The Determinant Factor of Learning Motivation on High School Students' Learning Outcomes in Covid-19 Outbreak in Indonesia

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Abstract

During the pandemic, students are at home and learning from home online. Learning through online methods requires teachers and students to adapt and motivate themselves to live it. This study aimed to determine the determinants of learning motivation factors on high school students' achievement in the era of the Covid-19 pandemic in Indonesia. The research method was quantitative research conducted on 60 students of class XI SMA class 2 of high school in three private high schools in Surabaya, Indonesia. By selecting purposive sampling based on the researcher's inclusion criteria and the data collection using google form. Then the collected data were processed using statistical methods using the correlation approach (correlational research) and linear regression. This study was to test the hypothesis related to the correlation between learning motivation variables and learning achievement during online learning in the Covid-19 pandemic era. Based on the correlation analysis of motivation on learning achievement, the correlation coefficient (r) = 0.458 with a significant value of 0.000 <0.05. Because with a significance value of 0.000 <0.05, Ho was rejected, and H1 was accepted. There was a very significant relationship between the two variables between learning motivation and learning achievement. Meanwhile, from the coefficient value of 0.458 (in the range 0.41 - 0.6), it could be concluded that the correlation between learning motivation scores and learning achievement was moderate. In other words, the higher the motivation to learn, the higher the learning achievement of students. Then according to the t-test, it could be seen that the significance value of 0.000 was smaller than 0.05; it could be concluded that Ho was rejected and H1 was accepted, which meant that there was a significant influence between learning motivation and students achievement.

Keywords: learning motivation, learning outcomes, students, Covid-19
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INTRODUCTION

In early 2020, the world was shocked by the news about the virus that originated in China and can be transmitted from person to person (Babvey et al., 2020). Furthermore, the World Health Organization (WHO) explained that calling the virus Severe Acute Respiratory Syndrome Corona-2 (SARS-CoV-2) and the disease called Coronavirus Disease 2019 (COVID-19) (Hong et al., 2021). The Covid -19 pandemic caused a crisis in various life aspects that had never happened before (Hussein et al., 2020; Rahiem, 2021). One of the areas affected was education, such as schools and educational facilities were entirely closed. Students and teachers were at home and underwent the online system's learning process (Muro et al., 2018; Qazi et al., 2020). As a result, more than 190 countries had closed their educational facilities on a large scale to prevent the virus's spread and reduce its impact(Bacher-Hicks et al., 2021).

The United Nations Educational, Scientific, and Cultural Organization acknowledged in early March 2020 that the Covid-19 pandemic also impacted the education sector (Chhetri et al., 2021; Lapitan et al., 2021). Furthermore, in mid-May 2020, UNESCO stated that more than 1.2 billion students at all levels of education worldwide had stopped attending face-to-face classes. More than 160 million were students in Latin America and the Caribbean.(Hong et al., 2021) stated that nearly 300 million students worldwide had their educational activities disrupted. It affected and threaten their future education rights, which meant that education in the pandemics erawould require maximum innovation in learning to educate children to achieve a better future (Tajeri Moghadam et al., 2020).

Based on UNESCO data on March 25, 2020, 68,265,787 Indonesian students were affected by Covid -19 (Mok et al., 2021). Besides, the closure of schools and distance learning (PJJ) or online in Indonesia also came into effect in March 2020 (Rahiem, 2021). It was to minimize the coronavirus's spread and its effects (Bonkowsky et al., 2020). As a result of the closure, teachers, students, and parents faced many challenges, including problems related to the internet network, teachers limited capability in carrying out online learning, adjustments to the educational curriculum, and problems related to socio-economics so that some people did not have adequate facilities to do so—the online distance learning process (Dong et al., 2020).

One of the impacts of social distancing also occurs in the learning system in schools. Based on Circular Number 4 of 2020 concerning the Implementation of Education Policies in the emergency period of the spread of the virus, the Minister of Education and Culture urges all educational institutions not to teach directly and learn processes face-to-face indirectly or remotely. With this appeal, all educational institutions changed the learning methods to online or in a network system (Asanov et al., 2021). With this virus outbreak, making and requiring all schools, colleges, and other educational institutions to use online learning methods without exception, with the aim that the learning process continues even though it has to be in their respective homes (Anthony et al., 2020).

The number of challenges and the online learning system's implementation time for a long time often made it saturated to affect student learning motivation in the learning participation. (Ibáñez et al., 2020) described motivation as a learning machine whose goal was how to lead to maximum learning outcomes. Motivation could influence what students learn, so how students learn and when to choose to learn (Hwang et al., 2021; Şengel et al., 2020).(Laothong & Cheng, 2017) showed that motivated learners were more likely to engage in challenging activities, were actively involved, enjoy and adopt an in-depth approach to learning and show increased learning activity, persistence, and creativity.

