



Identifying the Empirical Gaps in the Relationships between Student Engagement and Their Academic Achievement: Future Research Perspectives

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

This research paper basically discussed about the empirical gaps when identifying the relationship between student engagement and their academic achievement, which would be useful for the future researches on the topic. Secondary data collection was used. A critical Literature Review was conducted using a sample size of 22 articles. The first gap is about the sample size, where the sample is being limited to just one university/school/institute. The second gap is about the way the researchers have measured the academic achievement, where most have done using a single subject result, which would be impractical. Thirdly, lack of qualitative approaches to measure the relationship between student engagement and academic achievement is identified as a gap. As the fourth gap, students from all the years and variety of faculties should be taken, as student engagement might vary with them. As the fifth gap, many researchers have identified that most researches have been carried out targeting one country, which might be failed to give an overall result on the relationship. The sixth gap identified was that many of the researchers have paid to

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the respondents in filling the survey and therefore the researchers have faced restrictions due to unavailability of sufficient financial resources. The last gap which was identified throughout the literature was that information technology nowadays has an influence on student engagement and the fact was not taken into account by most of the researches. At the latter part of the research, the recommendations to the future researchers were given.

Keywords: Academic achievement; campus engagement; class engagement; student engagement.

1. INTRODUCTION

1.1 Background of the Study

Education is considered basic for not only the progress of the people, but also for the advancement of community and country. In order to bring about enhancements in all perspectives and utilize modern and inventive strategies and methods individuals ought to generate awareness and improve their educational skills. When looking at the academic achievement, the student engagement is widely recognized as important concept influencing on achievement and learning in higher education and it is identified as a key to many issues similar to weak performances, boredom and dropouts [1].

1.2 Independent Variable

Researches have illustrated that engaging students within the learning process increments their attention and focus, motivates them to practice higher-level critical thinking abilities, and advances important learning encounters. Student engagement has been given many definitions from many researchers. Jayarathna and Fernando (2014) has defined student engagement as the sum of physical and mental vitality that the understudy commits to the scholarly experience. Besides, it was characterized as the degree to which students take part in scholastic and non-academic activities and distinguish with and value the goals of schooling [2]. However, in most of the article's student engagement have been divided into two main components as class engagement and the campus engagement. Voelkl [3] defines the campus engagement using the terms sense of belonging and value. It can be understood that the valuing does not just mean the importance of campus or other elements of the school, university, education but also about giving value to the concept of educational institute. Class engagement was been defined as the student's reactions to in class and out class activities. These two components were further divided as

class engagement into cognitive, emotional and behavioural. Connell and Wellborn [4] has defined cognitive engagement as the conceptualization of cognitive engagement incorporates adaptability in issue understanding, inclination for hard work, and positive adapting within the confront of failure. Behavioural engagement was also referred to as the positive conduct, such as following the rules and following to classroom standards, as well as the non-attendance of disruptive behaviours such as skipping school and getting in inconvenience [5,6,3]. Skinner and Belmont [7] and Connell and Wellborn [4] have referred emotional engagement as students' emotional responses within the classroom, counting interest, boredom, joy, pity, and anxiety. Campus engagement was also further divided into two dimensions as valuing and sense of belonging. Goodenow [8] stated that, sense of belonging means that when students feel they are accepted, they are supported, and included in the community/school community. Gunuc and Kuzu [9] has identified that valuing refers to as emotional and psychological engagement includes the involvement in activities and education teaching.

1.3 Dependent Variable

Academic achievement has been identified as the dependent variable of the present study. Sugimoto (1968) has defined Academic success in their study in terms of whether or not the student had obtained a degree, certificate, or credential or had obtained permission to continue university studies at a higher level. Pascarella and Terenzini [10] have defined academic success as a measurement of a student's academic and intellectual development. Regularly the variable of academic achievement; is characterized and measured by Grade Point Average (GPA), a mean score based on the numeric translation of last course grades. On the other hand, academic achievement has been operationalized as a subjective self-evaluation of execution by individuals [11].

