Classroom Technological Practices for the Enhancement of Student's Learning Motivation

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Abstract: This study explored the "Classroom Technological Practices for the Enhancement of Students' Learning Motivation". The objective of the study was to explore the practices of technology in the classroom for the enhancement of learning motivation at Higher Education Institutes. The research question what are the classroom technological practices for the enhancement of learning motivation at Higher Education Institutes? Abdul Wali Khan University was targeted for data collection. A convenient sampling technique was used to select a sample of 6 students. In-depth interviews were arranged for the gathering of data from the targeted sample. Thematic analysis was applied to analyze the data. It was found that classroom technological practices improve the learning motivation of students. This finding is a pleasant count to the awareness in the arena of learning. The result makes available support for policy creativity suggested to increase students' learning motivation by purifying teachers' competencies in classroom technological practices. It aims to benefit teachers, students, assessors, analysts, researchers, and other stakeholders. Based on this result, it is recommended that inexpert instructors be delivered training in technological instruction; inexperienced instructors may attend recurrent seminars, and workshops to equip themselves with new technological skills to practice for instruction.

Keywords: Technology, classroom practices, students, motivation, learning motivation

1. Introduction

Multimedia is the best tool for teaching at a higher level these days. It provides active learning in the classroom. Blended learning is the best method of teaching in this age of computers. Collaborative learning is also good for learning motivation. University teachers practice technology for the enhancement of learning motivation. Universities need educators who apply classroom technological practices in these changing scenarios (Hakimi et al., 2024). Classroom technological practices embrace the use of multimedia. It is beneficial for diverse students and better than traditional classroom teaching. Diverse digital tools use, online students' feedback, digital content, and material availability; and reviewing webpages, watching videos on YouTube, and preparing PowerPoint presentations are the most significant techniques to apply classroom technological practices (Zubaidi, & Velusamy, 2024).

Learning motivation is the comprehensive driving force within the learners to yield, pledge, and arrange direction for learning activities to achieve the directed objectives. Teachers can yield learners' learning motivation by setting convincing goals, fashioning a productive classroom atmosphere with connected instruction methods, admiring remarks from scholars, yielding optimistic criticism, connecting learning doings, proposing exterior awards, and

accepting the role model shape for learners. These kindle ingenuity, inquisitiveness, keenness for learning, and enlightening skills are crucial for individual and academic enhancement. It improves the attention of the scholars, who face challenges with passion; and proves perseverance in the face of disorders (Sanulita et al., 2024).

In Pakistan, classroom technological practices are rarely used in all departments of universities as compared to other developed countries. It was discovered that significant relationship between classroom technological practices with learning motivation (Mumtaz & Ibrahim, 2024). Results of a study showed that teachers have sufficient facilities for technology-based instruction but they did not practice it appropriately for academic undertakings (Sharma, & Sarkar, 2024). Therefore, this placed the author to explore Classroom Technological Practices for the enhancement of students learning motivation. Classroom technological practices are easy means for students to improve their learning motivation.

1.1 Statement of the Problem
This study aims to explore classroom technological practices for the enhancement of students learning motivation. The aim is to explore the enhancement of learning motivation with classroom technological practices. Research studies showed the optimistic and significant influence of classroom technological practices on students' learning motivation. Teachers' understanding of new technological instruction methods is crucial for the enhancement of the learning motivation of students. Consequently, the teacher with classroom technological practices can improve students' learning motivation for gaining knowledge and expertise. Therefore, it needs additional investigation and a huge gap is still there to be packed by investigations.

1.2 Objective of the study
To explore classroom technological practices on students' learning motivation implication of technology-based teaching at the University level.

1.3 Research question
What are the common classroom technological practices for the enhancement of learning motivation?

1.4 Delimitations of the study
The study was delimited only to Abdul Wali Khan University. The study was further delimited to education department students.

1.5 Significance of the study
The study contributes to the literature on classroom technological practices for the enhancement of students' learning motivation. It is also important for the professional improvement of teachers. It is noteworthy for leaders to concentrate on teachers' competencies of novel technological methods like blended learning with the use of classroom technological practices and prepare them for the future as strengths. It is also essential for university advancement; primarily technology-based instruction usefulness, instructors' skill progress, and a functioning atmosphere at the university level. It will be helpful for instructors to improve their instruction with technological practices for better learning motivation of the learners. The study will also be productive for future researchers to get help for future road maps.

