

Academic stress, perception, and attitude towards online learning of sports science students

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Abstract:

To further understand how stress academic and it's affected factors are experienced by sport science students, the cross-sectional study was conducted. Using a purposive sampling technique, the authors approached many sports science students from a heterogeneous group in Jakarta. An email with an informed consent to obtain permission to join the research and an explanation of the study objectives was sent to each prospective applicant; after determining their willingness to participate, the online questionnaire was sent to 91 sports science students (28 females and 63 males). A Perception of Academic Stress Scale (PAS) questionnaire (which is a dichotomous questionnaire about the perception and attitude towards online learning) and an open questionnaire to obtain recommendations for improvement was sent to the students. Descriptive analysis and chi-squared test were used to analyze the data. The obtained findings indicate that, the students experienced various level of academic stress (most of the students experienced a moderate level of stress, and only a few experiences a high level of stress, 74% and 13%, respectively). Most of the students thought that online learning was not pleasant and expressed the attitude that they disagreed to continue online learning lectures, 60.44% and 86.81%, respectively. The cross-tabulation analysis using the chi-squared test confirmed that the more unpleasant was online learning, the higher was the level of stress (sig 0.004), and the higher was level of stress, the more that students disagreed to continue online lectures (sig 0.06). An adequate support, such as comprehensive teaching resources and concrete guidelines, should be provided to reduce academic stress and foster a positive perception and attitude toward online learning courses.

Keywords: academic stress, online learning, evaluation, sports science students

Introduction

Online learning is a type of education that is delivered over the internet, typically using a computer or mobile device. It allows students to learn at their own pace, in their own time, and from any location. Online learning can take many forms, including video lectures, interactive tutorials, and collaborative discussion forums (Chen & Chen, 2020; Ruiz Lara et al., 2011). It is often used in conjunction with traditional classroom instruction, but can also be used as a standalone educational format. Online learning has become increasingly popular in recent years due to its convenience and flexibility (Blasco et al., 2011).

Online learning received various reactions from students. Online learning made it difficult for students to interact with lecturers because they could not communicate face-to-face. Online learning uses various platforms in the learning process. Lectures performed at home made students adapt to the new system and became a challenge (Hadi, 2020). The process of online learning is ineffective because there are various obstacles in its implementation such as inadequate facilities or infrastructure (e.g., learning media, which not all students have), the delivery of lecture material is not as clear as face-to-face lectures, and lecturers have difficulty delivering lectures. (Gunawerdhana, 2020, Chan et al., 2021). Another problem is that students find it difficult to understand lecture material, which may lead to fear and worry about the value of their academic results, which eventually causes academic stress (Rodrigues et al., 2018, Maqableh, M., & Alia, M. 2021).

Sport science is an interdisciplinary field that focuses on the scientific principles and practices that underlie the performance of athletes and the effectiveness of physical activity and sport programs (de Pauw et al., 2013). Students who study sport science may take courses in subjects such as anatomy, physiology, biomechanics, nutrition, and psychology, among others. They may also participate in internships or practical experiences to gain hands-on experience in the field (Gojard & Terral, 2014; Sanseviero et al., 2019). Sport Science is part of education that prioritizes physical activity and the promotion of healthy living for physical, mental, social, emotional, and character growth and development. Sport Science has been situated as the primary vehicle for students and adolescents to develop physical literacy. The intended purpose of physical activity is to develop

student's appropriate skills, help them understand strategies for moving within a specific environment, and to understand how this affects their health, rather than simply providing students with an opportunity to become physically fit within lessons (Sum et al., 2018b). Physical literacy as a multidimensional disposition acquired by individuals encompassing "the motivation, confidence, physical competence, knowledge and understanding to maintain physical activity throughout the lifecourse.(Sum et al., 2018a)

The global reach of sports publicity has greatly expanded as it has grown more popular. The study of sport science has a lot to offer about how technology affects our daily life (Al Qudahqudah et al., 2018). The use of Internet-based technology in education has been expanding quickly in recent years (Tideswell, 2014). We present findings from an investigation of instructors' perceptions of the implementation of a program incorporating both in-person and online interactions between students (Austin et al., 2017). Demand for internet access and the availability of educational resources online have rapidly increased in recent years (Purvis et al., 2011). Higher education has been actively encouraged to find more effective and flexible delivery models to provide all students with access to quality learning experiences yet also meet institutional imperatives for efficiency and accountability (de George-Walker & Keeffe, 2010).

