

Factors of Increasing Students' Motivation in Educational Settings: A Review

Heng Ee How¹, Chong Chew Lan², Siti Noorahayusolah Binti Kosnandi³, Nur Syuhada Binti Zainal Abidin⁴

¹Faculty of Social Science and Humanities, Tunku Abdul Rahman University of Management & Technology, ^{2,3}Faculty of Accountancy, Finance And Business, Tunku Abdul Rahman University of Management & Technology, ⁴Faculty of Computing and Information Technology, Tunku Abdul Rahman University of Management & Technology
Email: hengeh@tarc.edu.my, chongcl@tarc.edu.my, noorahayusolah@tarc.edu.my, nursyuhada@tarc.edu.my

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Abstract

Student's academic success depends mainly on their academic achievement motivation. This study aims to review the factors that enhance the students' motivation. Four factors are discussed in this study, namely, theory and framework to enhance motivation, mode of learning, educational tools design, and educational psychology. The past literature studies revealed that researchers incorporated various theories and frameworks in their research to achieve certain goals. The mode of learning like collaboration activities via online and face-to-face classes affects the motivation in learning. The design of the educational tools is found to be effective in heightening the students' learning motivation, specifically, incorporating game elements in educational tools improves students' learning motivation. Studies conducted to increase motivation through educational psychology include increased learning willingness which lowers anxiety and leads to an increase in motivation to learn. The implication of the review study can help in increasing the awareness of the researchers in making a conscious effort to incorporate effective ways that can increase students' learning motivation.

Keywords: Motivation, Educational Settings, Educational Tools, Academic Achievement, Educational Psychology

Introduction

Student's academic success depends mainly on their academic achievement motivation. Motivation, the extent and intensity with which students apply themselves to learning, refers to "cognitive, emotional, and behavioral indicators of student investment in and attachment to education" (Tucker et al., 2002). While there are many factors that affect academic achievement in higher education, motivation is one of the most influential factors. Motivation

is referred to as an “internal condition that stimulates, directs and maintains behavior” (Kumar, 2017). Undoubtedly, students will not put in extra effort in their studies for recognition and rewards if they are not motivated to succeed.

Previous studies focused on the student’s learning motivation enhancement plan. According to Zhang (2021), learning motivation is the most important factor influencing learning performance and acquisition. The factors to increase students’ motivation are indeed important as it helps to increase students’ performance. Hence, four factors are discussed in this study, namely, theory and framework to enhance motivation, mode of learning, educational tools design, and educational psychology. The review of the past literature has shown that researchers have used a variety of theories and frameworks to achieve certain goals in their research projects. Learning motivation is influenced by the mode of education, whether it is via in-person classes or online collaborative activities. It has been shown that the design of the instructional tools effectively increases students' desire to study. Specifically, adding elements of games to instructional materials makes students more motivated to study. Lastly, research in educational psychology seeks to improve motivation by encouraging a stronger desire to learn, which in turn lowers anxiety and increases motivation to learn.

Theory and Framework to Enhance Motivation

According to Chazan et al (2021), it is crucial to understand what motivates people to succeed. They found that much research in the last three decades has shaped various models of Achievement Goal Theory which focuses on how people perceive their own competence in the sense of being capable of performing a task or activity well and how their goals affect their behavior. Recognizing these goals helps experts comprehend the main reason for students to strive in academic settings. Some researchers said that these goals are not flexible, but newer research stated that these goals can be changed depending on the situation. This is helpful for psychologists who want to find ways to motivate students better. As highlighted by Maehr & Zusho (2009), despite ongoing development in the specific models and theories related to Achievement Goal Theory, there is still a consensus among researchers regarding the central importance of the construct of competence within the theory.

This theory has a significant impact on students’ motivation as shown by Hulleman et al (2010) in their research which defined that achievement goals are future-oriented cognitive representations of desired outcomes. These goals serve as guides for students' behavior and can shape their motivation in different ways. In education, it is crucial to comprehend how students' choice between mastery or performance goals, in conjunction with their perception of competence impacts their motivation. This concept is well supported by Elliot & Murayama (2008), which illustrated that students driven by mastery goals exhibit intrinsic motivation and a passion for learning, while those who focus on performance goals may prioritize external rewards or fear of failure over genuine interest in learning. Additionally, students with a growth mindset believe they can improve their abilities through effort by showing persistence and resilience when dealing with challenges, while those with a non-flexible mindset might try to avoid difficult tasks. Educators can leverage this understanding of students' mindsets and motivation to create a more effective and supportive learning environment that encourages mastery goals, emphasizes growth as well as effort, and provides opportunities for students to experience competence and success. This approach can cultivate self-efficacy and intrinsic motivation without relying on external rewards or pressures, ultimately leading to achieve learning outcomes and fostering lifelong learning.