2. Literature review
Multimedia practice in the classroom improves students' learning motivation. Many results of the research studies recommended that the best universities practice multimedia in the classroom for learning purposes (Guan, Song, & Li, 2018). Learning through multimedia comprises online sharing, saving learning time, increasing learners' learning brilliance, and mounting learners' consideration and motivation. Practicing multimedia supports students to learn more effectively and adeptly and apply time more effectually and expertly. Practicing multimedia expressively increases students' learning motivation and their optimum motivation leads to more top accomplishment. Multimedia aims to pass information to the students clearly and thoroughly. Multimedia helps to illumine the content. A professor may apply numerous learning resources so that students can understand the content and familiarize students curiosity about the content (Abdurrahman et al., 2020).

Classroom technological practices support many students to yield new areas of knowledge and progress to new domains of understanding. Multimedia grows learners' engagement and makes the classroom more enjoyable to

influence learning motivation. Multimedia improves sensual capabilities and captivates receptiveness and interest in learning (Makransky & Mayer, 2022). Multimedia enhanced educational fairness and heightened learning motivation. Learning through multimedia has become more eye-catching and innovative. To get learning progress, instructors must ceaselessly be encouraged and resourceful to meet learning goals and capable of pervading enjoyment in the learning procedure. This advanced students' motivation throughout classroom learning (Rahiem, 2020). Classroom technological practices assist learners to improve motivation for getting knowledge (Daum, Goad, Mosier, & Killian, 2022).

It was established that multimedia is linked to accelerating learning motivation with many progressive technologies etc. that have made learning more accessible. Based on the facts multimedia presentation in higher education institutes is the key solution for students who need numerous animations of plentiful learning models that make them continuously learn.

Blended learning is also a form of classroom technological practice that is quite different from traditional methods. It was contended that classroom technological practices were far more supercilious than traditional classes (Hamad, Shehata, & Al Hosni, 2024). Classroom technological practices encourage learning motivation. It was also reflected that blended learning provides a foundation to promote a multimodal approach to functioning teaching (Håkansson Lindqvist et al., 2024). The learner's uniqueness, classroom practice tools, and educator's capabilities are measured as the main elements of a productive blended learning setting (Rasheed, Kamsin, & Abdullah, 2020).

Cooperative learning is practiced in digital classroom practices that organize classroom activities in light of the social learning experiences of the learners (Tran, 2019). Students are answerable for their learning in cooperative learning. They cooperate in a friendly learning environment and achieve their aims (Jian, 2019). Cooperative learning improves the instructive accomplishment of specialists, upturns the communication expertise of learners, and enhances learning motivation to enable the learners the attain their goals (Abramczyk, & Jurkowski, 2020).

Practical simulation is also practiced in classrooms where the teacher controls the boundaries of the setting and students learn to realize the targets (Lin et al., 2023). Critical thinking and deep commitment are essential in classrooms for learners to execute doings in digital classes (Sauvé, 2010).Learning motivation increases a passion for achieving objectives. Appreciation, rewards, prizes, cash awards, clapping, and respect increase learning motivation and bring positivity to actions. Studies recommended that classroom technological practices have a dominant significance in cultivating the learning motivation of learners in higher education institutes (Gable & Dreisbach, 2021).

Ali and Anwar (2021) noted a noteworthy link between a university's classroom technological practices and the learning motivation of students. Inspiration is a basic phase of mounting learning motivation (Alamri et al., 2020). Kuhl et al., (2021) highlighted the need for attention, care, and respect to students for learning motivation. Shahid and Paul (2021) established that students' learning motivation showed enhancements when they were specified concerning the institution. Effective teachers motivate their scholars to learn and prepare them for the difficulties in the coming time with their dedication (Aguilar et al., 2021). Shaban (2024) posited that the learning setting, learners' interactions with educators, and instructors' motivational skills are the diverse facets for the enhancement of learning motivation.

