RELATIONSHIP BETWEEN STUDENTS' LEARNING APPROACHES AND INTRINSIC MOTIVATION AT HIGHER LEVEL

Sania Ashfaq
M.S Scholar,
Department of Educational Leadership & Management, International Islamic University Islamabad,
Islamabad, Pakistan.
Email: sania.ashfaq823@gmail.com

Munazza Mahmood
Assistant Professor,
Department of Educational Leadership & Management, International Islamic University Islamabad,
Islamabad, Pakistan.
Email: munazza.mahmood@iiu.edu.pk

ABSTRACT

Students' learning and better academic performance determine the quality of higher education. Students' Learning Approaches are those in which students handle the knowledge or experience they have acquired to learning and to understand and analyze the information so that it may be assimilated into the learner's knowledge. Intrinsic motivation as a behavior that intrinsically motivates the students to perform any activity for the achievement of a specific goal. The objectives of the expected study were to; find out the level of intrinsic motivation, preferences of students' learning approaches, relationship between students' learning approaches and intrinsic motivation and find out the difference between intrinsic motivation and preferences of students' learning approaches of first and last-year students. The purpose of this study was to find out the preferences of university students and their relationship with intrinsic motivation and how to improve their knowledge through effective teaching and testing. The study was descriptive and cross-sectional in nature and survey technique was used for data collection. Data were analyzed through descriptive statistics (mean) Pearson product moment correlation was used to analyze the relationship between students' learning approaches and intrinsic motivation. Inferential statistics (t test) was used to identify the difference between intrinsic motivation and preferences of students' learning approaches of first and last-year students. The analysis showed that there is a significant relationship between strategic and deep learning approaches. It was recommended that students

prefer a strategic learning approach while teachers may motivate students for a deep learning approach.

KEYWORDS
Intrinsic Motivation, Students' Learning Approaches, Higher Education

INTRODUCTION

Learning approaches are those skills and behaviors that students use to engage in learning through different ways that incorporate a surface learning approach in which students use rote memorization and a deep learning approach for better performance in academic activities. Learning involves modification, grasping fundamental concepts, recognizing proofs, and remembering information based on facts. Intrinsic motivation is a behavior that intrinsically motivates students to perform any activity for the achievement of a specific goal. Students are determined to learn about something new with different ideas and actions that also depend on the student's competency (Diseth & Martinsen, 2021).

There are two distinct learning approaches known as "surface" and "deep". In the surface learning approach, students focus on memorizing facts because they only want to meet the minimum requirements. In contrast, deep learners examine the material in-depth and work to fully understand its significance. Another kind of learning that was created much later is known as the "achieving" or "strategic" approach. By being aware of the assessment needs and criteria, learners who adopt an achieving or strategic learning approach use their intellectual abilities and gain higher academic achievement (Beausaert et al., 2019).

According to different research, learning strategies and motivation vary depending on an individual's needs and level of expertise. Students who adopt a deep learning approach are very motivated and aware of their abilities and skills. Deep learning students read extensively, relate new information to prior knowledge, and strive to find connections between their new knowledge and other fields of study. Focusing on intrinsic motivation makes it seem like intrinsically motivated students learn out of curiosity, interest, or pleasure (Tauer& Harackiewicz, 2020).

Students' learning approaches appear to have a greater impact on the quantity and quality of their learning. It is possible to evaluate how well curricula and instructions are promoting successful approaches and identify students who need extra support by keeping an eye on these methods. Understanding students' learning approaches should assist teachers in thinking through how to modify their teaching and assessment methods as well as how to design learning resources that accommodate specific students' learning preferences (Jayawardena et al.,2018).

Intrinsic motivation is an important aspect of the teaching-learning process that determines student behavior, their self-efficacy, determination, and resilience. Teachers motivate students to enhance their knowledge by creating and thinking skills and also take part in curricular and co-curricular activities. Motivation has been extensively researched in education and other fields. Researchers have explored motivation from behavioral, social, cognitive, and humanistic theoretical perspectives (Condry & Chambers, 2021).

