**IS PANDEMIC AFFECTING STUDENTS ? : A STUDY ON LEARNING INTEREST AND
ACADEMIC ACHIEVEMENT ON MEDICAL STUDENTS**

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Abstract

The purpose of this study was to determine the effect of learning interest on academic achievement before and during pandemic.

The cross-sectional study was conducted on medical students of Medical and Health Sciences Faculty of Muhammadiyah Makassar University. Learning interest assessed by questionnaires that filled out by 70 students by purposive sampling technique. Data about academic achievement on previous and current semester, were obtained from academic department. Data were analysed using Chi-Square Test to observe the correlation between the variables.

The result shows that 93,6% of respondents in low learning interest group have experienced decrease in study achievement, while other 6,4% has increased their achievement between last and current semester. Among respondents that have high interest in learning, 95,6% of them undergo increased academic achievement, whereas only 4,4% that have decreasing in their achievement. From the analysis test, with p-value = 0.000, this study shows a significant correlation between study interest on academic achievement before and during pandemic on medical students of Medical and Health Science Faculty of Muhammadiyah Makassar University.

The primary limitation of these results is numbers of respondents. Further study should be carried out on larger respondents from different year of medical school.

The study can serve toward education especially learning process in medical school.

Keywords: *Learning interest, Student achievement, Medical education.*

1. Introduction

Students achievement that students accomplish in the end of semester is a result from multiple factors, within individu, family, community, and environment. Examination or continuous assessments are commonly used to measure student achievement academically (Ward, Stoker, & Murray, 1996). Several studies have been observed in different areas or level to assess the factors that affect academic achievement. Javanthi *et al.* identify factors that come from student such as learning interest, co-curricular activities (Giuseffi, 2018), study habit, self-motivation, promptness at school (Sibanda, Iwu, & Benedict, 2015) and also personal goals and traits (Nuria Villalobos Ulate Olga Chaves Carballo, 2011) predispose to student academic achievement. Some factors that come externally from students are teacher and environment. During pandemic, changes have been made in ways of delivering teaching materials to students. Regulation on activity restriction by government constrain the education institution to shift their ways of teaching to online teaching (Bokayev, Torebekova, Davletbayeva, & Zhakypova, 2021). This transformation can lead to certain matters. For this purpose, this study have been conducted to identify the correlation of learning interest on academic achievement before and during pandemic.

2. Literature Review And Hypothesis Development

Defining Interest

Several definitions have published on interest definition. The most popular come from John Dewey which stated that interest is “the accompaniment of the identification, through action, of the self with some object or idea, because of necessity of that object or idea for the maintenance of self-expression” (Dewey, 1896). In other words, Dewey believes that interest on students is self-driven passion that implemented on action. Another definition stated by Renninger *et al.*, interest is a bridge between cognitive and affective that seem as an effort towards certain subject or matter. However, this effort vary to each subject. Interest can drive students’ attention, encourage effort, and also support learning. These also elevate strategic process (James Kpolovie, Igbo Joe, & Okoto, 2014). Lai defined interest is a personal preferences with regard to learning, in which a person choose one subject or matter rather than other ((James Kpolovie et al., 2014). Furthermore, Lester D. Crow and Alice Crow stated that : “an interest is a motivating force that impels an individual toward participation in one activity rather than another. It indicates that interest provide a strong motivation to learn” (Oktaviani & ., 2020).

Some Indonesian experts also have declared more definition on interest. According to Tidjan (1976), interest is a psychological phenomenon that show focusing on an object because there is a sense of excitement. Ahmad D. Marimba said that “interest is tendency to something that we feel there is an importance to something with happy feeling to something- Minat adalah kecenderungan jiwa pada sesuatu, karena merasa pentingnya hal tersebut, yang disertai dengan perasaan bahagia terhadap hal tersebut” (Marimba, 1992). Alisuf Sabri (1998) also reply the term “tendency” in his definition. He said that interest is tendency toward something to be frequently notified and recalled gaudily. Interest is relative feeling, mainly pleasure so that interest build up by a pleasant feeling toward something. Kartini Kartono (1980) stated “Minat merupakan momen dari kecenderungan-kecenderungan yang terarah secara intensif kepada satu obyek yang dianggap penting – interest is moment of trends which intensively directed to an object that considered important”. According to Slamato (2003) “minat adalah suatu rasa lebih suka dan rasa ketertarikan pada suatu hal atau aktivitas, tanpa ada yang menyuruh- interest is preferred taste on some matters or activities, without being told to do so”.

In the form of learning interest, Mangal (2007) stated that interest is the central force that drives the whole machinery of teaching learning process. It means that interest will bring students to more focus to the material that have been given by teacher. Crow & Crow in Mangal (2007) state interest may refer to motivating force that impels individuals to attend a person, thing, or an activity itself. So that interest is a cause to a activity occurred. Moreover, Hendra (2009) opposed by saying that “Minat dapat diartikan sebagai keinginan yang kuat untuk memenuhi kepuasan siswa anda, baik berupa keinginan memiliki atau melakukan sesuatu – interest is a strong drive to satisfy their needs in having something or doing something”.