According to (Tam et al., 2021), the findings showed that students doing online learning more intrinsically motivated would produce maximum learning achievement than students with no intrinsic motivation. In achieving student achievement, it was none other than student motivation growth, both intrinsically and extrinsically (Cortés et al., 2017; Gurumoorthy & Kumar, 2020). However, low motivation was a determining factor for students' poor learning, leading to lower learning achievement (Kyriakides et al., 2019; Sierra, 2020). Therefore, student motivation was considered an essential factor for success in a learning environment that would lead to enjoy learning and impact student achievement better and more complete in the learning process (Ekici, 2010; Md. Yunus et al., 2011).

Many factors affected motivation and their impact on the student learning process; it was necessary to identify the motivation further and influencing factors during the online learning process during the Covid-19 pandemic (Lapitan et al., 2021).Learning motivation was one of the top priorities for students to continue to develop in the learning process in schools, especially online learning (Chhetri et al., 2021; Kryshko et al., 2020) because online learning was very influential on student learning motivation. In the current limited conditions, teachers 'understanding and creativity were necessary for packaging learning to attract students' attention and motivation in following the online learning stages (Mok et al., 2021). Selection of the right approach and approach model and support from various parties determine online learning success (de Figueiredo et al., 2021; Santiago et al., 2021).

The learning spirit could increase learning motivation to produce learning achievement (Naik et al., 2020; Oh et al., 2019). Student learning motivation was a driving force or impetus that makes students interested in the learning process continues with whatever situations and conditions occur (Tajeri Moghadam et al., 2020). Low motivation in learning could lead to low success in learning to lead to students achievement (Gatti et al., 2019; Huizenga et al., 2019). Therefore, in this case, how to increase student learning motivation in online learning due to the current COVID-19 pandemic (Vu et al., 2020). In other words, it was necessary to have an alternative, various attractive methods designed so that they lead to a fun learning process which in turn fosters students learning motivation (Rahiem, 2021).

In the learning process, good learning facilities must also determine learning motivation in the online learning process, resulting in students learning achievement (Bai et al., 2020; Knoop-van Campen et al., 2020). Online learning required facilities that support learning, such as the internet, computers or devices, and so on (Rahiem, 2021). The use of suitable facilities would maximize the material conveyed to students effectively (Hwang et al., 2021; Tajeri Moghadam et al., 2020).The school had to provide optimal support to optimally support online learning carried out by educators (Katz et al., 2020), such as providing learning resources, computers connected to the internet, and tools that support learning activities for teachers (Hussein et al., 2020).

Besides, students learning motivation had a good effect on learning success or students achievement (Børsting et al., 2020; Ernst et al., 2020). As stated by (Saini et al., 2020), the learning process would achieve success if students have the right learning motivation. Therefore, learning motivation was very important for every student, both intrinsic and extrinsic (Saini et al., 2020). The learning climate created by online learning must also influence learning motivation and improve students achievement in schools (Furusawa & Brewster, 2019; Lycko & Galanakis, 2019; Woo et al., 2019). If in online learning, the teacher could create a conducive classroom atmosphere that leads to increased learning achievement maximum and complete (Ernst et al., 2020; Hammami et al., 2019).

METHOD
Research Type
This type of research was quantitative research. The research emphasized numerical data analysis using

statistical methods using the correlation approach (correlational research) and linear regression. This research was to test hypotheses related to learning motivation variables and learning achievement during online learning in the Covid-19 pandemic era.

Sample and Data Collection

Participants in this study were 60 students of class XI Senior High School in three private high schools in Surabaya, Indonesia. The selection of participants using purposive sampling was under inclusion criteria set by the researcher. The data collection was carried out via google form using a closed questionnaire containing several written questions to obtain information from participants about their personal or known matters.

Data Analysis

Data analysis was grouping data based on respondents' variables and types, tabulating data based on all respondents' variables, presenting data for each variable under study. Then perform calculations to answer the problem formulation and perform calculations to test the hypothesis proposed. The data analysis technique used was simple linear regression analysis to determine the correlation or influence between variables. The regression equation's significance was to compare the value of empirical and theoretical F found in the F values table. Was there a significant effect of variable X learning motivation on variable Y learning achievement? Then, the calculation result compared to the level of confidence interval 95% (significant level $\alpha = 0.05$), where Ho was rejected if the probability r (correlation coefficient) <0.05. Hypothesis (Ho: there is no relationship, while H1: there was a correlation). It determined if F count> F table, then there was an effect of variable X on variable Y.

RESULT AND DISCUSSION

Result

The data included research data from 60 high school class 2 students from three different schools through purposive sampling based on the study results.

