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The Relationship Between the Levels of Motivation and Learning Strategies of Aspiring Teachers at the Higher Education Level

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Abstract: The motivation levels of potential teachers in higher education and the learning strategies they use are contrasted in this study. A student's learning style and, therefore, their academic performance, are heavily influenced by their intrinsic and extrinsic motivation. Strategies for learning might range from memorisation to analysis and synthesis. This impacts students' academic achievement. Therefore, the primary objective of this research is to examine the relationship between intrinsic motivation and the effectiveness of various learning strategies among future educators. Understanding these relationships can enable teachers to better support student engagement and academic success. By highlighting the role of educational psychology in shaping effective teaching methods, this study aims to enhance teacher training programs to better address students' diverse learning needs and promote improved study habits through intrinsic motivation.

Keywords: motivation, learning strategies, intrinsic motivation.

1. Introduction

1.1. Research Background

According to Bustato et al., students' study habits and the amount of intrinsic motivation have a significant impact on their academic performance. [1] Motivation may have a significant effect on how a student approaches learning. Factors from inside and outside the organisation are included in this. Curiosity and a desire to achieve one's own goals are examples of internal motivators. Rewards and praise are examples of extrinsic motivation that operate in a different way. From rote memorisation to more sophisticated strategies like analysis and synthesis, students' methods of learning may vary greatly. This is crucial when the students' deadlines draw near. Future educators would do well to prioritise learning about the relationship between students' intrinsic drive and effective teaching methods. Educators may foster a better learning environment by being aware of their interdependencies. Teachers might motivate student engagement and development in this manner. For instance, educators who fully understand these dynamics may better tailor their classes to each student's individual needs. The standard for academic success may be increased. Finding out what drives and how people learn best for university teaching positions is the driving force behind this study. In order to further our understanding of educational psychology, this research aims to

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identify patterns and correlations between different motivating factors and preferred learning styles. This essay does double duty by drawing attention to the importance of these psychological aspects and by using recent research results to investigate their possible consequences for educational policy and practice moving forward. In addition, the results of the research might shed light on how teachers can better differentiate their lessons to meet the requirements of their pupils. This may lead to classrooms that are more welcoming and productive for everyone.

1.2. Importance of the Topic

An internal drive to achieve a goal is what really motivates individuals to take action based on Bandhu et al. [2] Achieving one's objectives requires this kind of inner motivation. It propels people to work tirelessly towards them. How seriously and persistently pupils take their academic pursuits is determined by its implementation in the classroom. [3] If pupils aren't interested in learning, they won't be able to absorb and remember what they learn, no matter how good the teacher is. Methods of learning, on the other hand, refer to the many ways in which students absorb, process, and retain information. Visual, auditory, and kinesthetic learning are all possible approaches, along with more advanced tactics like active learning, self-reflection, and critical thinking. For students to achieve their full academic potential, it is crucial to understand how their individual learning styles intersect with intrinsic motivation. Students who actively engage with the content via strategies such as self-testing, spaced repetition, and elaborative questioning are more likely to have a thorough grasp of it. When combined with intrinsic motivation, it results in better grades. Motivation and efficient study methods are the two most important factors in academic achievement. [4]

The learning environment, the significance of feedback, and the topic's relevancy are additional crucial considerations for enhancing teaching approaches and student accomplishment. Students' desire and ability to study are both boosted when they can understand how their coursework relates to the actual world, according to research. [5] How to best foster and support students' motivation and learning techniques in educational contexts might be better understood by investigating the relationship between these variables. This matter is most prominent when it comes to enhancing educational outcomes and methods of teaching, as these aspects work together to build a classroom climate that encourages students' academic and personal growth over the long run.