Covington (2000) also agreed that mastery goals benefit more in student achievement when compared to performance goals. Students with mastery goals tend to be more engaged in their learning, use more effective strategies, and persist in the face of challenges. They are also less prone to facing anxiety and fear of failure. This distinctive feature is central to Covington's framework for understanding the link between goal-setting, motivation, and academic achievement. This distinction has significant implications for educators in academic settings.

The neglected dimensions of learning in simulation-based medical education research are motivation and affective areas (Moll-Khosrawi et al., 2021). According to Eccles-Parsons et al (1983) as well as Wigfiel and Eccles (2000), the expectancy-value theory posits that the motivation of individuals in task performance is contingent upon two key elements: subjective task values (the desire of individuals to complete the task) and expectations of success (which rely on individuals' beliefs in how skillful they will execute a given task). The subjective values of tasks comprise three elements: (1) Importance: the value of achieving the given task; (2) Interest: the intrinsic value or the value of being interested in the task; and (3) Usefulness: the task value to achieve future objectives. Hence, in order to increase learners' motivation to learn, it is critical for learners to complete the task that not only improves their learning but also improves their views of the task values (Gao et al., 2023).

In the 3D virtual world simulation conducted by Gao et al (2023), students could successfully apply their knowledge to a task that required them to assist the villages. The medical students were able to apply what they learned which allowed the students to easily see the practical significance of their learning. According to the findings, students' subjective task values were enhanced. Therefore, the medical students' motivation was improved.

Getty et al (2021) demonstrated five important steps that made up the motivational planning process, which used an Expectancy-Value-Cost (EVC) framework to increase student motivation in college courses. It chooses which pedagogy and teaching techniques are most effective to study and implement. The process begins with learning the Expectancy-Value-Cost framework and identifying the main motivational challenges in the classroom. Next, it involves determining the source of these challenges either expectancy, value or cost. Afterwards adopting research-based teaching strategies to address the challenges, followed by assessing the effectiveness of the teaching strategies as the final step.

The EVC framework, historically, resembles the early motivational model initiated by Atkinson (1957) known as the theory of risk-taking. According to his theory, three things influence people's willingness to take chances: their fear of failing, their incentive value for success, and their expectation of success. Meanwhile, another comprehensive model that includes expectancy, value and goal beliefs developed by Pintrich and Schunk (2002) is applicable to a wide range of educational settings, including higher education. The model suggests that students' motivation to engage in their study is influenced by their expectancy beliefs perceiving their ability to succeed, their value beliefs related to perceptions of the importance of the work, their goal beliefs which let them to set specific objectives for themselves and their self-regulatory beliefs about their ability to manage their learning.

Then, as mentioned by Ainsworth & Meece (1998) in their review of various theories of motivation, including expectancy-value theory and self-efficacy theory, this EVC framework has also been used to identify students who are at risk of potential for not completing their education. They proposed this EVC framework can be used to identify students who are at risk of leaving school prematurely by assessing their expectancy beliefs, value beliefs, and cost beliefs. Has been used to develop interventions to improve student motivation. Effective

interventions such as to provide students with opportunities to develop their self-efficacy beliefs Bandura (1997) or teaching students self-regulatory strategies Zimmerman (2000) or helping students to set SMART goals Locke & Latham (2002) can then be targeted to these students to help them increase their motivation and engagement in study.

As the primary goal of EVC framework is to benefit students by increasing their motivation to achieve academic goals, Hidi & Harackiewicz (2008) mentioned it greatly helps teachers to understand the motivational factors that influence their students' behavior. Meanwhile, Henderson & Mapp (2002) highlighted the contribution of this framework as an advantage to school administrators to develop policies and programs that promote a positive school climate and that support student motivation. Based on the National Research Council (2000), the EVC framework significantly informed policymakers about the key factors influencing student motivation and served as a critical benchmark for guiding the development of effective educational policies.

Mode of Learning

In the past three years, we have been maintaining social distancing till today from each other as the effect of the changes in the community due to covid-19 pandemic. In order to avoid the transmission of the virus, most educational institutes suspend their lecture, tutorial and practical classes and students are having online classes at home. Due to the sharp rise in remote learning, the nature of education has drastically altered these days. The activities of teaching and learning are carried out virtually via digital media (Mohamed et al., 2021)

Despite the advantages of online learning, there are some negative impacts caused by social media. It is generally agreed that social media platforms such as Facebook, WhatsApp, Douyin, Instagram, WeChat, LinkedIn, etc. which contain interesting – topics have become an integral part of student's daily lives, taking up most of his/her spare time in browsing various types of information on the internet instead of doing exercise, reading a book or spending time for exam and test. It is proven by a finding that the time spent by the respondents on social media on the phone or tablet screen stressed the impact on their academic performance ends up negative with the reason that the respondents don't have time to make assignments or study (Talaue et al., 2018).