Tabel 1. *Respondent Characteristic*

Sex	Total	Percentage
Male	33	55%
Female	27	45 %
Total	**60**	**100**

Table 1 showed 33 male and 27 femalerespondents.

Tabel 2.*Description of Student Motivation Level*

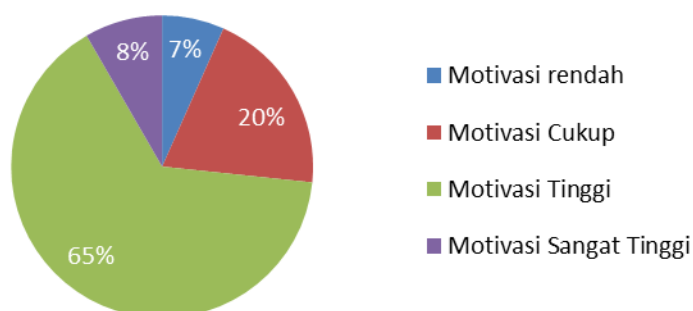| Motivation Level	Total	Percentage
Low	4	6.7%
Moderate	12	20%
High	39	65%
Very High	5	8.3%
Total	**60**	**100%**

Figure 1. Learning Motivation Presentation Diagram

Table 2 showed that, during the pandemic's online learning process, most students had 65%high learning motivation and65%very high motivation, 20% moderate motivation, and 6.7%low motivation.

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Table 3. Motivation Analysis of Each Aspect of Motivation

Motivation Aspects	Percentage	Explanation
A desire and desire to succeed	80.6%	High motivation
An encouragement and necessity to learn	74.6%	High motivation
Diligent in facing the assigned task	75%	High motivation
Resilient in facing the difficulties faced	72%	High motivation
The excitementin learningactivities	78%	High motivation
Enjoyment in finding and solving problems	79.6%	High motivation

Descriptive Analysis of Learning Outcomes
Student learning outcomes in the learning process was in the following table:

Table 4.1Descriptive Statistics

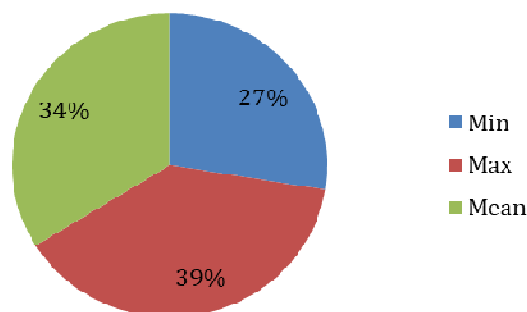|	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Learning Outcome	60	70.00	98.00	86.5333	6.67265	44.524
Valid N (listwise)	60					

Figure 2. Learning Achievement Diagram

The lowest score obtained by high school students was 70, and the highest score was 98 from the total sample of 60 students. Students' average value was 86, which indicated the value criteria in the range of 81-90 with an excellent category.

Table 4.2. Analysis of Correlations Between Learning Motivation And Learning Achievement

		Learning Outcome	Motivation
Pearson Correlation	Learning Achievement	1.000	.458
	Motivation	.458	1.000
Sig. (1-tailed)	Learning Achievement	.	.000
	Motivation	.000	.
N	Learning Achievement	60	60
	Motivation	60	60

Based on the correlation analysis of motivation on learning achievement, the correlation coefficient (r) = 0.458 with a significant value of 0.000 <0.05. A significance value of 0.000 <0.05 showed that Ho was rejected, and H1 was accepted. It could be a very significant correlation between the two variablesbetween learning motivation and learning achievement. Meanwhile, with the coefficient value of 0.458 (in the range of 0.41 - 0.6), the correlation between learning motivation scores and learning achievement was moderate. In other words, the higher the motivation to learn, the higher the learning achievement of students.

Simple Linear Regression Test between Learning Motivation and Learning Achievement
Bivariate data analysis using a simple linear regression test. The results of the test between learning motivation and learning achievement were in the following table:

Table 4.3*Simple Linear Regression Analysis of Learning Motivation on Learning Achievement*

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.458[a]	.210	.196	5.98203

    a.   Predictors: (Constant), Motivation

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	551.419	1	551.419	15.409	.000[a]
	Residual	2075.515	58	35.785		
	Total	2626.933	59			

a. Predictors: (Constant), Motivation

b. Dependent Variable, Learning Outcomes

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	70.251	4.219		16.651	.000
	Motivation	4.342	1.106	.458	3.925	.000

a. Dependent Variable: Learning Achievement

From the table above, the following results were: 1) From the Summary model table, R2 = 0.210, meaning that the independent variable of learning motivation explained or predicted the value of the dependent variable on the learning achievement of 21.0%. The remaining 79.0% by factors other than learning motivation, 2) From the ANOVA table, the F value was 15.409 with a significant test of 0.000. Because the significant test value was less than 0.05, the linear equation form Y = a + Bx was correct and could be used. 3) From the t-test, the significance value of 0.000 was smaller than 0.05. It meant that Ho was rejected and H1 was accepted, which meant a significant influence between learning motivation on student achievement. 4) The regression equation obtained was**Y = 70,251 + 4,342X**, and from the addition of 1 unit of the independent variable, learning motivation would increase the dependent variable student achievement with a value of 4,342.