It is inferred from the above literature that classroom technological practices, mostly multimedia, blended learning, cooperative learning, practical simulation, internet, and other online devices expressively touch the learning motivation of the students at the university level and inspire them for better learning.

3. Methodology
This study of classroom technological practices for the enhancement of learning motivation was a qualitative study intended to gather the classroom technological practice stories of students for improving learning motivation. Each student was emailed an invitation to join the in-person interview of 60 minutes. Six students were chosen from the education department of Abdul Wali Khan University for interview. Data were gathered through 60 minutes of open-ended interviews. Interviews were recorded and transliterated to know the experiences of each interviewee (Clandinin & Connelly, 2000).

4.1 Thematic analysis
4.1.1 Familiarity with data by transcribing from audio recording
One student said in her interview that effective classroom technological practices can significantly enhance learning motivation. Students may be engaged through multimedia lessons by using interactive whiteboards. Pre-recorded

lectures and in-class discussions through flipped classrooms may be arranged. Educational games, rewards, and leaderboards through gamification are very essential.

Another interviewee remarked that virtual field trips are crucial. Students may be guided to explore picnic places, educational environments, and historical sites. Padlet, Google Docs, and discussion forums may be used as collaborative tools. Quizzes, polls, and digital assessments may be used as real-time feedback. Adaptive software and learning paths should be used for personalized learning.

One postgraduate student presented that Learning Management Systems (LMS) may be utilized to organize coursework and assignments. Duolingo, Khan Academy, and PhET Interactive Simulations may be used as educational Apps to enhance learning motivation. Video Conferencing through Zoom, Google Meet, and Skype are very imperative for learning motivation. Online Resources i.e. Crash Course, TED-Ed, and National Geographic may be utilized for learning motivation. Digital Portfolios i.e. showcase student work, and progress reports may be used in the classroom. These increase engagement and participation; enhance student autonomy and self-directed learning; improve collaboration and communication; safeguard assessment and feedback; and ensure access to diverse resources and perspectives.

One student said that the best classroom practices are to integrate technology meaningfully, not just for its sake; to provide technical support and training; to encourage student creativity and choice; to monitor and address digital distractions; and to continuously evaluate and adapt technological practices.

Another student said that technology integration increases student engagement and learning motivation. He said that effective technological practices are linked to better academic achievement. Technology provides equal learning opportunities for students with disabilities.

Technological practices enable tailored instruction to meet individual needs. Students acquire essential skills for the digital age. Technological practices facilitate teamwork and communication. Immediate assessment and feedback improve student learning.

Another student's point of view was that overreliance on technology can lead to reduced attention span and diminish critical thinking and problem-solving skills; frequent technical problems disrupt learning; facilitate bullying and harassment, and excessive information can overwhelm students.

Collating data with initial codes

01 CTP Effective classroom technological practices can significantly enhance learning motivation. Students may be engaged through multimedia lessons by using interactive whiteboards. Pre-recorded lectures and in-class discussions through flipped classrooms may be arranged. Educational games, rewards, and leaderboards through gamification are very essential. Virtual field trips are crucial. Students may be guided to explore picnic places, educational environments, and historical sites. Padlet, Google Docs, and discussion forums may be used as collaborative tools. Quizzes, polls, and digital assessments may be used as real-time feedback. Adaptive software and learning paths should be used for personalized learning.
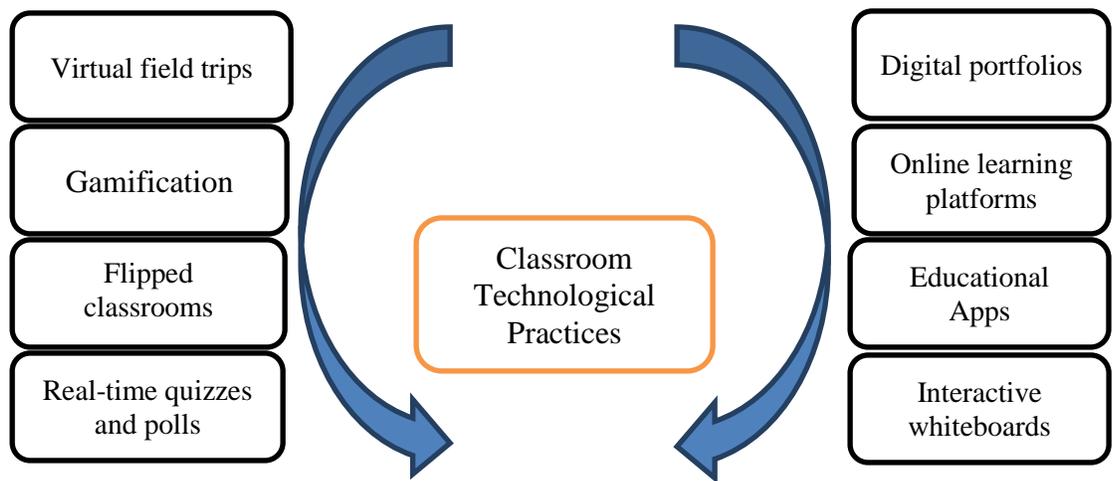
02 LM Technology integration increases student engagement and learning motivation. He said that effective technological practices are linked to better academic achievement. Technology provides equal learning opportunities for students with disabilities. Technological practices enable tailored instruction to meet individual needs. Students acquire essential skills for the digital age. Technological practices facilitate teamwork and communication. Immediate assessment and feedback improve student learning. The best classroom practices are to integrate technology meaningfully, not just for its sake; to provide technical support and training; to encourage student creativity and choice; to monitor and address digital distractions; and to continuously evaluate and adapt technological practices.

