGY

The study is conducted under the positivistic philosophy. A deductive approach is used. The researcher developed a theory and hypotheses and designed a research strategy to test the hypothesis. First, a search was carried out to describe causal relationships between academic motivation and other variables that effect academic motivation. Consequently, hypothesis was developed to state the relationships between these variables. To test these hypotheses, a collection of quantitative data was carried out.

The research strategy used is survey strategy as it gives more control over the research process and, when sampling is used, it is possible to develop findings which represent the population at a lower cost. All the questions in the questionnaire were close ended questions. From the literature review numerous factors influencing academic motivation were gathered. These factors can be categorized to four main classes of variables. Table 2 lists the four independent variables identified and a description of the each.

Independent Variable	Description
Availability of Physical Facilities	Availability of Technology (Network, Hardware, Software, Lab Facilities, Audio Systems in lecture halls, Learning Management Systems, etc.), Library facilities, Transportation, Accommodation, Comfortable classrooms can be a factor that contributes to students' motivation to attend classes and complete academic work.
Instructional Leadership	Leadership and support from the faculty and lecturers, meaningful feedback from lecturers and instructors, faculty having good rapport with the students, availability of counselling and advisory programs, appreciation of good performance can be motivational factors for undergraduates.
Belongingness	Belonging is an essential aspect of psychological functioning. If the other class members are supportive, and if they make an individual feel valued, that might effect on the level of motivation an undergraduate have for learning.
Self-efficacy	Self-efficacy is "the belief in one's capabilities to organize and execute courses of action required to produce given attainments" (Bandura, 1997). An undergraduate's belief that he/she can manage the academic tasks, do research and academic writing, take notes, and his optimism on life in general might have an effect on the level of academic motivation.

Table 1 - Description of independent variables used in the study

The dependent variable is undergraduate's academic motivation. This variable was measured using Academic Motivation Scale (AMS) (Vallerand et al., 1993). The AMS uses a seven-point (1…7) Likert scale to assess each subject's academic motivation (Vallerand et al., 1993). The AMS yields descriptive data measuring an undergraduate's academic motivation at a particular point in time. The AMS measured intrinsic motivation, extrinsic motivation, and amotivation. Each type of motivation was measured by a series of statements describing various aspects of that particular motivation (Vallerand et al., 1993). The AMS has 28 statements each with seven-point Likert scale (Vallerand et al., 1993). Each statement on the scale measures either, extrinsic, intrinsic, or amotivation.

The AMS has been used in various researches to study the relationships of academic motivation. This scale was validated with several populations. These validations included English- and French-speaking students, from high school to university levels, and it was also tested for factorial invariance across gender and across time (Grouzet, Otis, & Pelletier, 2006). A study conducted in Malaysia to validate the psychometric properties of the Academic Motivation Scale (AMS) in the Malaysian higher education context has identified that the external regulatory reasons are the highest form of motivation in higher education, particularly amongst students from foreign branch campuses and locally established private universities. It was suggested that the significant presence of extrinsic motivation in higher education may be

contributed by social norms and pressures for tertiary qualification attainment in a
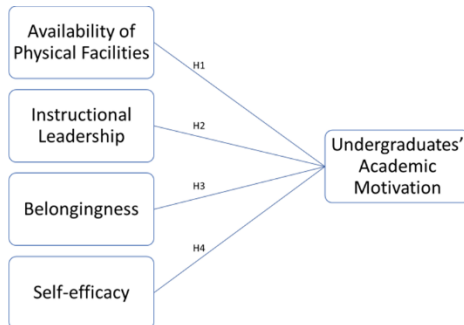
knowledge-based economy (Sean & Ahmed, 2012).

Figure 1 - Conceptual framework for the research

As per the empirical evidence gathered in literature review following hypothesis can be built.