Discussion

This study aimed to identify students' learning motivation towards students learning achievement, carried out in three senior high schools at 11th grade, totaling 60 students selected through purposive sampling consisting of 33 male and 27 female students. During the online learning process in the Covid-19 pandemic, according to the study results, the level of learning motivation showed that most students had 65% high learning motivation and 8.3% very high motivation, 20% moderate, and 6.7% low motivation. It meant that motivation to learn lead to the learning process and ensure the continuity of these activities effectively and maximally (Laothong & Cheng, 2017; Nakayoshi et al., 2021).

In this case, learning motivation was a non-intellectual psychological factor and played a role in fostering learning enthusiasm for individuals (Gurumoorthy & Kumar, 2020; Tam et al., 2021).The success of learning objectives was determined by how enthusiastic students in learning activities participated. Each student has their motivation to learn. Learning motivation came from two directions: intrinsic motivation and extrinsic motivation (Ibáñez et al., 2020). Thus, when motivation was in each student, it would impact students achievement (Laothong & Cheng, 2017; Md. Yunus et al., 2011).The data generated in the study that the lowest score was 70, and the highest score was 98 from the total sample of 60. The students' average value was 86, which indicated the value criteria were in the range 81-90 with the excellent category.

One of the factors for achieving good learning achievement was the motivation to learn from the students (Muro et al., 2018; Şengel et al., 2020). The motivation was an essential factor in learning activities because it was a condition that encouraged students to learn to achieve maximum learning achievement as well (Logan et al., 2020; Lycko &Galanakis, 2019). Following the research results, it was according to the results of the correlation analysis of motivation on learning achievement, the correlation coefficient (r) = 0.458 with a significant value of 0.000 <0.05. Because with a significance value of 0.000 <0.05, Ho was rejected, and H1 was accepted. A very significant correlation between the two variablesbetween learning motivation and achievement. Meanwhile, from the coefficient value of 0.458 (in the range 0.41 - 0.6), the correlation between learning

motivation scores and learning achievement was moderate. In other words, the higher the student's learning motivation, the higher the student's learning achievement (Guo et al., 2020; Hayes, 2020).

Then it was strengthened from the research results from the table model of Summary, R2 = 0.210, meaning that the independent variable learning motivation explained or predicted the value of the dependent variable on the learning achievement of 21.0%. The remaining 79.0% was by factors other than learning motivation. In the ANOVA table, the F value was 15.409 with a significant test of 0.000. Since the significant test value was less than 0.05, the linear equation form Y = a + Bx was correct and could be used. While the t-test could be seen that the significance value of 0.000 was smaller than 0.05, it could be said that Ho was rejected and H1 was accepted, which meant that there was a significant influence between learning motivation and student achievement. Furthermore, the result of the regression equation obtained was **Y = 70,251 + 4,342X**. The addition of 1 unit of the independent variable, learning motivation, would increase the dependent variable student achievement with a value of 4.342.

The regression test results that learning motivation affected learning achievement (Børsting et al., 2020).Because learning achievement would be maximized when student learning motivation grew (Kryshko et al., 2020), the learning atmosphere in its current conditions was inseparable from the role of technology which also coincides with the Covid-19 pandemic, so that the learning atmosphere used an online system (Tam et al., 2021). Then, educators and students were required to take advantage of existing technology so that the distance learning process could be optimal (Babvey et al., 2020; Katz et al., 2020). In this case, technology was a significant part and became the media necessary in delivering one-way learning programs, especially in today's online learning programs (Babvey et al., 2020; Qazi et al., 2020).

The Covid-19 pandemic, which has also entered the industrial revolution 4.0, was marked by the development and diversity of information technology. In contrast, the 5.0 industrial revolution had combined essential elements in the 21st century, namely humans and technology (Mukhalalati et al., 2020). The use of technology also enabled distance learning to emerge and encouraged more significant innovation in creating teaching methods inside and outside the classroom (Nakayoshi et al., 2021). Therefore, through the use of technology during online learning, it was hoped that specific classrooms and time would no longer limit the current learning process. Students felt comfortable and able to understand the teacher's material of learning (Babvey et al., 2020).