Research indicates that students with high levels of motivation are more inclined to employ efficacious study techniques, which subsequently contributes to enhanced academic performance within the classroom setting [6]. This correlation underscores the importance for educators to not only foster effective study habits but also actively cultivate students' intrinsic motivation to achieve. This information should be highly valued by programmes that train educators. Therefore, these programmes may be tailored to inspire future educators to create an atmosphere that boosts students' intrinsic motivation and to use a range of learning strategies to meet the demands of their diverse student bodies. [6] Therefore, schools should perform more studies on how different learning strategies relate to students' intrinsic motivation in order to enhance their teacher training programmes. To make sure that the next generation of teachers has what it takes to inspire their pupils to learn and succeed in the classroom, this kind of study is essential. It will also influence educational policy more generally. Teacher preparation programmes may build educators who can create dynamic, engaging, and supportive classroom settings where students are both motivated and empowered to excel academically by incorporating these findings into their curriculum. [7]

2. Relevant Domains of Psychology

Some branches of psychology may hold the key to unlocking the mysteries of intrinsic motivation and learning. Researchers in the field of educational psychology have long been curious in the effects

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of various classroom settings on students' want to learn and retention of course material. Krapp states that educational psychologists study different classroom dynamics to better grasp how children learn and remember things. [8] Their goal in doing this study is to identify what makes students more motivated to learn and how they can best support their learning. Teachers need to know their students' learning styles and interests in order to design lessons that engage all types of students. A fundamental objective of cognitive psychology is to comprehend the brain's learning process. Intrinsic motivation significantly influences many cognitive functions, such as memory, attention, and problem-solving ability. [9] Students who are very intrinsically motivated are more likely to carry out the critical thinking tasks—such as analysing, synthesising, and evaluating—required for deep learning. Because of this, cognitive psychology is an essential discipline for comprehending the learning process and the factors that motivate students to succeed in the classroom. Research on individual preferences in learning, however, is heavily dependent on these mental operations. Research in this area is complex in and of itself. These preferences could help shed light on the intricate relationship between cognition and personalised learning.

Personalised lesson plans take into account each student's cognitive style, which is their strategy for absorbing, organising, and interpreting new knowledge. A student's cognitive style is the manner in which they approach assignments, solve issues, and comprehend new information. [10] Each person's own blend of these cognitive styles plays a major role in shaping their preferred learning style. One example is the need of tailoring lessons to each student's unique learning style. [11] Because of this, their ability to absorb new knowledge is impaired. There are primarily three ways in which our senses of sight, sound, and touch are processed. Also, it is essential to understand how children learn is the idea of metacognition. The capacity to analyse and assess one's own mental processes is what this skill entails. The methods that students use to comprehend course information are greatly affected by their degrees of metacognition and self-regulation. [12] Abilities to organise, track, and assess one's own learning are included in this group. Students who are good at reflecting on their own learning and coming up with ways to improve their own performance in school are more likely to succeed academically. It is essential for educators to have a deep comprehension of the psychological components of learning if they are to design lessons that encourage students to improve their metacognitive abilities and intrinsic motivation. A person's cognitive type includes their abilities in processing and interpreting information. Their chosen learning techniques are greatly impacted by this. Students' performance on standardised tests may increase dramatically with personalised lessons. [13] Online course personalisation to meet student needs was emphasised by Lo et al. [13] Schools should prioritise developing a curriculum that is adaptable and focused on the needs of individual students in order to meet the needs of students with a wide range of learning styles.

A new angle might be revealed by taking a look at learning and motivation through the lens of developmental psychology. Intrinich and Zusho examined how different stages of development and formative experiences affect people's intrinsic drive and learning style over the long run. [14] Students' participation in learning activities that enhanced their academic performance was much higher among those who reported higher levels of intrinsic motivation. Intrinsic motivation determines how a person learns best. Their own life experiences, both in and out of school, have an impact. This changes as time goes on. The relationship between intrinsic motivation and specific learning patterns has been the subject of much study, with a heavy emphasis on studies involving prospective teachers. To back up their claim, Algharaibeh used a correlational study to elucidate how prospective teachers' intrinsic motivation correlated with their preferred learning strategies. [15] With the exception of seeking help, the study indicated a positive correlation between high levels of intrinsic motivation and the majority of learning strategies. These numbers show that students with a strong desire to learn independently are more likely to seek out and employ study methods that encourage independent study. To conduct the study, Artino created the Motivated Strategies for

