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Examining the impact of learning motivation, desire to work, and curiosity of students in the post-COVID-19 pandemic era

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ABSTRACT

This research aims to examine the influence of learning motivation based on environmental conditions, desire to work, and main desires. To achieve this, a quantitative research design was used, and a total of 500 students (101 boys and 399 girls) in Indonesia were selected as respondents using proportional random sampling techniques. Data collection was carried out using a learning motivation scale questionnaire. The results showed that students had a high level of motivation, with an average score of 50.8. The desire to work can be seen from hopes and dreams, as well as a conducive environment. It is known that external factors such as encouragement from others and involvement in activities have a greater influence with significance scores of 0.801 and 0.766 respectively. Meanwhile, appreciation and hopes or aspirations each received a score of 0.709 and 0.704. This implies that encouragement and activity can be integrated into the student's self. The research also shows that gender does not have a significant effect on the desire to learn. However, providing appropriate encouragement and rewards will increase students' willingness to learn, which can be maintained by educational institutions and parents and instill a desire for personal progress and development.

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1. INTRODUCTION

The COVID-19 pandemic has entered a transitional period towards a new normal life. This new phase necessitates careful preparation, particularly in the field of teaching and education, to effectively adapt to the changes brought by the new normal period as they directly impact the learning process [1]. The success of learning can be observed through changes in behavior and student outcomes. When students are motivated to learn, the learning activities tend to run smoothly [2]. Motivation, which can be defined as the drive to fulfill physiological or psychological needs [3], [4], plays a significant role. For example, it acts as a driving force for students, guiding their learning activities, ensuring the continuity of the process, and enabling the achievement of learning objectives. It is crucial to acknowledge that motivation is a complex aspect of human behavior that influences how individuals choose to spend time and energy on any given task [5], [6]. This behavior is evident in the choices of students in learning tasks, the time and effort invested, persistence in completing tasks, and their ability to overcome obstacles encountered during the learning process.

This study investigated the effects of learning motivation plays a very important role since encouragement is fundamentally an energizing force in learning implementation [4], [6], [7]. Furthermore, it is a key factor in achieving learning objectives and instilling in students the desire to actively participate in

the ongoing learning process. This phenomenon is the product of the interaction between extrinsic environmental stimuli and the intrinsic needs of individuals. Intrinsic motivation, such as the desire to learn, tend to yield better learning outcomes. However, a combination of strong intrinsic and moderate extrinsic motivation is considered optimal. The intrinsic arises from within students, driven by the desire for knowledge acquisition, achievement of goals, and fulfillment of learning needs. On the other hand, extrinsic comes from external sources, such as the demands from parents, a conducive environment, engaging learning partners, as well as interesting and enjoyable learning activities.

While earlier studies have explored the impact of recent technological advancements, motivation remains a powerful driving force that compels individuals to take action [8]. They have not explicitly discussed its influence on the importance of recognizing that the current pandemic conditions directly affect students' learning motivation [9]–[11]. To enhance their enthusiasm for learning, there is a need to obtain fast, precise, and accurate information [12], [13]. Creating a comfortable learning environment that facilitates easy access to information is essential for students. However, amidst the pandemic, many people tend to overlook the importance of fostering determination and a strong desire to acquire new knowledge. According to researchers [14], [15], self-motivation in learning generally plays a broader role compared to the environment. The need to adapt to new learning environments arises from the significant impact of the COVID-19 pandemic on the motivation of students. In the context of learning, motivation empowers individuals to receive, share, and acquire information, experiences, and knowledge, propelling them toward achieving their goals. Furthermore, it serves as a positive driving force that enhances self-improvement in action. To foster this drive, various strategies can be employed, including the implementation of rewards, praise, a genuine desire to learn, interest, and the establishment of goals to be achieved after the learning process. The indicators of success in this regard encompass i) a strong desire for success, ii) curiosity integrated with learning needs, iii) future hopes and aspirations, iv) appreciation for the learning process, v) engaging and interesting learning activities, and vi) the existence of a conducive learning environment that enables students to thrive [1], [16], [17].