These technologies included smartphones, laptops, and other supporting objects. However, smartphones or gadgets were most commonly used by students than laptops because they are more practical and have more adequate features (Bonkowsky et al., 2020). In addition to technology tools, educators are also learning online through digital platforms such as Google Class Room, E-Learning, Edmodo, Zoom, and Google Meet (Asanov et al., 2021). The use of technology as a source of information, learning resources, systems, and service quality has had a positive impact during this pandemic, most of which are beneficial for the online learning process (Sumiyoshi et al., 2020). Therefore, through this technology, it is hoped that educators could provide exciting and innovative learning media so that students do not feel bored because of the comprehensive implementation of online learning, and learning motivation continued to grow in students (Ibáñez et al., 2020; Şengel et al., 2020).

During the online learning process, it was not uncommon for students to need assistance from their parents. Of course, students' learning motivation was influenced by several factors, including parenting style, to produce maximum learning achievement(Saini et al., 2020). The motivation of students who were guided by their parents intensively was higher than students with low parents' involvement at home during online learning (Kryshko et al., 2020; Rahiem, 2021). Apart from mentoring by parents, the role and support of teachers as educators was indispensable for online learning during a pandemic; one of the roles of teachers was as a facilitator and motivator, who should be able to encourage and support students to be passionate and active in the learning process (Md. Yunus et al., 2011). Besides, the collaboration between parents and teachers could also positively impact student motivation during online learning. Children learn happily and take part in learning fun without coercion to increase learning achievement (Dong et al., 2020; Rahiem, 2021).

CONCLUSION

Based on this study's results, students learning motivation in the online learning process affected students achievement during the Covid-19 pandemic. Based on the correlation analysis of motivation on learning achievement, the correlation coefficient (r) = 0.458 with a significant value of 0.000 <0.05. Because with a significance value of 0.000 <0.05, Ho is rejected, and H1 was accepted. There was a very significant correlation between the two variables between learning motivation and learning achievement. Meanwhile, from the coefficient value of 0.458 (in the range 0.41 - 0.6), it can be concluded that the relationship between learning motivation scores and learning achievement is moderate. From the summary table model, R2 = 0.210, meaning that the independent variable of learning motivation explains or predicts the dependent variable's value on the learning achievement of 21.0%. The remaining 79.0% was by factors other than learning motivation. In the

ANOVA table, the F value was 15.409 with a significant test of 0.000. Since the significant test value was less than 0.05, the linear equation form Y = a + Bx was correct and could be used. While the t-test could be seen that the significance value of 0.000 was smaller than 0.05, it could be said that Ho was rejected and H1 was accepted, meaning that there was a significant influence between learning motivation on student achievement. Furthermore, the result of the regression equation obtained was **Y = 70,251 + 4,342X**. The addition of 1 unit of the independent variable learning motivation would increase the dependent variable student achievement with a value of 4.342.

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REFERENCE
Anthony, R., Paine, A. L., Westlake, M., Lowthian, E., & Shelton, K. H. (2020). Patterns of adversity and post-traumatic stress among children adopted from care. *Child Abuse and Neglect*, *July*, 104795. https://doi.org/10.1016/j.chiabu.2020.104795

Asanov, I., Flores, F., McKenzie, D., Mensmann, M., & Schulte, M. (2021). Remote-learning, time-use, and mental health of Ecuadorian high-school students during the COVID-19 quarantine. *World Development*, *138*, 105225. https://doi.org/10.1016/j.worlddev.2020.105225

Babvey, P., Capela, F., Cappa, C., Lipizzi, C., Petrowski, N., & Ramirez-Marquez, J. (2020). Using social media data for assessing children's exposure to violence during the COVID-19 pandemic. *Child Abuse and Neglect*, *August*, 104747. https://doi.org/10.1016/j.chiabu.2020.104747

Bacher-Hicks, A., Goodman, J., & Mulhern, C. (2021). Inequality in household adaptation to schooling shocks: Covid-induced online learning engagement in real time. *Journal of Public Economics*, *193*, 104345. https://doi.org/10.1016/j.jpubeco.2020.104345

Bai, S., Hew, K. F., & Huang, B. (2020). Does gamification improve student learning outcome? Evidence from a meta-analysis and synthesis of qualitative data in educational contexts. *Educational Research Review*, *30*(June 2019), 100322. https://doi.org/10.1016/j.edurev.2020.100322