By referring to past studies that have been done related to the research topic, the researchers have found out researcher gaps which are to be taken into consideration in future researches where the main objective of this paper is to discover research gaps in the literature of student engagement and academic achievement. When analyzing the past literatures, it was also identified that there have been other factors apart from the student engagement components which have affected the academic achievement of the undergraduates. Hopefully, the findings of the study will be made especially for future researchers to conduct pure studies that will further enhance the general body of knowledge in these areas.

1.4 Research Objective

To identify the empirical gaps in the relationship between student engagement and academic achievement.

1.5 Research Question

Are there empirical gaps identified in the past literatures on the relationship between student engagement and the academic achievement?

2. LITERATURE REVIEW

Literature Review on the Relationship between Student Engagement and Academic Achievement: Student engagement in scholastic work as the student's psychological speculation in and exertion directed toward learning, understanding or acting the information, aptitudes, or makes that scholastic work is aiming to advance [12]. It is also characterized as students' eagerness, needs, crave inspiration and success within the learning process as students' [12]. Most of the researchers have mainly divided the student engagement into two major components as class engagement and campus engagement.

Class engagement was further categorized into three basics as to cognitive, emotional and behavioral engagements. Cognitive engagement was depicted as concerns inclusion in learning, inspiration to learn, willingness to apply exertion to memorize troublesome concepts and abilities, the utilize of techniques. Emotional engagement was encompasses emotional viewpoints, sentiments, states of mind and recognitions towards the educational environment, relationships with instructors and classmates and

behavioral engagement was characterized as to support in scholarly, social and extracurricular exercise [13].

When analysing the past researches campus engagement has been divided into two main sub indicators as to sense of belonging and valuing. Voelkl [3] has defined the campus engagement by drawing the attention into the sense of belonging to school and to the worth or the value given to school. Willms (2003) has defined campus engagement as to students' sense of belonging, accepting the worth of college and active participation in campus activities.

Many past researchers have defined academic achievement in many different ways. Kuh et al. (2006) have characterized student success as academic achievement, engagement in instructively deliberate exercises, fulfillment, procurement of craved information, abilities and competencies, persistence, achievement of instructive results, and post-college performance. Academic success is found to influence how much effort is put into performances, determined on the task, and as a result, affecting the level of individual achievement [14]. Evidently, the assurance that students have in their academic competence develops a critical factor in their academic achievement. Pascarella and Terenzini [10] have defined academic success as a measurement of a student's academic and intellectual development.

In the reviewed past literatures, the relationship between the student engagement and academic achievement has being identified in many ways. There also have being researches that analyzed the relationship between the components of student engagement with the academic achievement.

An article which was done by Kuh (2001) has its key findings that student engagement has a positive correlation with the grade point average (GPA). Moreover, in the same article it was mentioned that campus engagement has more positive correlation with the academic achievement than that of class engagement.

In another article Park [12], has come into a conclusion that student engagement has a significantly positive relationship with the academic gains in the mathematics subject. It also states that it has no relationship with the racial or gender changes. Another article which was carried out to analyse the mathematics

performance Li et al. [15] have identified that cognitive engagement has a positive influence on the learning of the students. Cognitive engagement is esteemed by the instruction community and broadly held to encourage learning.

Moreover, in another article which was done by Greene et al. [16] has found in its key findings that GPA has a positive link with the time spent on reading and writing and there were no significant relationship was found in the hours employed, single parent proxy etc...

Nauffal [17] has stated that faculty interactions and the academic achievement have a significant positive correlation. In this study, the researchers have collected data from two faculties as business and engineering and have come to find out those business students interactions with the faculty activities are weaker than that of engineering students and that the academic achievements of the engineering students are higher compared to that of business students.