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Learning Questionnaire (MSLQ). It looked at the relationship between intrinsic motivation and various learning strategies. [16] Students with high levels of intrinsic motivation often initiate the process of developing, executing, and evaluating their strategies for learning. [17] These findings further accentuate the significance of self-regulation and metacognitive strategies in the learning process. The observed connection between intrinsic motivation and the development of innovative learning approaches suggests that students' internal drives can play a pivotal role in their academic performance and classroom engagement. In light of these observations, it would be highly beneficial for aspiring educators to comprehend the interplay between intrinsic motivation and various learning methodologies.

3. Research Findings

Motivated students had a higher propensity to use tactics that enhanced their academic performance. [6] Among these skills are the ability to plan ahead, practice until flawless, think critically, organise children's study space and time wisely, exert self-control, and learn from other peers. Students' motivation determines how much effort they put into their studies and what strategies they use to enhance their understanding and retention of material. Highly motivated students are likely to demonstrate traits like planning ahead, applying critical thinking to complex problems, and establishing a conducive environment for focused learning. Students' engagement with the material increases, and their grades go up, when they use these strategies. On the other hand, different techniques have different relationships with different degrees of motivation. An example of this is the strategies like elaboration and rehearsal tend to be connected with moderate levels of motivation. Students who are moderately driven to study still make use of strategies like outlining topics to help them completely grasp them or practicing material to help them memorise them. However, they may not be as proactive as students who are highly motivated. At the same time, measures such as organisation and peer learning may still be beneficial for individuals who lack motivation. These approaches give quick and controllable solutions to improve learning without requiring as much personal drive. [18] These results highlight the significance of encouraging future educators to make good use of their time by giving them incentives. Enhancing students' intrinsic motivation allows instructors to empower them to embrace a diverse array of tactics that enhance learning efficiency and long-term retention.

A student's capacity to learn is highly related to their level of intrinsic drive. If an educator wants the lesson plans to be effective, Brophy mentioned that the teacher needs to know the students' motivations. Educators can better engage their students and inspire them to learn on an intrinsic level when they have a firm grasp of what drives their pupils. [19] Teachers may find this data very helpful in improving their students' learning since engaged and successful students are intrinsically driven to do well in class. Key indications of academic achievement have long been acknowledged, as Coates pointed out, as students' enthusiasm and engagement with academic subject. [20] Consequently, encouraging learning is essential for both short-term results and the development of a lifelong love of learning and intellectual development.

According to studies on learning methods and motivation, students' strategies for studying and how they perceive their own motivation greatly influence their actual learning results. [6] [21] [22] In general, students' academic performance improves when they report higher levels of intrinsic motivation. Conversely, students who lack motivation are more likely to choose ineffective tactics. This might exacerbate their learning difficulties. Fostering a development mindset and promoting self-reflection among students is crucial. It demonstrates the value of motivation and learning methodologies working in tandem. Learning methods include everything that students do to understand more, retain more, or transfer what they've learned. [23] Taking notes and summarising are examples of elementary techniques. At the same time, applying ideas to real-world situations and

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integrating new information with old frameworks are examples of more complicated methods. Another way to look at it is that children' learning methods are different combinations of activities. The variety of these techniques tends to grow as pupils go through school. According to Thomas and Rohwer, students' learning strategies are fundamentally their plans of action and mental processes that help them achieve their educational goals. [24] Students freely use these tactics to enhance their learning processes and develop self-awareness. Learning strategies should be given top priority in studies that try to understand students' motivation and learning approaches. This is because students' capacity to describe and enhance their own strategies is highly dependent on their grasp of these ideas. [25] According to Bordios et al., most students' learning approaches may be adjusted to meet their goals in a short amount of time. [26]