Nevertheless, how social media is used by students has a direct and indirect effect on students' academic achievement. Therefore, it is important that students manage their social media as a device not just for social communication, amusement or enjoyment but also in their academic pursuits meanwhile maintaining a healthy study-life balance

To overcome this, there are various ways and factors that can overcome the impact brought by digital platforms. Gautam and Gautam (2021) revealed that for the online teaching-learning process, each university is required to generate a virtual mode of teaching and learning environment by developing an "education-friendly curriculum, latest technology, designated faculty and proactive administration involvement".

In addition, Hosen et al. (2021) stated that educational institutions may consider developing systems by enhancing social connection by sharing educational materials through different social media sites in order to promote students' learning performance. Moreover, more constructive feedback through discussion and the contribution of ideas from different experts in the social media groups may produce a positive impact on students' learning performance meanwhile helping to foster the creation of information within knowledge-sharing communities

Tan (2020) believed that it is important to provide a good virtual learning atmosphere by providing a virtual learning management platform to enhance students' learning motivation and meanwhile to encourage societal responses to the role of digital technologies in today's educational world and subsequently improve the students' learning performance. Narca and Caballes (2021) suggest that to encourage students to perform better in their studies, and make the process more enjoyable, certain motivational activities can be introduced. These activities could involve quizzes and interactive features, providing students with instant feedback and keeping them engaged. The internet is widely recognized for providing significant opportunities for adaptability, interaction, and innovation. Furthermore, fostering motivation through goal-setting involves informing students precisely about the tasks necessary for learning. This can be achieved efficiently by accomplishing designated activities weekly, accessing all provided lesson materials, and summarizing comprehension. Teachers have the option to encourage students through the use of rewards and positive feedback. Consequently, they can establish a digital incentive structure capable of genuinely inspiring the students. Positive feedback can also be conveyed through engaging videos, GIFs, and images. These commendations and praises are intended for students who demonstrate mature and respectful online communication, achieve new personal bests, invest extra effort in completing additional activities, and show notable signs of improvement. This approach nurtures a sense of continuous connection for students within the classroom. The role of teachers in developing learner autonomy is crucial, and scaffolding is essential in the process. In addition, the level of independence demonstrated by learners during online learning can be affected by their motivation and willingness to collaborate with others. Creating an online environment that encourages curiosity, teamwork, and a desire to learn together can significantly increase student engagement. When students are motivated, they take ownership of their learning and strive to achieve their goals. Furthermore, learners' autonomy can be positively impacted by the motivation and collaboration of their peers during online learning. Consequently, educators introduce various collaborative activities and strategies to facilitate active learning in the online environment. Online learning actively encourages and complements students in accessing information, as well as facilitating independent learning, which presents collaborative opportunities for acquiring essential complex skills (Susanti et al., 2023).

Educational Tools Design

Based on previous studies, the integration of a pedagogical agent that incorporates physical movements in an educational environment has been linked to the improvement of educational achievements (Mayer & DaPra, 2012; Davis, 2018). According to recent research in a multimedia learning environment, the inclusion of an instructor inside it has been shown to have a positive impact on both intrinsic motivation and mental effort (Beege et al., 2022; Lin et al., 2020).

Although Krieglstein et al (2023) found in their study that manually sketching on a whiteboard resulted in a greater level of intrinsic motivation if compared to the action of moving visual information onto the whiteboard animation, they perceived that the appearance of human voice can be viewed as credible and learning-facilitating approach (Mayer et al., 2003; Mayer & DaPra, 2012; Krieglstein et al., 2023). In addition, Krieglstein et al. (2023) opined that dynamic drawing motivates students' engagement extensively in generative processing (Fiorella et al., 2020). Furthermore, according to the signalling principle (Chun, 2000; Alpizar et al., 2020), dynamic drawings serve as cues that guide learners' attention to learning.

As Plass et al (2020), Wouters and van Oostendorp (2013) pointed out, the use of game elements as an educational tool has been defended for its potential to increase student (or user) engagement and motivation. Engagement can trigger interest and motivation (Axelson & Flick, 2010; Christenson et al., 2012). As described by Schwartz and Plass (2020), engagement is “the active and focused investment of effort in a game environment”. Huber et al. (2023) provided evidence for the positive impact of integrating game elements into online learning environments. Their findings indicate that such integration increases behavioral engagement among learners, resulting in a reduction in learner attrition. Moreover, learners with lower levels of self-efficacy are more likely to benefit significantly from such game element incorporation. While game elements may have negative effects on the cognitive learning outcomes of high-achieving people, for other individuals, any cognitive costs seem to be complemented by increased engagement, resulting in enhanced motivation and interest in the task that they are doing.