In a practical world, individuals are required to exert their fighting spirit to achieve optimal results. The progress of modern times can have both positive and negative impacts on adolescent development as they are commonly faced with numerous daily stressors. Moreover, teenagers in the millennial era tend to prioritize convenience and often show indifference toward current events. To maintain societal stability, educators need to provide significant encouragement to enhance the learning motivation of the millennial generation. In this scenario, motivated teenagers can improve their abilities, foster self-development, and effectively navigate challenges, including adapting to new normal conditions after the pandemic. Individuals with strong learning motivation tend to possess knowledge, exhibit positive behavior, and take proactive actions in life. Therefore, this study aims to investigate the influence of learning motivation on the desire for success, appreciation of learning, and adaptation to the circumstances following the COVID-19 pandemic. Understanding and studying the impact of learning motivation on students is crucial to fostering their motivation, enabling them to make positive contributions to society, while minimizing negative consequences.

2. METHOD

In this study, a quantitative descriptive analysis was performed to examine the learning motivation among Indonesian workers during the pandemic. The study specifically focused on demographic factors, such as gender, domicile, and type of work. A sample of 500 workers was selected using purposive sampling and their characteristics can be seen in Table 1. The selection process followed predetermined criteria established by [18], which took into account the aforementioned demographic factors. This was to ensure the relevance, significance, and representativeness of the samples. Before the data collection process, ethical approval was obtained from the Education Research Ethics Committee, at Universitas Negeri Padang. Subsequently, data were collected using a questionnaire on learning motivation, which was developed based on existing theories [17], [19]. The questionnaire consisted of 20 statement items that measured aspects such as desire (D), appreciation (A), encouragement (E), activity (Ac), hopes or dreams (HOD), and learning environment (L). The construct validity of the questionnaire was developed and tested using a grid constructed according to a theoretical basis. Data were analyzed using the Rasch model and statistical analyses of conformity [20]–[22] parameters such as the outfit mean square (MNSQ) value (+0.5 to +1.5) and the outfit z-standard value (ZSTD) (-2.0 to +2.0) were used to assess the suitability of items and participants, detect measurement bias, identify item strengths and weaknesses, and determine the difficulty level relative to the ability of participants. This analysis aimed to reveal insights into the personalities of the students [23].

Data collection was performed online using the Google Forms application. In this scenario, a brief description of the study was carried out and it included the objectives, procedures, and ethical considerations. Interested participants were invited to fill out the questionnaire voluntarily, which was completed in about

10 minutes. The data were then analyzed using percentages, t-tests, and correlations with the help of JASP Version 20. First, descriptive statistics were used to determine the average, percentage, and work-life balance of working women. The final stage involved concluding the collected data, which was then grouped through statistical analysis, including t-tests and correlations. This conclusion addressed the problems formulated in this study.

Table 1. Demographic profile of respondents

Variable	Frequency	Mean	SD
Gender			
Female	399	81.769	8.495
Male	101	77.792	9.884
Residence location			
Live in a hostel	155	80.110	9.119
Live in parents' house	345	81.351	8.825
Status			
Work	442	79.500	10.192
Doesn't work	58	81.158	8.742

3. RESULTS AND DISCUSSION

3.1. Results

Based on the analysis of data collected from 500 students who responded to the questionnaire, the impact of COVID-19 on the learning motivation levels of students was examined. The data obtained were organized and presented in predefined categories in tables. The results of quantitative data analysis are summarized in Table 2.

Table 2. Student learning motivation N=(500)

Category	Interval	F	%
Very high	>84	206	41.2
High	68-83	254	50.8
Medium	52-67	38	7.6
Low	36-51	2	0.4
Very low	20-35	0	0.0
Total			100

Based on Table 2 it was evident that some students experienced a high level of learning motivation due to COVID-19. Specifically, 2 students (0.4% of the total) had a low level, 38 (7.6%) were in the medium category, 254 students (50.8%) had a high level, and 206 (41.2%) were in the very high category. Consequently, educators needed to address this situation through some appropriate measures, such as promoting a relaxed learning environment, fostering self-control and self-confidence, as well as discouraging the fear of failure. The results of the analysis can be seen in Table 3.

Table 3. Description of learning motivation sub-variables (N=500)

No	Aspect	Ideal	Max	Min	Mean	SD	Category (%)				
							Very high	High	Medium	Low	Very low
1	Desire	15	3	15	12.58	2.24	62	25.4	9.4	3	0.2
2	Encouragement	20	8	20	16.56	2.13	36.4	46.6	13.6	3	0.4
3	Hopes or dreams	15	8	15	12.99	1.37	40.4	46.8	8.4	4	0.4
4	Appreciation	15	6	15	12.36	1.75	52	34.2	7.2	5.8	0.8
5	Activity	20	6	20	14.90	2.60	28	46.4	15.2	9.2	1.2
6	Learning environment	15	3	15	11.55	2.37	35.2	46.6	12.4	4.8	1
Total		100	99	45	80.96	8.927	8.92	35.2	46.6	12.4	4.8