Keller & Suzuki, Harandi, Puspitarini & Hanif, and Hsu are just a few of the many research that have looked at students' learning motives and tactics in different topics utilising different kinds of teaching and multimedia. [27] [28] [29] Therefore, it is widely acknowledged that having strong learning skills is essential for excelling in academics and the workplace. [30] Whether via time-honored practices or cutting-edge technological innovations, one of the primary aims of empirical research is to determine the optimal means by which students acquire knowledge. Biggs, Williams and Williams, Barkley and Major, Dart and Clarke, and Nativa all agree that university professors can do a better job of teaching and mentoring their students if they have a better grasp of their students' learning styles and motivation levels. [31] [32] [33] [34]

The three primary types of learning strategies that Bahri and Corebima uncovered were cognitive, resource management, and metacognitive. [35] Some examples of cognitive tactics include making idea maps. This underlines important points, and summarising material. Strategies for managing resources include making the most efficient use of available time, resources, and settings for learning. In contrast, metacognitive techniques centre on self-regulation, which includes keeping track of one's progress. This hanging the people’s learning tactics as needed, and commenting on one's own learning experiences. The significance of self-awareness in learning has been highlighted by researchers who have shown that students' self-reported learning habits strongly correlate with their actual academic achievement. [36] Numerous studies have now shifted their attention to students' motivation and learning approaches, with the overarching goal of understanding how these factors interact to impact students' overall academic achievement.

Howard et al. conducted a meta-analysis that found many ways in which learning techniques, such as self-efficacy, effort control, and time and study management, are linked to student motivation. [37] What students put into their studies and how well they manage their time are both influenced by their self-efficacy, or their conviction in their potential to achieve. Learners also need to be able to regulate their effort. This means keeping their attention and moving on even when things seem tough. Improving academic performance requires effective time management skills. The example includes creating reasonable objectives and organising study sessions. All of these things show how interdependent motivation and learning methods are. More and more people are starting to see self-regulation as a viable learning strategy in the last few years. Soydan, Misra & Misra, and Mannion all agree that this method is effective since it gets students involved in the process of learning. [38] [39] [40] Duckworth argues that instilling learning strategies in kids is insufficient to guarantee their academic achievement. [41] Motivating students to put those techniques into action in ways that boost their intellect and tenacity is more important. Looking at it from this angle, the importance of intrinsic motivation for successful learning becomes clear. Bandhu et al. assert that "motivation" is a fundamental human quality that drives individuals to fulfil their desires and achieve their goals. [2]

Zimmerman and Schunk looked at the link between intrinsic drive and self-control. [42] A strong correlation between self-regulated learning traits and most motivating factors was found in their study. These findings suggest that students who are enthusiastic about their education are more likely to take

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initiative, such as developing a study schedule, adhering to it, and adjusting their strategy as needed. Ultimately, students' learning capacities are enhanced and they have agency over their educational trajectory when they are motivated.

4. Implications for the Future

In particular, this study has the potential to enhance teacher preparation programmes in the future. According to Kusurkar et al., a curriculum that includes tactics to motivate students might help future teachers develop a strong desire to achieve academically. [43] Their capacity to develop diverse learning styles will determine their academic and career success. In order to track how learning strategies and intrinsic motivation change over time, future research should primarily use longitudinal studies. Research on how technology influences learning processes and the cultural and environmental factors that influence motivation is essential for elucidating this relationship. [44]

5. Conclusion

To sum up, educational psychologists need to devote more time and energy to studying how college students' intrinsic drive and their chosen methods of learning interact with one another. By better comprehending this connection, the future research may improve educational procedures and results. This can set up the next generation of teachers for great success. Institutions of higher learning may improve the quality of education they provide by encouraging students to learn and disseminating information about successful study techniques. Improving educational processes and expanding our understanding requires ongoing study and practical work.