Bonkowsky, J. L., deVeber, G., Kosofsky, B. E., Augustine, E. F., Bassuk, A., Brooks-Kayal, A. R., Felling, R. J., Fullerton, H. J., Glass, H. C., Grinspan, Z. M., Guerriero, R. M., Johnston, M., Lyons-Warren, A., Maricich, S., Musolino, P. L., Pomeroy, S., Porter, B. E., Rho, J. M., Rotenberg, A., … Soul, J. S. (2020). Pediatric Neurology Research in the Twenty-First Century: Status, Challenges, and Future Directions Post–COVID-19. *Pediatric Neurology*, *113*, 2–12. https://doi.org/10.1016/j.pediatrneurol.2020.08.012

Børsting, T. E., Kristensen, N., & Hanssen, I. (2020). Student nurses' learning outcomes through participation in a clinical nursing research project: A qualitative study. *Nurse Education in Practice*, *43*(October 2018), 102727. https://doi.org/10.1016/j.nepr.2020.102727

Chhetri, B., Goyal, L. M., Mittal, M., & Battineni, G. (2021). Estimating the prevalence of stress among Indian students during the COVID-19 pandemic: A cross-sectional study from India. *Journal of Taibah University Medical Sciences*, *xxxx*. https://doi.org/10.1016/j.jtumed.2020.12.012

Cortés, A. S., Correa-Díaz, A. M., Benjumea-Arias, M. L., Valencia-Arias, A., & Bran-Piedrahita, L. (2017). Motivational Factors and Effects Associated with Physical-sport Practice in Undergraduate Students. *Procedia - Social and Behavioral Sciences*, *237*(June 2016), 811–815. https://doi.org/10.1016/j.sbspro.2017.02.153

de Figueiredo, C. S., Sandre, P. C., Portugal, L. C. L., Mázala-de-Oliveira, T., da Silva Chagas, L., Raony, Í., Ferreira, E. S., Giestal-de-Araujo, E., dos Santos, A. A., & Bomfim, P. O. S. (2021). COVID-19 pandemic impact on children and adolescents' mental health: Biological, environmental, and social factors. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, *106*(August 2020). https://doi.org/10.1016/j.pnpbp.2020.110171

Dong, C., Cao, S., & Li, H. (2020). Young children's online learning during COVID-19 pandemic: Chinese parents' beliefs and attitudes. *Children and Youth Services Review*, *118*(August), 105440. https://doi.org/10.1016/j.childyouth.2020.105440

Ekici, G. (2010). Factors affecting biology lesseon motivation of high school students. *Procedia - Social and Behavioral Sciences*, *2*(2), 2137–2142. https://doi.org/10.1016/j.sbspro.2010.03.295

Ernst, M., Brähler, E., Klein, E. M., Jünger, C., Wild, P. S., Faber, J., Schneider, A., &Beutel, M. E. (2020). What's past is prologue: Recalled parenting styles are associated with childhood cancer survivors' mental health outcomes more than 25 years after diagnosis. *Social Science and Medicine*, *252*(March), 112916. https://doi.org/10.1016/j.socscimed.2020.11291.

Furusawa, M., & Brewster, C. (2019). The Determinants of the Boundary-spanning Functions of Japanese Self-initiated Expatriates in Japanese Subsidiaries in China: Individual Skills and Human Resource

Management. *Journal of International Management*, *25*(4), 100674. https://doi.org/10.1016/j.intman.2019.05.001

Gatti, L., Ulrich, M., & Seele, P. (2019). Education for sustainable development through business simulation games: An exploratory study of sustainability gamification and its effects on students' learning outcomes. *Journal of Cleaner Production*, *207*, 667–678. https://doi.org/10.1016/j.jclepro.2018.09.130

Guo, P., Saab, N., Post, L. S., & Admiraal, W. (2020). A review of project-based learning in higher education: Student outcomes and measures. *International Journal of Educational Research*, *102*(May), 101586. https://doi.org/10.1016/j.ijer.2020.101586

Gurumoorthy, R., & Kumar, N. S. (2020). Study of impactful motivational factors to overcome procrastination among engineering students. *Procedia Computer Science*, *172*(2019), 709–717. https://doi.org/10.1016/j.procs.2020.05.101

Hammami, S., Saeed, F., Mathkour, H., & Arafah, M. A. (2019). Continuous improvement of deaf student learning outcomes based on an adaptive learning system and an Academic Advisor Agent. *Computers in Human Behavior*, *92*, 536–546. https://doi.org/10.1016/j.chb.2017.07.006

Hayes, S. (2020). Socialising students for Philosophic Practice? An analysis of learning outcomes in tourism taught Master's programmes. *Journal of Hospitality, Leisure, Sport and Tourism Education*, *xxxx*, 100274. https://doi.org/10.1016/j.jhlste.2020.100274

Hong, J. C., Lee, Y. F., & Ye, J. H. (2021). Procrastination predicts online self-regulated learning and online learning ineffectiveness during the coronavirus lockdown. *Personality and Individual Differences*, *174*(January), 110673. https://doi.org/10.1016/j.paid.2021.110673