Table 3 shows the predominant learning motivation across various aspects, mainly in the medium category (S). The overall scores ranged from 45 and 99, with an average of 80.96 and a standard deviation of 8.927. Analyzing the data revealed an average score of 12.58 and 62% in the very high category (M), indicating that the desire of students for success significantly contributes to their learning motivation. Similarly, the aspect of Encouragement showed an average score of 16.56 and 46.06% in the high category

(t), demonstrating how enthusiasm and determination positively influence motivation in achieving learning goals. The hopes or dreams aspect obtained an average score of 12.99 and a high percentage (46.8%) in the same category (T), emphasizing how clear aspirations contributed to motivation in meeting learning needs. Additionally, the appreciation aspect achieved an average score of 12.36 and a percentage of 52% in the very high (ST) category, highlighting the role of rewarding learning outcomes. The activity aspect obtained an average of 14.90 (46.4%) in the high category (T), indicating that motivation thrived when learning activities were engaging. The last aspect was the environment, which had an average of 11.55 (46.6%) in the high category (M). This implied that there is a lack of conducive environmental support in student learning activities due to restrictions on social interaction. Consequently, these results showed the need to enhance the learning environment, provide support, and encourage knowledge acquisition, appreciation of learning activities, and aspirations, because many teenagers require motivation in their learning journey. These behaviors were influenced by internal factors such as knowledge, attitudes, facilities, experiences, culture, society, and beliefs. The relationship between each sub-variable was analyzed in Table 4, where D is desire, E is encouragement, HoD is hopes or dreams, A is appreciation, Ac is activity, LE is learning environment, and LM is learning motivation.

Table 4. Results of Pearson correlation analysis of learning motivation based on aspects

Aspect	D	E	HoD	A	Ac	LE
D		0.362	0.308	0.316	0.271	0.277
E	0.362		0.649	0.546	0.508	0.438
HoD	0.308	0.649		0.540	0.428	0.327
A	0.316	0.546	0.540		0.445	0.337
Ac	0.271	0.508	0.428	0.445		0.498
LE	0.277	0.438	0.327	0.337	0.498	
LM	0.600	0.801	0.704	0.709	0.766	0.701

Table 4 shows the relationship between learning motivation and encouragement, which had a strong and significant correlation of 0.80. Similarly, the relationship between learning motivation and activity was also strong, with a correlation of 0.76. These findings indicated that higher learning motivation was associated with encouragement. However, the aspect of desire had the lowest correlation of 0.60, meaning that it had a less significant impact on increasing the willingness to learn. Based on this result, it was inferred that the willingness of students to learn was influenced by factors such as desires, hopes or dreams, and encouragement from others.

In addition, the scores for learning motivation about the environment and hopes or dreams were 0.701 and 0.704, respectively. These scores indicated that a positive learning environment and having hopes and dreams had a beneficial impact. The results also showed that external factors such as encouragement and activity had a stronger influence on learning motivation, with significance scores of 0.801 and 0.766, respectively. Appreciation received a score of 0.709, while hopes or aspirations scored 0.704. Considering the conditions of the COVID-19 pandemic, the aspects of learning motivation that had the highest correlation were encouragement and activity. On the other hand, the least influential factors were the effect of basic science knowledge on the action variable, followed by the effect of trust in news sources on analytical thinking skills. Table 5 does not show any significant difference between the tendencies of men and women in exhibiting negative behavior.

From Table 5, the group statistics consisted of 101 males and 399 females, with an average learning motivation score of 77.79 and 81.76, respectively. This implied that there was a difference in willingness to learn based on gender. Table 6 shows the interpretation of the independent samples t-tests to determine the significance of this difference.

According to Table 6, the "mean difference" value was -3.977, reflecting the difference in average learning motivation between men and women. This calculation was derived by subtracting the average learning motivation of women (81.76) from that of men (77.79), producing a difference of -3.977. The range of the difference fell between -5.901 and -2.053 (95% confidence interval of the difference lower upper). Consequently, these findings suggested that there was no statistically significant distinction in the trend of learning motivation between men and women.