References

[1] *Busato, V. V., Prins, F. J., Elshout, J. J., & Hamaker, C. (2000). Intellectual ability, learning style, personality, achievement motivation and academic success of psychology students in higher education. Personality and Individual differences, 29(6), 1057-1068*

[2] *Bandhu, D., Mohan, M. M., Nittala, N. A. P., Jadhav, P., Bhadauria, A., & Saxena, K. K. (2024). Theories of motivation: A comprehensive analysis of human behavior drivers. Acta Psychologica, 244, 104177.*

[3] *Allen, D. (1999). Desire to finish college: An empirical link between motivation and persistence. Research in higher education, 40(4), 461-485.*

[4] *Stover, J. B., Freiberg Hoffmann, A., de la Iglesia, G., & Fernandez Liporace, M. M. (2014). Predicting academic achievement: The role of motivation and learning strategies.*

[5] *Amerstorfer, C. M., & Freiin von Münster-Kistner, C. (2021). Student Perceptions of Academic Engagement and Student-Teacher Relationships in Problem-Based Learning. Frontiers in Psychology, 12(12). https://doi.org/10.3389/fpsyg.2021.713057*

[6] *Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. Journal of educational psychology, 80(3), 260.*

[7] *Kiefer, S. M., Ellerbrock, C., & Alley, K. (2014). The role of responsive teacher practices in supporting academic motivation at the middle level. RMLE Online, 38(1), 1-16.*

[8] *Krapp, A. (1999). Interest, motivation and learning: An educational-psychological perspective. European journal of psychology of education, 14, 23-40.*

[9] *Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. Cognitive science, 12(2), 257-285.*

[10] *Miller, A. (1987). Cognitive styles: An integrated model. Educational psychology, 7(4), 251-268.*

[11] *Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2008). Learning styles: Concepts and evidence. Psychological science in the public interest, 9(3), 105-119.*

[12] *Winne, P. H. (1996). A metacognitive view of individual differences in self-regulated learning. Learning and individual differences, 8(4), 327-353.*

[13] *Lo, J. J., Chan, Y. C., & Yeh, S. W. (2012). Designing an adaptive web-based learning system based on students' cognitive styles identified online. Computers & Education, 58(1), 209-222.*

[14] *Pintrich, P. R., & Zusho, A. (2002). The development of academic self-regulation: The role of cognitive and motivational factors. In Development of achievement motivation (pp. 249-284). Academic Press.*