Huizenga, J., Admiraal, W., Dam, G. ten, & Voogt, J. (2019). Mobile game-based learning in secondary education: Students' immersion, game activities, team performance, and learning outcomes. *Computers in Human Behavior*, *99*(April), 137–143. https://doi.org/10.1016/j.chb.2019.05.020

Hussein, E., Daoud, S., Alrabaiah, H., & Badawi, R. (2020). Exploring undergraduate students' attitudes towards emergency online learning during COVID-19: A case from the UAE. *Children and Youth Services Review*, *119*(August), 105699. https://doi.org/10.1016/j.childyouth.2020.105699

Hwang, G. J., Wang, S. Y., & Lai, C. L. (2021). Effects of a social regulation-based online learning framework on students' learning achievements and behaviors in mathematics. *Computers and Education*, *160*, 104031. https://doi.org/10.1016/j.compedu.2020.104031

Ibáñez, M. B., Uriarte Portillo, A., Zatarain Cabada, R., & Barrón, M. L. (2020). Impact of augmented reality technology on academic achievement and motivation of students from public and private Mexican schools. A case study in a middle-school geometry course. *Computers and Education*, *145*, 103734. https://doi.org/10.1016/j.compedu.2019.103734

Katz, C., Priolo Filho, S. R., Korbin, J., Bérubé, A., Fouché, A., Haffejee, S., Kaawa-Mafigiri, D., Maguire-Jack, K., Muñoz, P., Spilsbury, J., Tarabulsy, G., Tiwari, A., Thembekile Levine, D., Truter, E., & Varela, N. (2020). Child maltreatment in the time of the COVID-19 pandemic: A proposed global framework on research, policy, and practice. *Child Abuse and Neglect*, *November*. https://doi.org/10.1016/j.chiabu.2020.104824

Knoop-van Campen, C. A. N., Segers, E., & Verhoeven, L. (2020). Effects of audio support on multimedia learning processes and outcomes in students with dyslexia. *Computers and Education*, *150*(June 2019), 103858. https://doi.org/10.1016/j.compedu.2020.103858

Kryshko, O., Fleischer, J., Waldeyer, J., Wirth, J., & Leutner, D. (2020). Do motivational regulation strategies contribute to university students' academic success? *Learning and Individual Differences*, *82*(July), 101912. https://doi.org/10.1016/j.lindif.2020.101912

Kyriakides, L., Stylianou, A., & Eliophotou Menon, M. (2019). The link between educational expenditures and student learning outcomes: Evidence from Cyprus. *International Journal of Educational Development*, *70*(June), 102081. https://doi.org/10.1016/j.ijedudev.2019.102081

Laothong, W., & Cheng, H. C. (2017). Comparison of factors affecting orthodontic treatment motivation of Taiwanese and Thai patients in two hospitals. *Journal of Dental Sciences*, *12*(4), 396–404. https://doi.org/10.1016/j.jds.2017.06.003

Lapitan, L. D., Tiangco, C. E., Sumalinog, D. A. G., Sabarillo, N. S., & Diaz, J. M. (2021). An Effective Blended Online Teaching and Learning Strategy during the COVID-19 Pandemic. In *Education for Chemical Engineers*. Institution of Chemical Engineers. https://doi.org/10.1016/j.ece.2021.01.012

Logan, R. M., Johnson, C. E., & Worsham, J. W. (2020). Development of an e-learning module to facilitate student learning and outcomes. *Teaching and Learning in Nursing*, *000*, 7–10. https://doi.org/10.1016/j.teln.2020.10.007

Lycko, M., & Galanakis, K. (2019). Student consultancy projects playbook: Learning outcomes and a framework for teaching practice in an international entrepreneurial context. *International Journal of Management Education*, *January*, 100285. https://doi.org/10.1016/j.ijme.2019.02.005

Md. Yunus, M., Osman, W. S. W., & Ishak, N. M. (2011). Teacher-student relationship factor affecting motivation and academic achievement in ESL classroom. *Procedia - Social and Behavioral Sciences*, *15*, 2637–2641. https://doi.org/10.1016/j.sbspro.2011.04.161

Mok, K. H., Xiong, W., Ke, G., & Cheung, J. O. W. (2021). Impact of COVID-19 pandemic on international higher education and student mobility: Student perspectives from mainland China and Hong Kong. *International Journal of Educational Research*, *105*(August 2020), 101718. https://doi.org/10.1016/j.ijer.2020.101718

Mukhalalati, B., Ashour, M., & Al Noami, A. E. (2020). Examining the motivations and future career aspirations of Qatari pharmacy students and alumni: A case study. *Currents in Pharmacy Teaching and Learning*, *12*(11), 1329–1339. https://doi.org/10.1016/j.cptl.2020.06.003