Table 5. Description of gender data based on the learning of motivation

Group statistics				
Gender	N	Mean	Std. deviation	Std. error mean
Male	101	77.79	9.884	0.983
Female	399	81.76	8.495	0.425

Table 6. Results of t-test analysis in terms of gender

	Independent samples T-Test							
						95% CI for mean difference		
	t	df	p	Mean difference	SE difference	Lower	Upper	Cohen's d
Total	-4.062	498	<.001	-3.977	0.979	-5.901	-2.053	-0.452

Note. Student's t-test.

3.2. Discussion

The purpose of this research is to obtain information regarding the analysis and description of the extent of student learning motivation during COVID-19, this needs special attention because low motivation can have a negative impact. Previous studies have also found that when the willingness of an individual becomes low, it could lead to negative emotions, physical issues, decreased life satisfaction, and reduced happiness [24]–[32]. We found that this implied that all these aspects collectively contributed to fostering a stronger tendency toward learning motivation in adolescents. Learning motivation is crucial [24], [31] and should be accompanied by a conscious attitude toward acquiring new things [33], [34]. The learning methods proposed in this study tend to have a much higher proportion. It refers to conscious efforts that can be directly observed through actions, such as desires, hopes or dreams, appreciation, and involvement in learning activities in the environment [16].

Our research shows that this level allows individuals to increase their motivation to learn by having desires, hopes, or dreams, and support from their environment. The presence of desire can be seen as a response to activities that lead to achievement [35], [36]. Everyone has goals in life [37], [38], which are not associated with poor performance and students also need to have goals to achieve their desired accomplishments. The proposed learning method can provide benefits such as desire which is said to be a driving force that motivates individuals to act and strive to achieve success and influence without causing negative impacts. This desire is what makes students unable to stay at home every day and carry out unproductive activities such as excessive use of smartphones instead of studying for exams. This research explores the passion and drives individuals to pursue their endeavors [39], [40], comprehensively guiding their daily activities. Passion is what makes individuals persist when they want to give up [6], [41]. However, further and in-depth study may be needed to ensure that desire alone cannot be maintained because it requires nurturing and support. Teachers or educators play an important role in validating students' aspirations and providing more than just motivation to learn new things [42]–[45]. This could help students set clearer goals and encourage them to keep exploring new things with a positive mindset.

Our study demonstrates that positive curiosity was important during the COVID-19 pandemic as it helped individuals seek new information and face challenges [46], are more resilient than included hopes and dreams, as well as the environmental factors that supported different responses [47]. Further research can explore a person's curiosity, especially regarding aspects of understanding the subject matter, so that it can motivate them to learn in a way that produces appropriate results. Two desires increase motivation, namely gaining knowledge and receiving recognition and awards [48], [49]. Recent observations suggest that the Global reports identified several factors that boosted students' motivation, such as developing an increased interest in learning, being creative and prepared, appreciating the learning community, and embracing diverse perspectives [48], [50], [51]. Our findings provide conclusive evidence that this proposed learning method is related to the other hand. a lack of motivation can lead to feelings of panic or regret, which can then manifest in changes in certain behaviors, rather than because of an increase in the number of people doing those things [48], [50], [52]–[54].

4. CONCLUSION

In conclusion, this study showed that the learning motivation of students after the pandemic was categorized into three, namely very high, high, and low. Although the overall score was good, there was still a need for improvement in terms of direction because only 0.06 participants were categorized as sufficient. To achieve a better result, there is a need to enhance the learning environment, hope and dream, activity, and appreciation. The dominant factor closely related to this was encouragement, with a score of 0.08. In addition, learning motivation based on each factor produced a score of 0.701 for the environment and 0.704 for hope or dream. This showed that a conducive environment, as well as hopes and dreams, could have a positive effect in this scenario. It was also found that learning motivation was primarily influenced by external factors, such as encouragement from others and engaging in activities. This was evident from the significance scores of 0.801 and 0.766. Appreciation received a score of 0.709, while hopes or aspirations scored 0.704. Therefore, the aspects related to COVID-19, which had the strongest correlation with readiness to learn were encouragement and activity. This study also found no significant effect of gender on learning

motivation trends. However, proper encouragement and appreciation could enhance this desire, which was expected to be maintained by educational institutions and parents. Educators, including counselors, played a crucial role in this aspect by providing various psychological interventions through guidance and counseling services and by optimizing self-potential. Future studies should also consider utilizing learning motivation as a means to instill the desire for progress and personal development. This proactive approach was important because the desire to perform a task thrived when it originated from within and was reinforced externally, serving as a constant reminder to keep moving forward and evolving in life, particularly for the millennial generation.

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