From all explanation above, the researcher reveal some keys on definition of interest, particularly in learning. Learning interest can be define as a self-driven tendency toward objects or activities in learning process, in order to satisfy individuals’ needs, and will lead to happy feeling afterwards.

Types of Interest

There are three types of interest that have been identified. These are : (1) situational interest refers to short momentary attention or curiosity about particular subject or matter. It combines affective qualities, such as feelings of excitement, with cognitive qualities such as focused attention and perceived value. (2) individual interest, sometimes referred to topic interest, where shows stable preferences for specific content. (3) Well-developed individual interest, is predisposition to re-engage particular subjects over time. Students with well-developed interest has more stored knowledge and value and sometimes spend a lot of effort on the subjects without even realizing. (Hidi & Renninger, 2006).

All these types of interest needs situations that can make the interest to continue deepen and might merge to other content. Such terms so strongly tight with effort. As John Dewey anticipated, it appears that when conditions to support student interest are in place, effort will follow. Interest as a force that will encourage individu to give more effort includes trying harder, asking for help, and participating (Renninger, 2014).

Factors affecting Learning Interest

From student perception, learning interest influenced by five factors, i.e age, sex, level of education, early experience and role of family. All aspects are interconnected, and a student's initial interest in them can be enhanced or deepened by situational interest, which gives a meaningful learning experience (Mahmood, 2019). A qualitative study that had been done by Derek Cheung, where he stated that there were 3 aspects that affecting learning interest. They are situational influences, individual interest, and self-concept (Cheung, 2018). Furthermore, a classroom setting that promotes peer conversation and explains how subjects apply to everyday life is linked to increased study engagement (Jocz, Zhai, & Tan, 2014).

Defining Academic achievement

In the field of academic achievement, various definition are found. Kpolovie *et al.* (2014) have provided a definition of academic achievement. They said that academic achievement refers to a student's ability to learn and recall facts, as well as his ability to communicate his knowledge orally or in writing, especially in the context of an examination (James Kpolovie et al., 2014). Academic achievement is the extent to which an individual student has acquired knowledge, skills and experiences in the specific set of academic goals (Mwageni, 2017).

In all the studies reviewed here, academic achievement is recognised as students' ability that acquire knowledge, skills and experiences to academic goals.

Factors affecting Academic achievement

Academic achievement caused by various common factors. These are :

- a. The socioeconomic factor (SEF) is one of the most studied factors influencing students' academic success. According to several studies, students with a higher socioeconomic status do better than students with a lower socioeconomic status.
- b. School leaders can increase students' achievement in a variety of ways, including direct and indirect effects on teaching and learning, (ii) incorporating diverse stakeholders (such as parents) in school, and (iii) establishing a proper ethos and atmosphere.
- c. The major aspects from students/ factors that influencing students' academic achievement include time management, self-motivation, engagement, behavior, and attitudes.
- d. Many studies have found that there is a favorable relationship between teacher quality and student accomplishment. The impact of educators on students' lives and achievement varies significantly,

according to the literature, from being a guide, a facilitator, a model, a pedagogical leader, a source of knowledge, to being a friend and confidant.

- e. Private tuition is another component that operates in conjunction with education. Tutoring provides beneficial out-of-school activities for young people, and children who receive private tuition are more likely to do well in school and achieve their goals (Atchia & Chinapah, 2019).

Pandemic and Its Impacts

The world has come to a halt because to the Covid-19 pandemic. By the end of October 2020, this new coronavirus strain had infected over 42 million people, resulting in over one million deaths. On March 12, 2020, the World Health Organization proclaimed the Covid-19 outbreak a pandemic, two months after it was first reported. Localized and country-wide school and university closures, while only temporary, pose substantial problems to education systems, students, and teachers around the world. School closures have an influence on not only kids, teachers, and families, but the entire community and society. Faculty members who lack online teaching experience, enough preparation time for online teaching, and technology support face unique problems in higher education. When students are self-isolated at home, they face challenges related to a lack of active academic involvement and positive learning attitudes, as well as a "lack of self-discipline, appropriate learning materials, and excellent learning surroundings" (Heng, 2021).

Due to reduced contact hours for learners and a lack of communication with teachers when learning/understanding challenges, students' academic performance is likely to suffer in classes held for both year-end and internal examinations (Sintema, 2020).

The findings of a study in Egypt include specific recommendations for institutions, instructors, and higher education portal designers on how to use online distant learning in the future. The results show that students with higher achievements appear to perform better in online courses, whereas students with lower achievements appear to perform worse. Although this outcome was not found to be significant, it is clear that students have been deprived of a great deal of on-campus help since the COVID-19 lockdown. Senior students, teaching assistants, and mentoring staff typically did not provide one-on-one personal support and advice to students with poor achievements (El Said, 2021).

These studies as mentioned above clearly indicate that there is a relationship between learning interest and students achievement in pandemic era. However, research on subject has been mostly restricted to limited comparisons between before and during pandemic. Therefore, this project provided a deeper understanding on learning interest and student achievement on those conditions.