Overreliance on technology can lead to reduced attention span and diminish critical thinking and problem-solving skills; frequent technical problems disrupt learning; facilitate bullying and harassment; and excessive information can overwhelm students.
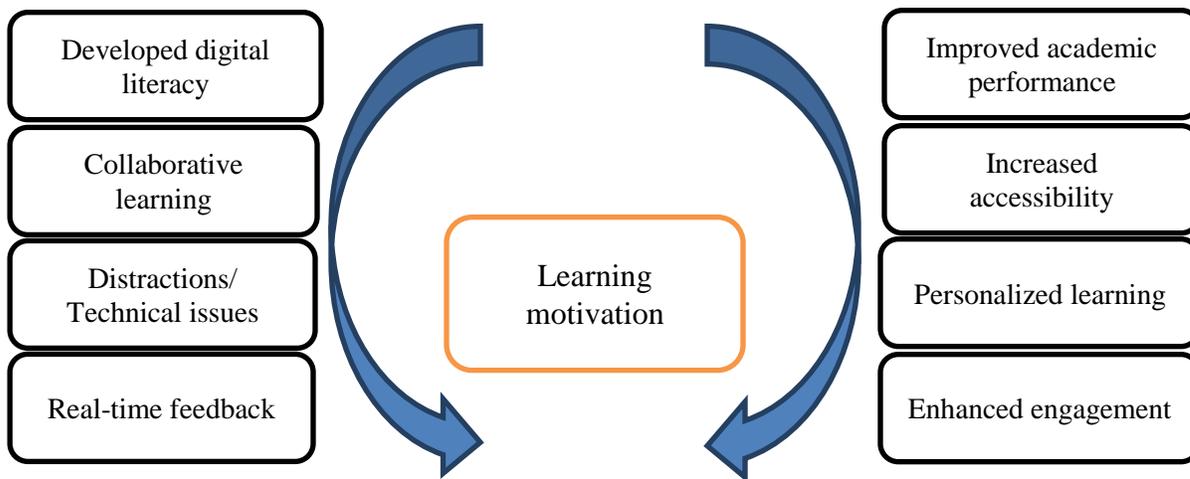
Searching for themes
Thematic mapping
Figure1 Thematic mapping of Classroom Technological Practices Word Trees

Virtual field trips

Gamification

Flipped classrooms

Real-time quizzes and polls

Classroom Technological Practices

Digital portfolios

Online learning platforms

Educational Apps

Interactive whiteboards

Figure2 Thematic mapping of learning motivation Word Trees

Developed digital literacy

Collaborative learning

Distractions/ Technical issues

Real-time feedback

Learning motivation

Improved academic performance

Increased accessibility

Personalized learning

Enhanced engagement

4.2 Naming themes

Effective classroom technological practices can significantly enhance learning motivation. Students may be engaged through multimedia lessons by using *interactive whiteboards*.