The factors of intrinsic motivation depend on the students' self-efficacy, determination, and resilience. Students with higher levels of self-efficacy are known to have more creative and accurate skills and can achieve goals using their abilities rather than their competencies. They participate actively in potential work and have a variety of learning ideas (Cetin & Askun, 2018). According to current results in the field of education, a higher level of self-determination leads to better conceptual learning and understanding, deeper engagement, and greater persistence in learning. For one to grow more self-determined toward intrinsic motivation, basic psychological demands such as autonomy, competence, and relatedness must be addressed (Hall et al., 2021).

Resilience theory is founded on study, stress, and a knowledge of how traumatic events in people's lives affect them. Resilience means adaption and coping with positive behavior in the face of diversity, danger, and unfavorable circumstances. Resilient people typically reflect on their experiences and, as a result, recognize and be aware of the inner strengths, abilities, and successes they have developed throughout their lives. Individuals with high resilience are less affected by unfavorable occurrences and more resilient, even though unpleasant life experiences have been linked to a variety of harmful outcomes (Kyndt et al.,2019).

LITERATURE REVIEW

In the current study, learning strategies were defined broadly as "cognitions or actions that alter the encoding process and make it easier to store and retrieve new information''. We concentrate on two aspects of students' learning strategies how they organize or regulate their learning behaviors and how they process information as they learn it. Students who are more encouraging and take part in every activity attain higher academic standards, have higher self-esteem, are more persistent, and have less academic anxiety (Hartmann et al., 2020). According to Wilson (2017), students' attitudes toward learning can be classified into three groups based on how they behave during their studies. Students who take a strategic learning approach are well-organized, have more management skills, demonstrate their knowledge comprehensively, have more academic achievement, actively take part in every curricular and co-curricular activity, focus on finding new knowledge, and enhance

the quality of learning.

The deep learning approach refers to a combination of goal and process. In deep learning students read extensively, relate new information to prior knowledge, and study beyond the course requirements, clearly stating the subject's structure and encouraging students to associate with what they know, using student-centered teaching methods. In-depth study about the courses and perform better in a way with full concentration. They have different leadership skills, planning, and management skills for the learning outcomes. Design different activities for self to demonstrate the material and also self-evaluation for their competency (De Clercq et al., 2018). Academics have asserted that a surface learning approach is necessary for progressing to acquiring knowledge in specific topics, areas, and scenarios, as well as for developing their learning capacities. The surface approach involves students looking for anticipated questions and attempting to forecast what their lecturers would expect of them on exams. They only complete assessment requirements, use repetition to learn, set short-term goals for their studies and they only use rote memorization for learning (Reppy & Larwin, 2020).

In contrast to research that continuously focuses on students' learning as the regulating force. Vermont developed a structure that is composed of three components as an important part of the Inventory of Learning methodologies based on a significant qualitative study with Dutch university students. Self-regulation is the study of activities in which an individual directs their effort and sets their objectives. When students are held to external standards, they organize their learning around the teacher or the course content (Endedijk et al., 2019). According to Valerio (2021), Motivation has a great impact on students' learning and their intellectual development. The most important factor of the teaching-learning process is to intrinsically motivate the students to learn new things. Teachers can significantly affect students' engagement and self-regulating behavior by using several motivational strategies. Individually, teachers have the potential to empower learning, in which they can create a more attractive classroom environment and set inspirational activities for students. Students use skills for learning that motivate them to face different challenges and discover new ideas. In SDT theory these three fundamental aspects of intrinsic motivation consist of determination, competency, and self-efficacy.

Positive words and feedback from teachers to students are utilized to increase their motivation. This could be a remark on their assignment, an email given before an exam, or direct praise from their peers and teacher. Giving feedback is important because it builds teacher-student relationships. When a teacher expresses appreciation for a student's efforts and makes encouraging words, they show their

concern for the student's academic progress and ability to complete assignments and tests. Most students have benefited from building caring relationships, which help them in becoming responsible individuals. (Hayenga & Corpus, 2017). Mohsen (2017), literature has identified some intriguing characteristics of self-efficacious people to distinguish them from others, including the fact that they frequently set difficult tasks for themselves, welcome challenges, have a higher level of self-motivation, have energy for achieving goals, and insist on difficult circumstances. Students may gain the understanding they need to function well from these traits. People with these traits are known as "discrepancy reduction" and may not put off difficult activities. According to Almutairi (2020), the impacts of self-efficacy on students' learning approaches have been studied in many types of research the findings of the studies indicate that learning behavior, coping strategies, and set goals are influenced by students' intrinsic motivation and intrinsic motivation is influenced by students' self-efficacy.