Hypothesis 1 – There is a relationship between the availability of physical facilities and undergraduates' academic motivation

Hypothesis 2 – There is a relationship between the instructional leadership and undergraduates' academic motivation

Hypothesis 3 – There is a relationship between the sense of belongingness in the classroom and undergraduates' academic motivation

Hypothesis 4 – There is a relationship between the self-efficacy and undergraduates' academic motivation

Each of the research questions was tested via hypotheses that are quantified from the results of the Academic Motivation Scale (AMS) and questionnaire developed by the researcher. The study explores possible relationships among academic motivation and four identified variables. The student population considered is undergraduate students in private higher education institutes in Sri Lanka. There is a lack of detailed data on the number of students of

these institutes as there is no requirement to provide statistics to an authority (Nawaratne, 2012). Due to the limitations of time, budget and access, it is difficult to collect data from the entire population of private university undergraduates. This exploratory quantitative study employed a convenience sample. A random sample would have been preferable, but a convenience sample was used due to the time-scale infeasibility to construct a random sample. The convenience sample was selected from the undergraduate population attending courses at higher education institutes in Colombo, Sri Lanka. Participation was voluntary and no personally identifiable information was collected. It was clearly conveyed to the undergraduate participants that participation in the study was voluntary and does not affect their course grades in anyway. The subjects were anonymous to the researcher and required to give informed consent. All the responses were anonymous. Data collection was conducted in several steps.

The survey instrument used in this study is a questionnaire. Considerable effort was spent on designing the questionnaire. Further to that a pilot study was also conducted. Data was collected through printed and distributed questionnaires.

This method was selected due as the response rate for surveys conduct online tends to be rather low. The researcher traveled to the data collection sites to administer the questionnaire. In this case, the sites were the university classes. The questionnaire was administered at site by the researcher and researcher was present when the respondents answered and the researcher answered any questions raised by the respondents regarding the questionnaire. The response rate was high, as all the undergraduates requested to participate responded.

There is high confidence that right respondents have responded as the researcher was present when the undergraduates were answering the questionnaire. But there is a likelihood of contamination or distortion of respondent's answers as the answers yay be contaminated by consultation with others. The length of the questionnaire was five A4 Pages. It contained 51 questions in total. All the questions were closed, not too complex questions. Questions were created so that they were of interest to respondents. Since the questionnaire was paper-based, researcher coded the answers after data collection. Before distributing the questionnaire, a small group of undergraduates were selected to answer the questionnaire. This pilot group was requested to comment on their understanding of the questions and overall comprehensiveness of the questionnaire. This group included 30 undergraduates. The participants were questioned on terms that were unfamiliar, the clarity of the questions and their opinion about the flow of the questionnaire. The researcher was present when this set of undergraduates completed the questionnaire. Therefore, the researcher was able to observe the difficulties the participants faced while completing the questionnaire. The pilot test was not repeated because no problems arose during the testing period. The pilot test used the same documents used in the full study. After the data collection, the raw data were reviewed to find missing values and abnormal patterns of responses.

The primary data gathered through the questionnaire was analyzed using SPSS software and Microsoft Excel. Excel was used to calculate descriptive statistics. Each of the research questions was analyzed using a statistical technique appropriate for the question and the type of data gathered. Since the research is conducted to explore whether there exists a relationship between several scale variables, a correlation analysis was carried out to determine whether the hypothesis can be accepted or rejected.

Data Analysis

Cronbach's alpha was calculated to assess the reliability of the AMS measurements, and measurements for other four variables. Following are the Cronbach's Alpha values derived for the pilot test of this study. In the questionnaire there were 7 questions to measure the availability of facilities. As Cronbach's Alpha was at .783 for Facility Availability which is in the range of "good", it was decided to make no changes to the main study data analysis. As Cronbach's Alpha was at .714 for Instructional Leadership which is in the range of "good" reliability, it was decided to make no changes to the main study data analysis. Cronbach's Alpha for classroom belongingness was at .592 which is in the range of "poor" reliability.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
B1	13.23	2.599	.176	.031	.681
B2	12.87	2.120	.394	.249	.506
B3	12.67	2.299	.596	.460	.386
B4	12.73	2.340	.414	.335	.491

Table 2 - Pilot test reliability measures

According to the table 2 it can be seen that if Question B1 is eliminated from the scale an acceptable reliability level of .681 can be achieved. The scale was to measure the Classroom Belongingness of a respondent. The statement B1 was,

"I feel that many of the lecturers take time to listen to me when I have a problem to discuss."