As one of the key findings of the article which was done by Wara et al. [18], have identified that cognitive engagement has a moderate positive relationship with the academic achievement of the students and that increasing the cognitive engagement results in increase in the academic achievement ($r=.376$, $N=312$, $p<.05$). In the same study, it was mentioned that students who do not take the assignments seriously have less chance of succeeding in the academics due to the lack of cognitive engagement and therefore the instructors should have a constant supervision of the students.

An article which was done in UK by Appleton et al. [19], has its key finding as that, the cognitive and emotional engagement and its measures have an impact of the students learning and academic achievements. Changes in these two engagements have a positive impact on the students' academic achievement. In addition, Li et al. [15] has stated that the school engagement also has a positive influence in the students' academic achievement and it has also specifically mentioned that the school engagement differ from individual to individual which in turn changes their academic achievement.

Fredricks et al. [20] has done a research on the school engagement and how it affects the academic level of the school students. In this, the

author has been able to find a key finding as to Engagement result in commitment or venture and hence may be a key to reducing student apathy and upgrading learning. Therefore, the students who are highly engage in schools tend to have a higher commitment in their studies than the students with lower interactions with the school and ultimately that leads to a conclusion as to higher performances in academics are generated from the students who interacts more with the studies and vice versa.

3. RESEARCH METHODOLOGY

The main purpose of writing this paper is to explore the empirical gaps (research gaps) when identifying the relationship between student engagement and their academic achievement for future researches.

In arrange to connect with the research objectives, two main variables were chosen. The independent variable was knows as the Student Engagement whereas the dependent variable being the Academic Achievement. This study uses a deductive investigate approach which involves in evaluating a theoretical thesis or an argument employing a research methodology. The generalization of this approach will be from general to the specific, where a confirmation on already distinguished research gaps in past literary works were investigations through a critical literature review (CLR).

A research strategy is a comprehensive arrange for carrying out a investigate study. It follows how the research should be carried out in arrange to realize the research objectives. In this situation, it coordinates to investigate the empirical gaps when recognizing the relationship between student engagement and their scholarly accomplishment for future investigates. In arrange to achieve that, qualitative approach utilizing secondary data was carried out.

A critical literature review (CLR) of peer reviewed journal articles on student engagement and their scholastic accomplishment were carried out by the authors. Significant qualitative and quantitative articles were identified on major publishers, to be specific, Emerald Online, Science Coordinate, Springer Connect, Taylor & Francis and Sage publishers. A literature review is the keystone of any investigate project since it empowers analysts to find and identify the crevices within the field, as well as to set up a base for the hypothesis under investigation.

A literature review can be conducted in different ways. Be that as it may, a well-established, systematic and methodical writing review would way better serve its reason to pick up a more detailed knowledge on the current state-of-the-art guaranteeing reliability, unwavering quality, exactness, and transparency of the literary works.

Searches were performed were restricted to English dialect in titles and abstracts in each database. References from retrieved articles were moreover checked on for potential appropriate publications. Investigates were primarily centered on the combination of the keyword “Student Engagement” and “Academic Accomplishment. In add up to, 22 articles published in different journals amid 1980–2019 were collected which uncovered investigate gaps. There, the most focus was centered at the discussion, conclusion, the research implication & the limitations portion of the past literary works, where seven gaps were distinguished and were assembled the research gaps into coherently significant themes.

4. RESEARCH GAPS

When reviewing the past literatures there were many research gaps identified and many of the researchers have given recommendations for the future researchers on how to improve the researches in order to gain better findings.

Gap 01: Sample collected being limited to one university/school/institute.

One of the main common research gaps that were found in many of the researches is the sample. In most of the articles, samples collected have being limited to one university/school, which do not give a representation of the total population. In Greene et al. [16]; Handelsman et al. (2005); Gunuc (2014); Pineda-Báez et al. (2014); Sheard et al. [13]; Gunuc and Kuzu [9] and Krause and Coates [21] all the researchers have mentioned about the same and the most research gap they found was limiting the whole research into one university.

Gap 02: Usage of single subject results for measurement of academic achievements rather than taking an aggregate or an average result.