Autonomous decisions are those made independently of outside constraints and reflect an individual's satisfaction. Autonomy appropriately reflects an individual's desire to engage in a specific behavior that ultimately results in self-determination. Despite being autonomous, people may rely on others to carry out their desires. This includes imposing others' advice or experiences to improve one's personality and overall well-being (Chen &Jang, 2019). The relationship between learning approaches and intrinsic motivation may depend on several factors, such as the evaluation process used by educators. The deep and strategic learning approaches are a better predictor of academic success than the surface learning approach. Students are intrinsically motivated to perform their activities with self-determination and competency (McDonald et al., 2017).

RESEARCH OBJECTIVES

1. Find out the level of intrinsic motivation of university students
2. Explore the preferences of students' learning approaches
3. Investigate relationship between students' learning approaches and intrinsic motivation
4. Find out the difference between intrinsic motivation and preferences of students' learning approaches of first and last-year students

RESEARCH QUESTIONS

1. What is the level of intrinsic motivation of university students?
2. What are the preferences of students' learning approaches?

RESEARCH HYPOTHESIS

1. There is no significant difference between the preferences of students' learning

approaches and intrinsic motivation of first and last-year students

RESEARCH METHODOLOGY

The study was conducted to find the relationship between students' learning approaches and intrinsic motivation. For this purpose, a survey was conducted. Data were collected from 246 students belonging to three universities of Islamabad and Rawalpindi. The stratified random sampling technique was used to select this sample of the study. Data were collected through two questionnaires that were based on two main variables of students' learning approaches and intrinsic motivation. The items were selected from a standardized instrument and used by Everaert (2017) and Kember (2014). The indicators of students' learning approaches were strategic, deep, and surface learning approaches. The indicators of intrinsic motivation were determination, self-efficacy, and resilience. Validity was confirmed by the opinion of experts in this field. The pilot study was also done with sample of 24 students. The reliability index found was .814 for students' learning approaches and .850 for intrinsic motivation.

DATA ANALYSIS

Data were analyzed through descriptive statistics mean scores and Pearson product-moment correlation was used to analyze the relationship between students' learning approaches and intrinsic motivation. Inferential statistics (t-test) was used to find the difference between the intrinsic motivation and preferences of students' learning approaches of first and last-year students.

Table 1: ***Range of mean score***

Levels	Range of mean score
Low level	1.00-2.3
Moderate level	2.4-3.7
High level	3.8-5.00

Table 1 shows the range of mean scores. The low level lies between 1.00-2.3, the moderate level lies between 2.4-3.7 and the high level lies between 3.8-5.00.

Table 2: ***Level of Intrinsic Motivation***

Intrinsic Motivation	Mean
Resilience	2.1
Determination	3.5
Self-Efficacy	3.9

Table 2 indicates the level of intrinsic motivation. The results of the mean score show that students have a high self-efficacy level (3.9), moderate determination level (3.5) and they have low resilience level (2.1).

Table 3: ***Preferences of learning approaches by university students***

Students Learning Approaches	Mean
Deep approach	2.90
Strategic approach	3.63
Surface approach	2.17

Table 3 shows the results of the preferences of learning approaches by university students. The mean score of (3.63) shows that students highly preferred the strategic learning approach and moderately preferred the deep learning approach as a mean score is (2.90) while they less preferred the surface learning approach as a mean score is (2.17)

Hypotheses Testing

Table 4: ***Relationship between deep learning approach and self-efficacy***

Variables	N	R	P-value
Deep Learning Approach Self –Efficacy	246	.531*	.003

Table 4 shows that r value (.531*) and p-value (.003) are smaller than 0.05. It shows a positive weak significant relationship exists between the deep learning approach and the self-efficacy of university students. Thus, the null hypothesis fails to be rejected.