Statements B2, B3, B4 respectively were;

"I feel that other students in my batch usually help me when I find work difficult."

"I feel friendly towards the other students of my class."

"I feel that other students in my class like to have me in their groups when there are group assignments."

It seems that, the relationship between the lecturer and undergraduate do not correlate with the relationship the undergraduate's peers.

It was decided to leave out B1 in the main study. As Cronbach's Alpha is at .742 for Self Efficacy which is in the range of "good" reliability, it was decided to

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make no changes to the main study data analysis.

Academic Motivation was measured using Academic Motivation Scale (AMS) (Vallerand et al., 1993). The AMS uses a seven-point (1…7) Likert scale to assess each subject's academic motivation (Vallerand et al., 1993).

Following are the Cronbach's Alpha values calculated for the main study.

Facility Availability – 0.723
Instructional Leadership – 0.747
Classroom Belongingness – 0.700
Self-efficacy – 0.704
Academic Motivation – 0.848

For this study, what is 'adequate coverage' was judged through careful definition of the literature reviewed and prior discussion. In assessing criterion-related validity, the data from questionnaire was compared with that specified in the criterion. This was undertaken using statistical analysis, correlation, using SPSS.

Following are the KMO values and Bartlett's Significant Values for the main study

Variable	Indicators	KMO	Bartlett's Significant Value
Facility Availability	F1 F2 F3 F4 F5 F6 F7	.740	.000
Instructional Leadership	L1 L2 L3 L4	.685	.000
Classroom Belongingness	B2 B3 B4	.664	.000
Self-efficacy	E1	.753	.000

|	E2 E3 E4 E5 E6		
Extrinsic motivation - external regulation	M1 M8 M15 M22	.622	.000
Intrinsic motivation - to know	M2 M9 M16 M23	.756	.000
Extrinsic motivation - identified	M3 M10 M17 M24	.585	.000
Intrinsic motivation - to experience stimulation	M4 M11 M18 M25	.740	.000
Intrinsic motivation - toward accomplishment	M6 M13 M20 M27	.777	.000
Extrinsic motivation - introjected	M7 M14 M21 M28	.733	.000
Amotivation	M5 M12 M19 M26	.735	.000

It was noted that the variables; Instructional Leadership, Classroom Belongingness, Self-Efficacy, Intrinsic Motivation to Know, Extrinsic Motivation external regulation have outliers. These outliers were treated appropriately.

According to the table 4 all the variables in this study can be considered as normally distributed as cut off criteria are met.

	Facility Availability	Instructional Leadership	Belongingness	Self-Efficacy	Intrinsic Motivation to Know	Intrinsic Motivation Towards Accomplishment	Intrinsic Motivation to Experience Stimulation	Extrinsic Motivation Identified	Extrinsic Motivation Introjected	Extrinsic Motivation External Regulation	Amotivation
N Valid	100	100	100	100	100	100	100	100	100	100	100
Missing	0	0	0	0	0	0	0	0	0	0	0
Skewness	-.126	.375	-.521	-.384	-.562	.064	.128	-.630	-.653	-.175	.664
Std. Error of Skewness	.241	.241	.241	.241	.241	.241	.241	.241	.241	.241	.241
Kurtosis	.748	-.335	-.717	-.006	.347	-.880	-.175	-.110	-.149	-.547	-.561
Std. Error of Kurtosis	.478	.478	.478	.478	.478	.478	.478	.478	.478	.478	.478