[15] Algharaibeh, S. A. S. (2020). Should I ask for help? The role of motivation and help-seeking in students' academic achievement: A path analysis model. Kıbrıslı Eğitim Bilimleri Dergisi, 15(5), 1128-1145.
[16] Artino Jr, A. R. (2005). Review of the Motivated Strategies for Learning Questionnaire. Online Submission.
[17] Azevedo, R., F. Behnagh, R., Duffy, M., M. Harley, J., & Trevors, G. (2012). Metacognition and Self-Regulated Learning in Student-Centered Learning Environments. In S. Land & D. Jonassen (Eds.), Theoretical Foundations of Learning Environments (pp. 171–197).
[18] Lin, L. J. (1992). Self-improving reactive agents based on reinforcement learning, planning and teaching. Machine learning, 8, 293-321.
[19] Brophy, J. (2004). Motivating students to learn. Routledge.
[20] Coates, H. (2005). The value of student engagement for higher education quality assurance. Quality in higher education, 11(1), 25-36.
[21] Garcia, T., & Pintrich, P. R. (1996). Assessing students' motivation and learning strategies in the classroom context: The Motivated Strategies for Learning Questionnaire. In Alternatives in assessment of achievements, learning processes and prior knowledge (pp. 319-339). Dordrecht: Springer Netherlands.
[22] Mauludin, L., Sefrina, L., Ardianti, T., Prasetyo, G., Prassetyo, S., & Putri, C. (2023). An Investigation of the Students' Perceptions of Motivating Teaching Strategies in English for Specific Purposes Classes. Journal of University Teaching and Learning Practice, 20(6).
[23] Schmeck, R. R. (Ed.). (2013). Learning strategies and learning styles. Springer Science & Business Media.
[24] Thomas, J. W., & Rohwer Jr, W. D. (1986). Academic studying: The role of learning strategies. Educational psychologist, 21(1-2), 19-41.
[25] Claxton, C. S., & Murrell, P. H. (1987). Learning Styles: Implications for Improving Educational Practices. ASHE-ERIC Higher Education Report No. 4, 1987. Association for the Study of Higher Education, 1 Dupont Circle, Suite 630, Washington, DC 20036.
[26] Bordios, R., Demafiles, T., Baylosis, T. C., Omotong, K., & Gumobar, N. (2023). Adaptability of Blended Learning among the Education Students of Notre Dame of Midsayap College. Psychology and Education: A Multidisciplinary Journal, 15(10), 1120-1132.
[27] Keller, J., & Suzuki, K. (2004). Learner motivation and e-learning design: A multinationally validated process. Journal of educational Media, 29(3), 229-239.
[28] Harandi, S. R. (2015). Effects of e-learning on Students' Motivation. Procedia-Social and Behavioral Sciences, 181, 423-430.
[29] Hsu, K. C. (2016). Social gamification in multimedia instruction: assessing the effects of animation, reward strategies, and social interactions on learners motivation and academic performance in online settings.
[30] Fazey, I., Fazey, J. A., & Fazey, D. M. (2005). Learning more effectively from experience. Ecology and Society, 10(2).
[31] Biggs, J. (1999). What the student does: Teaching for enhanced learning. Higher education research & development, 18(1), 57-75.
[32] Williams, K. C., & Williams, C. C. (2011). Five key ingredients for improving student motivation. Research in higher education journal, 12, 1.
[33] Barkley, E. F., & Major, C. H. (2020). Student engagement techniques: A handbook for college faculty. John Wiley & Sons.
[34] Dart, B. C., & Clarke, J. A. (1991). Helping students become better learners: a case study in teacher education. Higher Education, 22(3), 317-335.
[35] Bahri, A., & Corebima, A. D. (2015). The Contribution of Learning Motivation and Metacognitive Skill on Cognitive Learning Outcome of Students within Different Learning Strategies. Journal of Baltic Science Education, 14(4), 487-500.
[36] Baird, L. L. (1976). Using Self-Reports to Predict Student Performance. Research Monograph No. 7.
[37] Howard, J. L., Bureau, J. S., Guay, F., Chong, J. X., & Ryan, R. M. (2021). Student motivation and associated outcomes: A meta-analysis from self-determination theory. Perspectives on Psychological Science, 16(6), 1300-1323.
[38] Soydan, D. (2018). Adult learners' experience with immediate intervention in a self-regulated learning environment. Capella University.
[39] Misra, P. K., & Misra, P. K. (2021). Strategies for Learning. Learning and Teaching for Teachers, 59-80.;
[40] Mannion, J. (2018). Metacognition, self-regulation, oracy: A mixed methods case study of a complex, whole-school Learning to Learn intervention.
[41] Duckworth, E. (2006). The having of wonderful ideas and other essays on teaching and learning. Teachers College Press.
[42] Zimmerman, B. J., & Schunk, D. H. (2012). Motivation: An essential dimension of self-regulated learning. In Motivation and self-regulated learning (pp. 1-30). Routledge.

DOI: 10.54254/2753-7064/50/20242463

[43] *Kusurkar, R. A., Croiset, G., Mann, K. V., Custers, E., & Ten Cate, O. (2012). Have motivation theories guided the development and reform of medical education curricula? A review of the literature. Academic Medicine, 87(6), 735-743.*

[44] *Pintrich, P. R. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. Journal of educational Psychology, 95(4), 667.*