Table 5: ***Relationship between deep learning approach and determination***

Variables	N	R	P-value
Deep learning approach Determination	246	.310*	.002

Table 5 shows that the R value (.310*) and p-value (.002) are smaller than 0.05. It shows a positive weak significant relationship exists between the deep learning approach and the determination of university students. Thus, the null hypothesis fails to be rejected.

Table 6: ***Relationship between deep learning approach and resilience***

Variables	N	R	P-value
Deep learning approach Resilience	246	.231*	0.09

Table 6 shows the R-value (.231*) and p-value (0.09) are greater than 0.05. It shows a non-significant relationship exists between the deep learning approach and the resilience of university students. Thus, the null hypothesis fails to be accepted.

Table 7: ***Relationship between surface learning approach and self-efficacy***

Variables	N	R	P-value
Surface learning approach Self-Efficacy	246	.656*	.000

Table 7 shows that the R-value (.656*) and p-value (.000) are smaller than 0.05. It shows a positive weak significant relationship exists between the surface learning approach and the self-efficacy of university students. Thus, the null hypothesis fails to be rejected.

Table 8: ***Relationship between surface learning approach and determination***

Variables	N	R	P-value
Surface learning approach Determination	246	.439*	.06

Table 8 shows that the R-value (.439*) and p-value (.06) is greater than 0.05. It shows a non-significant relationship exists between the surface learning approach and the determination of university students. Thus, the null hypothesis fails to be accepted.

Table 9: ***Relationship between surface learning approach and resilience***

Variables	N	R	P-value
Surface learning approach Resilience	246	.198*	.005

Table 9 shows that the R-value (.198*) and p-value (.005) which is smaller than 0.05. It shows a positive weak significant relationship exists between the surface learning approach and the resilience of university students. Thus, the null hypothesis fails to be rejected.

Table 10: ***Relationship between strategic learning approach and self-efficacy***

Variables	N	R	P-value
Strategic learning approach Self- Efficacy	246	1.692*	.002

Table 10 shows that r value (1.692*) and p-value (.002) are smaller than 0.05. It shows a positive weak significant relationship exists between the strategic learning approach and the self-efficacy of university students. Thus, the null hypothesis fails to be rejected.

Table 11: ***Relationship between strategic learning approach and determination***

Variables	N	R	P-value
Strategic learning approach Determination	246	.431*	.001

Table 11 shows that the R-value (.431*) and p-value (.001) are smaller than 0.05. It shows a positive, weak significant relationship between the strategic learning approach and the determination of university students. Thus, the null hypothesis fails to be rejected.

Table 12: ***Relationship between strategic learning approach and resilience***

Variables	N	R	P-value
Strategic learning approach	246	1.421*	0.07
Resilience			

Table 12 shows that the R-value (1.421*) and p-value (0.07) are greater than 0.05. It shows a non-significant relationship exists between the strategic learning approach and the resilience of university students. Thus, the null hypothesis fails to be accepted.

Table 13: ***Difference between the intrinsic motivation of first and last-year students***

Year	N	Mean	t-value	Df	P-value
First	105	51.25			
			1.321	188.52	.001
Last	141	57.30			

Table 13 shows that the t-value (1.321) and p-value (.001) are smaller than 0.05. It shows a significant difference exists between the intrinsic motivation of first and last-year students. Thus, the null hypothesis fails to be rejected.

Table 14: ***Difference between preferences of students' learning approaches of first and last-year semester students***

Year	N	Mean	t-value	Df	P-value
First	105	52.49			
			1.864	199	.004
Last	141	60.53			

Table 14 shows that the t-value (1.864) and p-value (.004) are smaller than 0.05. It shows a significant difference exists between the preferences of students' learning approaches of first and last-year students. Thus, the null hypothesis fails to be rejected.

The present study examined the relationship between learning approaches and the intrinsic motivation of university students. Based on the findings following conclusions were drawn.

1. The result showed that students have a high level of self-efficacy and a moderate level of determination, and they have a low level of resilience. Also, students highly

preferred the strategic learning approach and moderately preferred the deep learning approach while they preferred the surface learning approach.

2. The result of data analysis showed that there was a positive weak significant relationship between the deep learning approach and self-efficacy also, there was a positive weak significant relationship between the deep learning approach and determination.

3. The result showed that there was a non-significant relationship between the deep learning approach and resilience. Also, there was a non-significant relationship existing between the surface learning approach and determination.