Educational Psychology

Motivation means forces acting on or within a person to initiate behaviour. A well-paid career was recognized as one of the motivational factors that motivated students in Hong Kong to succeed at university (Kember, 2000). In addition, the study also commented that the willingness of family or extended family members to share educational fees can be seen as a collective nature which has indirectly motivated the students to study hard and succeed in their studies,

In the new era of e-learning before the COVID-19 pandemic, students faced online anxiety while having their classes at home, however, according to Gautam and Gautam (2021), for students with a higher willingness and positive behaviour to learn, learning at home lessened the degree of anxiety. The study also revealed that the participants in the studies had the perception that the “pandemic provided a better opportunity of being technology-friendly”. In summary, students learned to adapt to the new learning environment by showing the initiative to enjoy learning and being accountable for themselves.

According to Long et al.'s (2022) research, the majority of college students, 77.4%, set periodic goals and make an effort to achieve them. Moreover, 80.8% of the surveyed students believe that hard work is essential for accomplishing their life goals, which is the highest percentage among all the responses. 80% of students believe that individual interests should be outranked to collective and general interests when a conflict arises. A comparable percentage of students believe that their life perspective is shaped through self-directed learning and exploration, as opposed to the influence from family, parental guidance, social surroundings, or formal school education. Proposing an innovative approach to cultivating students' life perspectives rooted in positive psychology within the realm of educational psychology, there is a call for revamping educational environments, theoretical content, and teaching methods in shaping students' outlook on life.

Conclusion

This study reviewed four factors that enhance the students' motivation. The past studies explored and incorporated ways based on theory and framework to improve students' motivation. Achievement Goal Theory states that mastery goals, as opposed to performance goals, often have a more favourable effect on students' achievement. Students who have mastery targets show greater levels of involvement with their studies, use more effective strategies, and show perseverance in the face of difficulties. Furthermore, they are also less

likely to feel anxiety and fear when confronting failure. On the other hand, the Expectancy Value Theory posits that two essential elements determine an individual's motivation for completing a task: subjective task values, or the desire to finish the task, and expectations of success, or the belief in one's own ability to skillfully perform the task. The subjective task values refer to the values assessed by the learners on the activity's importance, interest and usefulness. Here, the Expectancy-Value-Cost (EVC) framework discussed here takes into account three aspects that influence people's willingness to take chances: their fear of failing, their incentive value to succeed, and their expectation of success. Locke and Latham (2002) suggested using SMART goals to increase learners' engagement and interest in learning.

The second factor reviewed is the mode of learning that affects learners' motivation to learn. Because activities and collaborative learning promote engagement, this instructional approach can enhance learning motivation. Due to the COVID-19 pandemic, it became a norm in education to access learning materials and classes via online platforms. This results in learners overly using social media. Hosen et al. (2021) stated that educational institutions should consider developing systems that enhance social connections and facilitate the sharing of educational materials via diverse social media platforms. This approach aims to tackle the issue at hand and enhance students' academic performance. In addition, enhancing feedback via interactive discussions and incorporating input from diverse social media experts can enhance students' learning outcomes and foster the creation of information within knowledge-sharing communities. In addition, goal-setting involves promptly and correctly informing students about the tasks needed for learning, which motivates students to use digital platforms with interactive features that provide quick feedback. In order to enhance motivation and engagement, educators may also provide a range of collaborative activities and procedures that foster interactive and dynamic learning in an online environment.

The creation and design of educational tools that encourage motivation is the third factor of the review. There is a link between improved academic achievements, better intrinsic motivation, and increased engagement when varied teaching techniques and components are integrated. The use of a pedagogical agent in a classroom that contains physical movements has been linked to improved learning results, and using a human voice may be seen as a credible and learning-facilitating approach. A different strategy that has been supported for its capacity to increase students' motivation and participation is the incorporation of gaming elements into educational materials. Interest and motivation can be sparked by such engagement.

The fourth factor delved into the realm of educational psychology. According to the principles of educational psychology, extrinsic motivation motivates students to study harder. Students showed a greater inclination to put in more effort into their studies when they chose a well-paying career and had financial support from their family to pay for their education. Conversely, when students assume complete responsibility for their online studies during the COVID-19 Movement Control Order, their motivation increases as their will to learn outweighs their learning anxiety because they are fully responsible for learning online at home. Another research in the realm of educational psychology demonstrates the influence of self-directed learning in shaping the life perspective and contributing to learning motivation.

Motivating learners is a complex undertaking that requires careful attention to several factors. The characteristics and factors reviewed here are crucial aspects that scholars have discovered that have proven to have a significant influence on motivating learning. This study highlights the potential efficacy of using well-established theories, varied instructional

methods, educational instruments, and concepts of educational psychology. By using knowledge gained from previous research, educators may develop ways that not only conform to established techniques but also augment and maintain learners' motivation. In conclusion, this study helps to increase the awareness of the researchers in making a conscious effort to incorporate effective ways that can increase students' learning motivation.

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