Muro, A., Soler, J., Cebolla, À., & Cladellas, R. (2018). A positive psychological intervention for failing students: Does it improve academic achievement and motivation? A pilot study. *Learning and Motivation*, *63*(April), 126–132. https://doi.org/10.1016/j.lmot.2018.04.002

Naik, G., Chitre, C., Bhalla, M., & Rajan, J. (2020). Impact of the use of technology on student learning outcomes: Evidence from a large-scale experiment in India. *World Development*, *127*, 104736. https://doi.org/10.1016/j.worlddev.2019.104736

Nakayoshi, Y., Takase, M., Niitani, M., Imai, T., Okada, M., Yamamoto, K., & Takei, Y. (2021). Exploring factors that motivate nursing students to engage in skills practice in a laboratory setting: A descriptive qualitative design. *International Journal of Nursing Sciences*, *8*(1), 79–86. https://doi.org/10.1016/j.ijnss.2020.12.008

Oh, J. W., Huh, B., & Kim, M. R. (2019). Effect of learning contracts in clinical pediatric nursing education on students' outcomes: A research article. *Nurse Education Today*, *83*(August), 104191. https://doi.org/10.1016/j.nedt.2019.08.009

Qazi, A., Naseer, K., Qazi, J., AlSalman, H., Naseem, U., Yang, S., Hardaker, G., & Gumaei, A. (2020). Conventional to online education during COVID-19 pandemic: Do develop and underdeveloped nations cope alike. *Children and Youth Services Review*, *119*, 105582. https://doi.org/10.1016/j.childyouth.2020.105582

Rahiem, M. D. H. (2021). Remaining motivated despite the limitations: University students' learning propensity during the COVID-19 pandemic. *Children and Youth Services Review*, *120*(December 2020), 105802. https://doi.org/10.1016/j.childyouth.2020.105802

Saini, M., Kumar, A., & Kaur, G. (2020). Research Perception, Motivation and Attitude among Undergraduate Students: A Factor Analysis Approach. *Procedia Computer Science*, *167*(2019), 185–192. https://doi.org/10.1016/j.procs.2020.03.210

Santiago, I.-P., Ángel, H.-G., Julián, C.-P., & Prieto, J. L. (2021). Emergency Remote Teaching and Students' Academic Performance in Higher Education during the COVID-19 Pandemic: A Case Study. *Computers in Human Behavior*, 106713. https://doi.org/10.1016/j.chb.2021.106713

Şengel, Ü., Çevrimkaya, M., & Zengin, B. (2020). The effect of professional expectations of tour guiding students on their professional motivation. *Journal of Hospitality, Leisure, Sport and Tourism Education*, *xxxx*, 100293. https://doi.org/10.1016/j.jhlste.2020.100293

Sierra, J. (2020). The potential of simulations for developing multiple learning outcomes: The student perspective. *International Journal of Management Education*, *18*(1), 100361. https://doi.org/10.1016/j.ijme.2019.100361

Sumiyoshi, T., Yokono, T., Kawachi, I., & Suzuki, T. (2020). Learning outcomes of interprofessional collaboration among medical and nursing students in Japan. *Journal of Interprofessional Education and Practice*, *21*, 100377. https://doi.org/10.1016/j.xjep.2020.100377

Tajeri Moghadam, M., Abbasi, E., & Khoshnodifar, Z. (2020). Students' academic burnout in Iranian agricultural higher education system: the mediating role of achievement motivation. *Heliyon*, *6*(9), e04960. https://doi.org/10.1016/j.heliyon.2020.e04960

Tam, H. lin, Kwok, S. Y. C. L., Hui, A. N. N., Chan, D. K. yin, Leung, C., Leung, J., Lo, H., & Lai, S. (2021). The significance of emotional intelligence to students' learning motivation and academic achievement: A study in Hong Kong with a Confucian heritage. *Children and Youth Services Review*, *121*, 105847. https://doi.org/10.1016/j.childyouth.2020.105847

Vu, C. T., Hoang, A. D., Than, V. Q., Nguyen, M. T., Dinh, V. H., Le, Q. A. T., Le, T. T. T., Pham, H. H., & Nguyen, Y. C. (2020). Dataset of Vietnamese teachers' perspectives and perceived support during the COVID-19 pandemic. *Data in Brief*, *31*, 105788. https://doi.org/10.1016/j.dib.2020.105788

Woo, E. M. W., Serenko, A., & Chu, S. K. W. (2019). An exploratory study of the relationship between the use of the Learning Commons and students' perceived learning outcomes. *Journal of Academic Librarianship*, *45*(4), 413–419. https://doi.org/10.1016/j.acalib.2019.05.007