4. The result showed that there was a positive, weak significant relationship between the surface learning approach and self-efficacy. Also, there was a positive weak significant relationship between the surface learning approach and resilience.

5. The result showed that there was a positive, weak significant relationship between the strategic learning approach and self-efficacy. Also, there was a positive weak significant relationship between the strategic learning approach and determination.

6. The result showed that there was a non-significant relationship between the strategic learning approach and resilience.

7. The result showed that there was a significant difference between the intrinsic motivation of first and last-year students. Also, there was a significant difference between the preferences of students' learning approaches of first and last-year students.

DISCUSSION

The current study discovered a significant relationship between the deep learning approach and students' intrinsic motivation, as well as a significant relationship between the strategic learning approach and students' intrinsic motivation. However, there was no correlation between the surface learning approach and students' intrinsic motivation. In their research, Hall & Raven (2021) claimed that there was a significant association between the deep learning approach and intrinsic motivation, as well as a significant relationship between the strategic approach and intrinsic motivation, whereas the surface approach showed a negative relationship.

Ladan (2019), also supports this conclusion. He found in their research that students typically use a surface approach to learning. The deep approach does, however, strongly predict high intrinsic motivation. In addition to being identified as elements that affect students' learning strategies, social activities, peer groups, personal aspects, and also how they approach their studies. In the current study, the most effective indicators of intrinsic motivation were shown to be self-efficacy and determination. Strategic learning approach and student satisfaction with their major were favorably connected, whereas the surface learning approach was adversely correlated. The results of the Guthrie and Klauda (2021), investigation are in

agreement with these findings. Additionally, they discovered in their research a favorable association between strategic learning approach and intrinsic motivation. However, the relationship between intrinsic motivation and the surface learning approach was not discovered.

Baris (2016), also supports the findings of the current study. According to the results of his study, the deep approach and students' intrinsic motivation are positively correlated. Intrinsic motivation and surface approach had a conflicting relationship. The total learning score did not significantly depend on approaches or intrinsic motivation. In the present research, results revealed that students prefer the strategic approach to learning. This finding is in contrast with the findings of Hall & Raven (2021). His study revealed that the strategic approach is mostly used by students. Teachers may adopt student-centered teaching methodologies to promote deep learning and can involve students in learning activities.

Finally, it is concluded that there was a positive relationship between students' learning approaches and intrinsic motivation, with the highest preference showing for the strategic learning approach. Deep and strategic learning approaches and self-efficacy and determination of intrinsic motivation were found to be significantly correlated, according to data analysis of recent research. The findings of the study showed that students prefer a strategic approach to learning.

RECOMMENDATIONS

1. The findings of the study indicated that students prefer a strategic learning approach. So, it is recommended that teachers motivate students to have a deep learning approach by using different teaching methods.
2. The findings of the study indicated that there is a relationship between a deep learning approach and the intrinsic motivation of university students. So, it is recommended that teachers motivate students to enhance their knowledge by developing an interest in academic activities and demonstrating a deep approach to learning.
3. Students also prefer the surface learning approach. So, it is recommended that students take part in different brainstorming activities that help them in the deep learning approach.

REFERENCES

Almutairi, Y. M. N. (2020). Learning Approaches, motivation, and determination of students: Higher education. *Educational Psychology*, *10*(3), 66. https://doi.org/10.1016/j.compedu.2019.103682

Beausaert, S. A., Segers, M. S. R., & Wiltink, D. P. (2019). The influence of Intrinsic Motivation on students' learning approaches and teaching learning approaches: The student perspective. *Educational research*, *55*(1), 1-15. https://doi.org/10.1097/acm.0b013e318253cc0e

Condry, J., & Chambers, J. (2021). Intrinsic motivation and the process of learning. In *The hidden costs of reward* (pp. 61-84). Psychology Press.

Cetin, F., & Askun, D. (2018). The effect of occupational self-efficacy on work performance through intrinsic work motivation. *Management Research Review*, *41*(2), 186-201.