Table 4 - Normality Statistics

It can be seen that self-efficacy has a positive linear relationship with undergraduates' academic motivation. Classroom belongingness also has a positive linear relationship with academic motivation. while availability of facilities does not have a linear relationship with academic motivation. It can also be seen that instructional leadership also has a linear relationship with academic motivation but this seems to be a negative linear relationship. Facility availability does not seem to have a relationship with undergraduates' academic motivation.
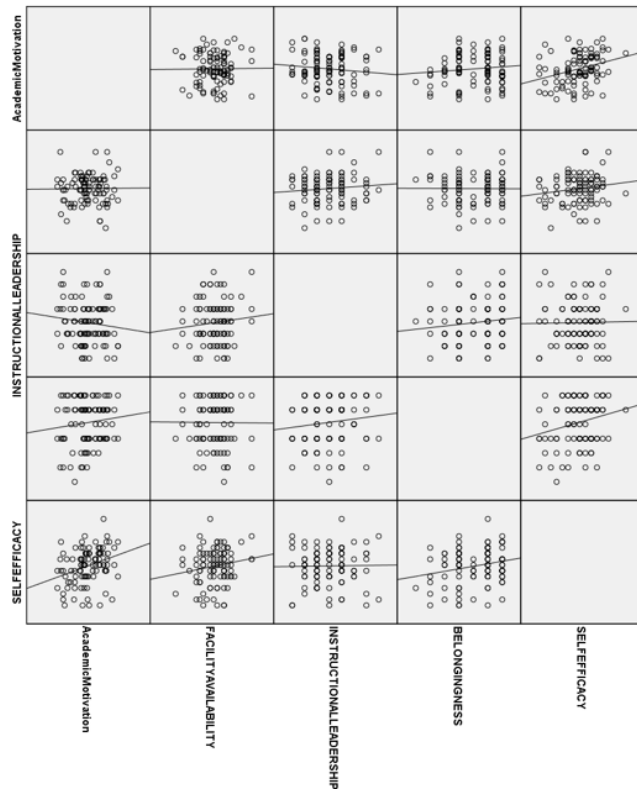
Even though it was seen from linear test that there is no linear relationship between facility availability and academic motivation, those variables are also included in Pearson's correlation.

		Academic Motivation	Facility Availability	Instructional Leadership	Belongingness	Self-Efficacy
Academic Motivation	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	100				
facility Availability	Pearson Correlation	.011	1			
	Sig. (2-tailed)	.914				
	N	100	100			
instructional Leadership	Pearson Correlation	-.119	.104	1		
	Sig. (2-tailed)	.240	.302			
	N	100	100	100		
Belongingness	Pearson Correlation	.112	-.006	.124	1	
	Sig. (2-tailed)	.269	.953	.218		
	N	100	100	100	100	
self-Efficacy	Pearson Correlation	.310**	.165	.016	.225*	1
	Sig. (2-tailed)	.002	.101	.871	.024	
	N	100	100	100	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 5 - Correlations table for the study

DISCUSSION AND CONCLUSION

Hypothesis is tested against analysis.

Hypothesis	Result
Hypothesis 1 – There is a relationship between the availability of physical facilities and undergraduates' academic motivation	No relationship was evident from the research.
Hypothesis 2 – There is a relationship between the instructional leadership and undergraduates' academic motivation	No relationship was evident from the research.
Hypothesis 3 – There is a relationship between the sense of belongingness in the classroom and undergraduates' academic motivation	No relationship was evident from the research.
Hypothesis 4 – There is a relationship between the self-efficacy and undergraduates' academic motivation	A positive relationship was evident from the research.

Table 6 - Evaluation of hypotheses

According to this theory extrinsic circumstances, like facilities provided by the institute and studying environment might not necessarily motivate an undergraduate, but lack of these conditions can cause dissatisfaction. As for the findings of this study it seems that there is no direct relationship between facility availability. The level of dissatisfaction among the undergraduates was not covered by the study but it is possible that these factors are needed to maintain at least a level of no dissatisfaction.

According to Self Determination Theory motivation does not happen automatically and motivated individuals requires social support is the significant element. Through relationships and interactions with others for continual sustenance of motivation. Also, according to Maslow's hierarchy of needs, the need for belonging can be a motivational factor. For example, if students have a need to feel a sense of belonging and care and be regarded as valuable part of the class he is likely to be academically motivated. As for the findings of the study, there was no statistically significant correlation between the classroom belonging and the academic motivation. When an undergraduate's sense of belongingness in the classroom increase, it was not seen that the motivation increased. However, relationships at educational settings can be multifaceted, and wide-ranging. Further research is needed to evaluate the relationship between classroom belongingness and academic motivation.