3. Research Methodology

The study was analytic observational research, with cross-sectional approach. Respondents were 70 medical students who attend Medical and Health Science Faculty of Muhammadiyah Makassar University in Year 4. Samples were chosen by total sampling technique, that meet both inclusion and exclusion criterions. Inclusion criterions were students who actively attend the last and current semester, and willingly participate in the study by filling the informed consent. Exclusion criterions were respondent with incomplete questionnaire, and student with inactive status on the last and current semester.

Primary data were collected from learning interest questionnaire using google form, and spread out in group of social media (Telegram or WhatsApp). The questionnaire was 15 items Likert scale questions, adapted from Ita Ariyanti (2010). The scale had five options: Strongly Agree, Agree, Neutral, Disagree,

and Strongly Disagree, with scores of 5, 4, 3, 2, 1 respectively. The questionnaire have entirely passed validity test. The Cronbach's Alpha for questionnaire was .901 which indicated as highly reliable. Secondary data which is academic achievement were obtained from Semester Grade Point Average (GPA) of the students which ranges from 0 to 4. GPA is classify into two groups: decreased and increased GPA. All data analysed using SPSS version 25, with Chi-square test to identify the correlation between the parameters.

4. Results And Discussions

Study starts from September 2020 to December 2020. During pandemic, all activity is done by using internet.

Learning Interest

Table 1 Distribution of Learning Interest

	Frequency	Percentage
Low	47	67.1
High	23	32.9
Total	70	100.0

The result shows that most of respondents (67,1%) have low learning interest, and only 32,9% are in high learning interest group.

Academic achievement based on GPA

Table 2 Comparative Test between GPA last and current semester

F	Sig.	t	Df	Sig. (2-tailed)	Average Difference	Std. Error Difference	Lower	Upper
.135	.714	2.140	138	.034	.18243	.08524	.01389	.35097
		2.140	137.774	.034	.18243	.08524	.01388	.35097

From table 3, the study express comparative test result to test between GPA last and current semester. The result 0.03 or sig. (2-tailed) ≤ 0.05 , which means there is a significant difference between GPA on last and current semester.

Table 3 Distribution of Academic Achievement

	Frequency	Percentage
Decrease	45	64.3
Increase	25	35.7
Total	70	100.0

Data shows that during pandemic, 64,3% of the respondents have experienced degression in academic achievement. Whilst 35,7% of respondents have sustain in increasing their achievement.

During pandemic, ways of teaching and learning process have transformed from conventional to virtual model, and cause disruption on its process (Ali Sadikin, 2020). Eventhough the COVID-19 crisis has driven the education sector to weight benefit of the technology, but some problems still emerge. Adaptation of technology both on students and teachers becomes challenging situations that might affect teaching and learning activities (Tristan Prodjomaroetom & Ali Muhyidin, 2020). In accordance with a study in Nigeria, academic performance influenced by three factors, i.e family, students, and academic (Diaz, 2003). Hence, all these situation might bring effects to the students' academically.

Distinct study done in Universitas Advent Indonesia (UNAI), where pandemic have brought positive impact on the students achievement. The students tend to performed better than before pandemic (Albinur Limbong, 2020). Although this study only focused on one semester, but still give us an overview on students achievement in this pandemic era.

Analysis of correlation between Learning Interest and Academic Achievement

Table 3 Distribution of Learning Interest toward Academic Achievement

Table 5: Distribution of Learning Interest toward Academic Achievement							
Learning Interest	Academic Achievement						<i>p-value</i>
	Decrease		Increase		Total		
	N	%	N	%	N	%	
Low	44	97.7	3	12.0	47	67.1	0.000
High	1	2.2	22	88.0	23	32.9	
Total	45	100	25	100	70	100	

Data in Table 3 shows that 97.7% of respondents in low learning interest group, have had decreased in academic achievement, and only 12.2% have had increase in their GPA. Contrary to the finding, In high learning interest group, the study find out that most of respondents (88.0%) have had increased in GPA, while 2.2% respondents have decrease in academic achievement.

Based on statistical test using Chi-Square test, the study find out the p value = 0.000. This reveals the significant correlation between learning interest and academic achievement before and during pandemic.

Several studies relevant to these findings. The study on high school students in Riau found out that students with high learning interest get better mark on the certain subject (Sri Dewi Mulyani *et al*, 2017). Identical respondents also included in the other study by Hude & Rohmah in Purwakarta, where they concluded that students in school will have high achievement if students have hig learning interest or motivation (Darwis Hude & Ifa Faizah Rohmah, 2017). Other result also confirm this study. In high school students of SMKN Tuluagung, Elisabeth *et al* discover that the learning interest may contribute to their writing achievement (Elisabeth & Dina Kartikawati : 2021).

Other study was a qualitative study also give a brief discussion about correlation between learning interest and student achievement. By determining the interest, students become more motivated and will help students to achieve better in their performance (Kate Sauer : 2012).

5. Conclusion

Based on the findings, the study concluded that there is a significant relation between learning interest and students' achievement before and during pandemic.

Limitation And Study Forward

Not all aspects can be covered on this study. Authors believe that numbers of respondents can be one of limitation of this study. Further research with larger respondents and more detail parameter should be done to answer such issue.

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