Chen, K.-C., & Jang, S.-J. (2019). Motivation in online learning: Testing a model of self-determination theory. *Computers in Human Behavior, 26*(4), 741-752. doi: 10.1016/j.chb.2010.01.011

Diseth, Å., & Martinsen, Ø. (2021). Approaches to learning, cognitive style, and motives as predictors of Intrinsic motivation. *Educational psychology*, *23*(2), 195-207. https://doi.org/10.1146/annurev.psych.52.1.397

De Clercq, M., Galand, B., Dupont, S., & Frenay, M. (2018). Achievement among first-year university students: an integrated and contextualized approach. *European Journal of Psychology of Education*, *28*, 641-662. https://doi.org/10.1007/s10212-012-0133-6

Endedijk, M. D., Vermont, J. D., Meijer, P. C., & Brekelmans, M. (2019). Students' development in self-regulated learning in postgraduate professional education: a longitudinal study. *Studies in higher education*, *39*(7), 1116-1138. https://doi.org/10.1080/03075079.2013.777402

Guthrie, J. T., & Klauda, S. L. (2021). Engagement in learning and motivational processes. In the *Handbook of individual differences in learning* (pp. 41-53). Routledge. https://doi.org/10.1037/0022-0663.95.1.148

Hayenga, A., & Corpus, J. (2017). Profiles of intrinsic and extrinsic motivations: A person centered approach to motivation and achievement in middle school. *Motivation & Emotion*, *34*(4), 371–383. https://doi-org.trmproxy.mnpals.net/10.1007/s11031-010-9181-

Hall, M., Ramsay, A., & Raven, J. (2021). Changing the learning environment to promote deep learning approaches in first-year education students. *Accounting education*, *13*(4), 489-505. https://doi.org/10.3102/0013189x018001032

Hartmann, S., Weiss, M., Newman, A., & Hoegl, M. (2020). Resilience in the workplace: A multilevel review and synthesis. *Applied Psychology*, *69*(3), 913-959. https://doi.org/10.1111/apps.12191

Jayawardena, C. K., Hewapathirana, T. N., Banneheka, S., Ariyasinghe, S., & Ihalagedara, D. (2018). Association of learning approaches with educational performance and intrinsic-extrinsic motivation of Sri Lankan first-year dental students. *Teaching and Learning in Medicine*, *25*(4), 334-341. https://doi.org/10.1007/s10734-016-9909-89

Kyndt, E., Dochy, F., Struyven, K., & Cascallar, E. (2019). The direct and indirect effect of motivation for learning on students' approaches to learning through the perceptions of workload and task complexity.

Ladan, M. A., Balarabe, F., Sani, D. K., Musa, H. A., Salihu, A. A., & Salihu, M. A. (2019). Learning approaches as predictors of motivation of undergraduate students in Ahmadu Bello University, Zaria. *IOSR Journal of Nursing and Health Science*, *3*(3). https://doi.org/10.1111/j.1365-2648.2019.04569.x

Mohsen, A. S. (2017). The impact of determination, self-efficacy, motivation and perceived stress on learning behavior: A cross-sectional study of Saudi psychology students. *European Journal of Educational Sciences*, *4*(3), 51-63. https://doi.org/10.1007/s10459-006-9036-2017.

McDonald, F., Reynolds, J., Bixley, A., & Spronken-Smith, R. (2017). Changes in approaches to learning over three years of university undergraduate study. *Teaching and Learning Inquiry*, *5*(2), 65-79. https://doi.org/10.1007/s10459-006-9036-2017.

Reppy, D., & Larwin, K. H. (2020). The Association Between Perception of Caring & Intrinsic Motivation: A Study of Urban Middle School Students. Journal of Educational Research

Tauer, J. M., & Harackiewicz, J. M. (2020). The effects of cooperation and competition in learning on intrinsic motivation and performance. *Journal of educational and social psychology*, *86*(6), 849. https://doi.org/10.3102/003465430298487

Valerio, K. (2021). Intrinsic motivation in the classroom. *Journal of Student Engagement: Education Matters*, *2*(1), 30-35. https://doi.org/10.1037/0022-0663.97.2.184

Wilson, M. L. (2017). Learning styles, instructional strategies, and the Intrinsic Motivation for students: A literature review. *International Journal of Education*, *4*(3), 67. https://doi.org/10.1348/00070990115989.06.