An outcome evaluation study done in US metropolitan high schools to examine the relationship between faculty, leadership and student achievement in mathematics concluded a positive relationship between faculty relations, transformational leadership and student achievement (Wiley, 2001). Not all studies conducted to identify instructional leadership effect on student motivation have reported a positive relationship. the results of two studies have found a weak to small negative effect of teacher leadership on student identification (Leithwood & Jantzi, 2000). In a similar note, this study could not find a positive relationship between the leadership of the faculty heads and lecturers and academic motivation.

In a longitudinal study, self-efficacy proved to be positively related to performance and motivation (Chemers, Hu, Garcia, 2001). Similarly, the findings of this study also display a positive correlation between the self-efficacy and academic motivation. Confident and optimistic students are more likely to have higher outlooks as they are confident in their capabilities.

Due to time limitations, the scope of the study was limited to private higher education institutes of Sri Lanka. It can be recommended to expand the research to include the state higher education institutes as well. The sampling technique was non-probability, convenience sampling which was adopted due to time and budget limitations. Furthermore, all the respondents were from institutes in Colombo. Therefore, the likelihood of sample being representative is rather low. It can be suggested to expand the study using simple random sampling. A larger random sample may increase the possibility of normally distributed data which may, reveal correlations between critical factors and the academic motivation subscales.

Qualitative researchers may find easier access to students from private higher education institutes due to small sample sizes need to conduct a study. focus groups, or interviews, would reduce the number of subjects needed. It might be easier for qualitative studies to access different student communities, such as students from different ethnic groups, students who have had public or private secondary education, etc., to improve the analysis. Qualitative studies should be able to narrow focus even further by subdividing those groups by gender, location of university, etc. Publicly available information, may be used to discover areas for further research.

Other research interests worth investigating include:

Effect of cultural values on academic motivation in higher education.

Impact of age in adult learners' motivation in higher education.

Effect of undergraduates, social economic status on the levels of motivation.

Relationship between the undergraduates' secondary level educational achievements and academic motivation.

These studies will help higher education institutions in the development of programs and polies.

REFERENCES

Abeyratne, S. and Lekamge, U. (2012), "Policy Reforms In Higher Education: Transforming Sri Lanka Into An Education Hub", Re-creating and re-positioning of Sri Lankan universities to meet emerging opportunities and challenges in a globalized environment – Workshop proceedings. [online] Available at: http://www.ugc.ac.lk/downloads/workshop/Workshop_Proceedings.pdf [Accessed 11 Apr. 2018].

Adams, S. (1963), "Toward an understanding of inequity", Journal of Abnormal and Social Psychology, Vol. 67, No 5, pp.422-436. [online] 65(5), pp.422-436. Available at: http://garfield.library.upenn.edu/classics1981/A1981MK45000001.pdf [Accessed 22 Feb. 2018].

Alderfer C. (1969), "An empirical test of a new theory of human needs", Organizational Behavior and Human Performance, Vol. 4, No. 2, pp.142-175.

Arnolds, C. and Boshoff, C. (2002), "Compensation, esteem valence and job performance: an empirical assessment of Alderfer's ERG theory", The International Journal of Human Resource Management, Vol. 13, No.4, pp.697-719.

Bandalos, D. L., Geske, J.A., Finney, S.J. (2003), "A Model of Statistic

Performance Based on Achievement Goal Theory", *Journal of Educational Psychology*, Vol. 95, No. 3, pp. 604-616.

Bandura, A. (1997), *Self-efficacy: The exercise of control*, Freeman, New York.

Bell, L., Bolam, R., & Cubillo, L. (2003), A systematic review of the impact of school headteachers and principals on student outcomes. EPPI-Centre, Social Science Research Unit, Institute of Education, London.

Burleson, S. and Thoron, A. (2014)," Maslow's Hierarchy of Needs and Its Relation to Learning and Achievement", *EDIS*, Vol. 2014, No. 4. [online] Florida. Available at: https://edis.ifas.ufl.edu/pdffiles/WC/WC15900.pdf [Accessed 24 Dec. 2017].