Although there have been numerous studies that assess the teaching and learning process, there are no studies that assess the effect of the teaching and learning process on sports science students in terms of academic stress, perception of pleasantness, or attitude towards continuity of online learning course. The purpose of this study is to describe the conditions under which online learning has been used at higher education institutions in Indonesia. The goal of this study is to ascertain the degree of academic stress, perceptions, and attitudes about the online teaching and learning process from the viewpoint of the students who experience it.

Materials and Methods

Participants and Data Collection

Using a purposive sampling technique (Kothari, 2004), the authors approached many sports science students from a heterogeneous group in Jakarta, Indonesia. An email of informed consents was sent to obtain permission to join the research, and an explanation of study objectives was sent to each prospective applicant. After determining their willingness to participate, an online questionnaire was shared with them. After repeated follow-ups, 91 students (28 females and 63 males) responded with their responses and were included in the study. A discussion via a telephone was also performed by the researchers with the respondents to obtain additional information regarding the perception, academic stress, and attitude towards online lectures.

Instruments

The Guttman scale with high validity and reliability was used to measure the perception and attitude toward online lectures. The perceptions of academic stress scale (PAS), which is an 18-item, five-point Likert-type scale, was used to measure academic stress. This scale was standardized on students pursuing graduation. The responses ranged from strongly disagree to strongly agree and measured four dimensions with internal consistency. These dimensions are as follows: pressure to perform (0.6), perception of workload and examinations (0.6), self-perception (0.5), and time constraints (0.6). The overall internal consistency reliability was 0.7, with high scores indicating higher stress experienced by students (Bedewy, D., & Gabriel, A., 2015).

Statistical analysis

A descriptive statistics test was used to analyze each variable. A chi-squared test was used to evaluate the differences between two categorical variables (i.e., perception and academic stress as well as academic stress and attitude). Pearson's chi-squared test is used to determine whether there is a statistically significant difference between the tested variables. Statistical tools and software (e.g., Microsoft Excel and IBM SPSS) were used to make the statistical analysis more accurate.

Results

Table 1. Description of Academic Stress, Perception, and Attitude towards Online Learning by Sports Science Students

	Frequency	Percentage
a. Level of Academic Stress		
Low	12	12%
Moderate	67	74%
High	12	13%
Total	91	100%
b. Perception toward Online Learning		
Pleasant	35	39.56%

Unpleasant	56	60.44%
Total	91	100%
c. Attitude toward Online Learning		
Agree to Continue	12	13.19%
Disagree to Continue	79	86.81%
Total	91	100%

Table 1.a shows that out of a total sample of 91 students studying sports science, 12 (13%) students reported experiencing low level of academic stress, 67 (74%) – moderate level of academic stress, and 12 (13%) – high level of academic stress. This observation demonstrates that most sports science students fall into the moderate academic stress category. Thus, students studying sports science endure academic stress.

Based on the responses to the Guttman scale questions in the survey, Table 1.b indicate that as many as 55 (60.44%) sports science students stated that online learning was not pleasant, and 36 (39.56%) sports science students stated that was pleasant.

In terms of the attitude, Table 1.c indicates that 79 (86.81%) sports science students stated that they were not in agreement with the continuation of learning online, while 12 (13.19%) sports science students indicated that they were in favor of it. Pearson's chi-squared test analysis of perception and academic stress as well academic stress and attitude is shown in Tables 2 and 3. Pearson's chi-squared test is used to determine whether there is a statistically significant difference between the tested variables.

Table 2. Cross-tabulation of Perception and Academic Stress of Sports Science Students

				Academic Stress			Total
				Low	Moderate	High	
Perception of Sports science Student Toward Online Learning Process	Unpleasant	Count	55	2	45	8	55
		%	100.0%	3.6%	81.8%	14.5%	100.0%
	Pleasant	Count	36	10	22	4	36
		%	100.0%	27.8%	61.1%	11.1%	100.0%
Total		Count	91	12	67	12	91
		%	100.0%	13.2%	73.6%	13.2%	100.0%

The cross-tabulation analysis in Table 2 shows that stress levels were noticeably higher among sports science students who claimed that online learning experience was unpleasant than among those who stated that they enjoyed it. The perception of enjoyment during an online course has been shown to have an impact on academic stress level, and this is supported by the asymptotic significance (2-sided) of 0.004. The higher was the enjoyment with an online course, the lower was the academics stress level.