Another common research gap that was found when analysing the literature was that, in some researches they have taken separate subject results to measure the academic achievement,

which they feel, is not a good indicator of academic achievement. Rather Goodenow [22] has suggested that they have only used English language results to determine the academic achievement which is unrealistic and therefore has recommended for the future researchers to distribute into different subject matters.

Gap 03: Lack of qualitative approaches to cover all the dimensions of student engagement.

Hu and Kuh (2002) have stated that future research ought to incorporate more measures of university characteristics. More data on student engagement in directions and classroom exercises ought to be collected to completely understand student engagement in future studies. Lack of qualitative approach has also being identified as a research gap by most of the researchers [21], (Pineda-Báez et al., 2014).

Gap 04: Study being limited to particular academic year or faculty.

Park [12]; Gunuc and Kuzu [9]; Krause and Coates [21] and Hausmann et al. [23] have clearly mentioned that taking undergraduates from all the years would give a better understanding on how the student engagement differ from year to year. Moreover, by analysing all the faculties without restricting the study to one faculty would give a better picture.

Gap 05: Not being considering the different perspectives of the countries.

Another research gap that was highlighted among many of the researches were that the researches were done targeting one country which fails to give a representation of all the universities in the world where it is highlighted in Krause and Coates [21] as it is stated that only Australian perspective was considered and therefore the researchers have recommended the future studies to be considering the different perspectives of the countries.

Gap 06: Sample size restrictions as a results of unavailability of sufficient financial resources.

Hausmann et al. [23] have stated that the sample size restrictions have being recorded as research gaps in the study as the researchers have paid to gain the completed surveys and financial resources have act as a constraint. Moreover, in some of the research articles it was mentioned that random sampling was not carried out

therefore the reliability of the sample have being not present.

Gap 07: Not concerning about contemporary facts such as Information Technology when analysis student engagement.

Sheard et al. [13] have stated that Information & Communication Technology have had an impact of the student engagement and it was not concerned when analysing the student engagement. The researchers have recommended the future studies to give more concern about the ICT when analysing the student engagement [24].

4.1 Future Implications

Student Engagement is appeared to be an important element in the education that most researchers are interested in researching. Academic Achievement is known to be a result of student engagement as said by many researchers.

When conducting the present study, the researchers have not analysed articles which are solely on student engagement or academic achievement, therefore when conducting the future researches on the topic future researchers could go through articles that are on student engagement and academic achievements separately.

The critical literature review carried out by the researchers is based on only four scholarly journal distributors and a few of other distributors might have been missed out in this search. Excluding articles focusing on student engagement is additionally a restriction of the display critical literature review.

Moreover, the future researchers could use the research gaps which were identified in the present study to develop further methodologies on the student engagement and the academic achievement.

Furthermore, in the present study, the researchers have only reviewed articles that are in English language which might have act as an implication and therefore it is recommended for the future researchers to analyses articles on different languages in order to find more empirical gaps which might have affected the

relationship between student engagement and the academic achievement.

Moreover, in the present study the researchers have only analysed 22 research articles to identify the gaps and future researchers are encouraged to increase the sample size in order to get a better understanding of the research gaps relating to the subject area.

After going through the past literatures seven gaps were identified, those will need to be addressed when conducting future researches on the topic which is the relationship between student engagement and academic achievement. Trying to cover the research gaps which were found in past literatures would give a fairer presentation on the relationship between the independent and the dependent variable.

5. CONCLUSION

It is seen that student engagement and academic achievement have been identified as important aspect of higher education as the goal of anyone who is engage in education is to gain higher academic accomplishments. When going through the past literatures on the topics of student engagement and the academic achievement, it was identified that there is a statistically significant relationship between the student engagement and the academic achievement, further, it was also identified that cognitive engagement which is a dimension of class engagement tend to have a higher positive relationship with student engagement and the academic achievement. However, when analysing the relationship between student engagement and the academic achievement the researchers have come across with research gaps which could be satisfied by the future researchers when conducting further research on the topic.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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