Carrell, M. and Dittrich, J. (1978), "Equity Theory: The Recent Literature, Methodological Considerations, and New Directions" *Academy of Management Review*, Vol. 3, No. 2, pp. 202-210.

Çeliköz, N. (2009), "Basic Factors that Affect General Academic Motivation Levels of Candidate Preschool Teachers", *Procedia - Social and Behavioral Sciences*, Vol. 1, No. 1, pp. 1357-1365.

Chemers, M.M., Hu, L, Garcia B.F. (2001), "Academic Self-Efficacy and First-Year College Student Performance and Adjustment", *Journal of Educational Psychology*, Vol. 93, No. 1, pp. 55-64.

Cheng-Liang Yang (2011), "An empirical study of the existence, relatedness, and growth (ERG) theory in consumer's selection of mobile value-added services", *African Journal of Business Management*, Vol. 5, No. 19.

Coon, D. & Mitterer, J. O. (2010), *Introduction to psychology: Gateways to mind and behaviour with concept maps*, Wadsworth, Belmont, CA.

Cutler, A. (2014), *Leadership Psychology: How the Best Leaders Inspire Their People*, Kogan Page.

Duncan, K. (2014), Sri Lanka opens university system to foreign investors. The PIE News. [online] Available at: https://thepienews.com/news/sri-lanka-opens-university-system-foreign-investors/ [Accessed 19 Feb. 2018].

Falleiro, S. (2013), A Study of the Effectiveness of Learning Management System on Student Engagement, Motivation and Performance in Higher Education, SNDT Women's University Mumbai. [online] Available at: http://shodhganga.inflibnet.ac.in/bitstream/10603/67288/16/16_final%20synopsis.pdf [Accessed 20 Mar. 2018].

Frick, D., & Drucker, P. (2011), "Motivating the Knowledge Worker", *Defense Acquisition Research Journal*, Vol. 18, No. 4, pp. 368–387.

Gibson, J., Ivancevich, J., Donnelly, J. and Konopaske, R. (2012), *Organizations*, McGraw-Hill, New York.

Goodenow, C. (1993), "Classroom Belonging among Early Adolescent Students", *The Journal of Early Adolescence*, Vol. 13, No. 1, pp. 21-43.

Granito, M. and Chernobilsky, E. (2012), "The Effect of Technology on a Student's Motivation and Knowledge Retention", NERA Conference Proceedings 2012.

Grouzet, F. M. E., Otis, N., Pelletier, L. G. (2006), "Longitudinal cross-gender factorial invariance of the Academic Motivation Scale", *Structural Equation Modeling: A Multidisciplinary Journal*, Vol. 13, No. 1, pp. 73-98.

Herzberg, F., Mausner, B. and Snyderman, B., (2011), *The Motivation to Work*, John Wiley & Sons, New York.

Hofstede, G. (1984), "The cultural relativity of the quality of life concept", *Academy of Management Review*, Vol. 9 No. 3, pp. 389–398.

Schneider, J. and Locke, E., (1971), "A critique of Herzberg's incident classification system and a suggested revision", *Organizational Behavior and Human Performance*, Vol. 6, No. 4, pp. 441-457.

Kessler, E. (2013), Encyclopedia of management theory, Sage, Thousand Oaks, Calif.

Kindermann, T. (2015), Peer Group Influences on Students' Academic Motivation. https://www.researchgate.net/public ation/277247733_Peer_Group_Influ ences_on_Students'_Academic_Moti vation [Accessed 20 Mar. 2018].

Kohn, A. (2010). Punished by rewards, Houghton Mifflin Co, Boston.

Kotler, P. and Fox, K.F.A. (1995), Strategic Marketing for Educational Institutions, Prentice-Hall, Englewood Cliffs, NJ.

Lee, S. (2007), "Vroom's expectancy theory and the public library customer motivation model", Library Review, Vol. 56, No. 9, pp. 788-796.

Leithwood, K., & Jantzi, D. (2000), "Principal and teacher leadership effects: A replication", School Leadership and Management, Vol. 20, No. 4, pp. 415-434.

LIRNEasia. (2012), CHOICES The education directory, LIRNEasia, Colombo.