Table 3. Cross-tabulation of Academic Stress and Attitude of Sports Science Students

			Attitude of Sports Science Students		Total
			Disagree to Continue	Agree to Continue	
Academic Stress	Low	Count	12	4	12
		%	100.0%	33.3%	100.0%
	Moderate	Count	67	6	67
		%	100.0%	9.0%	100.0%
	High	Count	12	2	12
		%	83.3%	16.7%	100.0%
Total		Count	91	12	91
		%	86.8%	13.2%	100.0%

In addition, according to cross-tabulation analysis in Table 3, many sports students (86.8%) declined to continue studying in the online format. Compared to students who experience minimal stress, many students who experience high levels of academic stress are likely to decline to continue taking online courses. This claim is supported by the asymptotic significance (2-sided) of 0.06. The higher was the academics stress level experienced by the students, the more likely they were to disagree to continue learning in an online format.

Discussion

Universitas Negeri Jakarta (UNJ) is one of the state universities in Indonesia that uses both synchronous and asynchronous online learning. In this study, a total of 91 students from the Faculty of Sports Science stated that learning at the university was performed completely online for both theoretical and practical courses. This learning model was unwelcomed by students because most students stated that it was unpleasant to study online.

The obtained results indicate that the students experienced various levels of academic stress. Most of the students experienced a moderate level of stress, and only a few experiences a high level of stress, i.e., 74% and 13%, respectively. Most of the students perceived that online learning was not pleasant and showed an attitude that they disagree to continue online learning, 60.44% and 86.81%, respectively. The cross-tabulation analysis using the chi-squared test confirmed that the more unpleasant it was to study, the higher was the level of stress (sig 0.004), and the higher was the level of stress, the more likely the students disagreed to continue online lectures (sig 0.06).

Other studies show that academic stress causes students to be reluctant to study online and to want to discontinue the online learning process. Furthermore, academic stress can occur along with the anxiety and depression among college students (Kumaraswamy, N. 2013, Hamblin, E. 2018). As adolescents, college students face many stressors due to puberty and uncertainty in their future life. As a result, academic stress affects their academic life (Sun, J. et al., 2012). Of note, adolescents are vulnerable to experiencing academic stress because of exams and their expectations about their careers (Dwi Utari, I. N., & Hamid, A. Y. S., 2021). There are many ways to deal with stress, including performing a lot of physical activity. Physical activity helps to release hormones that suppress stress. Decreased stress levels improve sleep quality, thereby increasing the degree of health and life satisfaction (Wang, F., & Boros, S. 2019). Furthermore, the more unpleasant the perception of online learning is for the students to study, the more they disagree to continue online learning (Fauziyyah, et al., 2021).

This study showed that out of 28 female students, 4 of them experienced high levels of stress; however, out of 63 male students, only 6 students experienced a high level of academic stress. This observation is like a study that was conducted in Egypt, where female students tended to be more stressed (Amr et al., 2008). It is known that stress level can be significantly difference in men and women and arise due to frustration and inhibition, overload, lack of time, and aggressive behavior. Furthermore, coping strategies were also significantly different in men and women. Men have better stress tolerance and coping mechanisms than women. (Verma et al., 2011).

In addition to students, PE teachers also experience academics stress during online teaching. This change of teaching mode has inevitably increased teachers' workload for lesson preparation and required curriculum restructuring. With the increase in workload, together with the expectations from parents and principals (as revealed by surveys), teachers naturally experienced increased stress (Chan et al., 2021). This study as well as others suggest that for effective online teaching, the lecturers should engage students with creative and effective implementation of synchronous online meetings, good time management skills, and provision of ample real-life examples and meaningful feedback (Daum & Buschner, 2014; Oliver, Osborne, & Brady, 2009; Williams, 2013).

Despite the strengths of this study, two limitations should be mentioned, First, the data were collected only in Jakarta. The study would be more comprehensive if similar surveys could also be conducted in other places to culturally examine differences and their effects. Second, this study only focused on online courses from the students' perspective and did not capture other perspectives such as those of parents and lecturers. Thus, it would be interesting to examine the effectiveness of online lessons from the points of view of parents and lecturers.

Conclusions

This survey is a pioneering study of online learning among the students from the Faculty of Sports Science. It provides valuable insight into the effectiveness of current online learning at the Faculty of Sports Science from the perspective of the students. Adequate support, such as comprehensive teaching resources and concrete guidelines, should be provided to reduce academic stress and foster a positive perception and attitude toward online learning courses. More research should be performed to determine the effectiveness of online learning from the perspective of parents and lecturers, as well as to investigate the impact of online courses on students' cognitive level.

Conflicts of interest - The authors declare no conflict of interest.

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