Locke, E. and Latham, G. (2006), "New Directions in Goal-Setting Theory", Current Directions in Psychological Science, Vol. 15, No. 5, pp.265-268. [online] Available at: http://journals.sagepub.com.ezproxy .uwl.ac.uk/doi/full/10.1111/j.1467-8721.2006.00449.x.

Manzoor, Q. (2012), "Impact of Employees Motivation on Organizational Effectiveness", Business Management & Strategy (BMS), Vol. 3, No. 1, pp. 1–12.

Miles, S., Cromer, L. and Narayan, A. (2015), "Applying Equity Theory to Students' Perceptions of Research Participation Requirements", Teaching of Psychology, Vol. (42), No. 2, pp. 349-356. [online] Available at: http://journals.sagepub.com.ezproxy .uwl.ac.uk/doi/full/10.1177/0098628 315603252#articleCitationDownloa dContainer [Accessed 23 Feb. 2018].

Mulder, L. (2007), Motivation cycles. Boise State University.

Nawaratne, S. (2012), "Shifting Paradigms of Higher Education in Sri Lanka", Re-creating and re-positioning of Sri Lankan universities to meet emerging opportunities and challenges in a globalized environment – Workshop proceedings. [online] Available at: http://www.ugc.ac.lk/downloads/wo rkshop/Workshop_Proceedings.pdf [Accessed 11 Apr. 2018].

Ryan, R. M., & Deci, E. L. (2000), "Intrinsic and extrinsic motivations: Classic definitions and new directions", Contemporary educational psychology, Vol. 25, No. 1, pp. 54-67.

Sahoo, F. M., Sahoo, K., & Das, N. (2011), "Need Saliency and Management of Employee Motivation: Test of an Indigenous Model", Vilakshan: The XIMB. Journal of Management, Vol. 7, No. 3, pp. 21–36.

Sandhya, K., & Kumar, D. (2011), "Employee Retention by Motivation", Indian Journal of Science & Technology, Vol. 4, No. 12, pp. 1778–1782.

Sass, E. J. (1989), "Motivation in the College Classroom: What Students Tell Us." Teaching of Psychology, Vol. 16, No. 2, pp. 86-88.

Sean, C. Y., & Ahmed, P. K. (2012), "Understanding student motivation in higher education participation: A psychometric validation of the academic motivation scale in the Malaysian context", International Proceedings of Economics Development and Research, Vol. 53, pp. 118 - 122.

Steel, P. and Konig, C. (2006), "Integrating Theories of Motivation", Academy of Management Review, Vol. 31, No. 4), pp. 889-913.

Tinsley, C. and Brett, J. (2001), "Managing Workplace Conflict in the United States and Hong Kong", Organizational Behavior and Human Decision Processes, Vol. 85, No. 2, pp. 360-381.

Tosi, H., Locke, E. and Latham, G. (1991), "A Theory of Goal Setting and Task Performance", The Academy of Management Review, Vol. 16, No. 2,

p. 480. [online] Available at: https://www.researchgate.net/public ation/232501090_A_Theory_of_Go al_Setting_Task_Performance [Accessed 24 Feb. 2018].

Vallerand, R., Pelletier, L., Blais, M. and Brière, N. (1993), "Academic Motivation Scale", Educational and Psychological Measurement, pp. 52-53.

Van Lange, P., Kruglanski, A. and Higgins, E. (2011), Handbook of Theories of Social Psychology, SAGE Publications, London.

Wicker, F. W., Brown, G., Wiehe, J. A., Hagen, A. S., & Reed, J. L. (1993), "On Reconsidering Maslow: An Examination of the Deprivation/ Domination Proposition", Journal of Research in Personality, Vol. 27, No. 2, pp. 118–133.

Wiley, S.D. (2001), "Contextual effects on student achievement: school leadership and professional community", Journal of Educational Change, Vol. 2, No. 1, pp. 1-33.

Spangler, W. D. (1992), "Validity of Questionnaire and TAT Measures of Need for Achievement: Two Meta-Analyses", Psychological Bulletin, Vol. 112, No. 1, pp. 140–54.