Pre-recorded lectures and in-class discussions through **flipped classrooms** may be arranged. Educational games, rewards, and leaderboards through *gamification* are very essential.

Virtual field trips are crucial. Students may be guided to explore picnic places, educational environments, and historical sites. Padlet, Google Docs, and discussion forums may be used as *collaborative tools*. *Quizzes, polls, and digital assessments* may be used as real-time feedback. Adaptive software and learning paths should be used for *personalized learning*.

Digital Portfolios i.e. showcase student work, and progress reports may be used in the classroom. These increase

engagement and participation; enhance *student autonomy* and *self-directed learning*; improve *collaboration and communication*; safeguard assessment and feedback; and ensure access to diverse resources and perspectives.

He said that effective technological practices are linked to better *academic achievement*. Technological practices facilitate *teamwork and communication*. Immediate assessment and feedback improve student learning. Overreliance on technology can lead to *reduced attention span* and diminish critical thinking and problem-solving skills; frequent technical problems *disrupt learning*; facilitate bullying and harassment; and excessive information can overwhelm students.

4.3 Findings/Interpretation

It was found that classroom technological practices significantly influence learning motivation. Effective classroom technological practices can expressively enhance learning motivation. Students may be engaged through multimedia lessons by using interactive whiteboards. Pre-recorded lectures and in-class discussions through flipped classrooms enhance learning motivation. Educational games, rewards, and leaderboards through gamification influence learning motivation. Virtual field trips affect learning motivation. Quizzes, polls, and digital assessments increase learning motivation. Adaptive software improves personalized learning. Classroom technological practices increase student engagement and learning motivation. Effective classroom technological practices enhance academic achievement. Technology provides equal learning opportunities for students with disabilities. Technological practices enable tailored instruction to meet individual needs. Students acquire essential skills for the digital age. Technological practices facilitate teamwork and communication. Immediate assessment and feedback improve student learning. The best classroom practices are to integrate technology meaningfully, not just for its sake; to provide technical support and training; to encourage student creativity and choice; to monitor and address digital distractions; and to continuously evaluate and adapt technological practices.

Overreliance on technology can lead to reduced attention span and diminish critical thinking and problem-solving skills; frequent technical problems disrupt learning; facilitate bullying and harassment and excessive information can overwhelm students.

5. Conclusion

It was concluded from the interpretation of the data yielded by interviewees during the interview that classroom technological practices have a significant influence on the learning motivation of students. Operative technology integration in the classroom through multimedia while using blended learning, inclusive learning, cooperative learning, and practical simulation methods can enhance student involvement, learning motivation, and academic achievement. On the other hand, ineffectual and unproductive classroom technological practices can lead to distractions, decreased motivation, and poor academic performance.

5.1 Discussion

Research suggests that classroom technological practices influence learning motivation through several factors- interactive technologies increase student engagement and learning motivation through engagement (Hwang et al., 2012; Mumtaz, & Ibrahim, 2024; Sharma, & Sarkar, 2024); technology-based learning environments promote autonomy and self-directed learning (Ryan & Deci, 2000); immediate feedback from classroom technological practices enhance learning motivation and learning outcomes (Nicol & Macfarlane-Dick, 2006; Jian, 2019; Sanulita et al., 2024); technology facilitates collaborative learning, promoting social motivation (Johnson & Johnson, 2009); and classroom technological practices make learning relevant and meaningful, increasing intrinsic motivation (Keller, 2010; Alamri et al., 2020). Teacher training and support are crucial for effective technology integration (Koehler & Mishra, 2009); student-centered approaches, such as flipped classrooms and gamification, enhance learning motivation (Bishop & Verleger, 2013); technology-based assessments and feedback improve learning motivation and outcomes (Black & Wiliam, 1998); and equitable access to technology is essential for minimizing the digital divide (Warschauer, 2004). These studies support the findings of this study.

5.2 Implications

Educators should integrate technology in a way that complements teaching methods. Schools should provide ongoing teacher training and support. Policymakers should prioritize equitable access to technology. Researchers should investigate the impact of emerging technologies on learning motivation.

5.3 Limitations

The study sample size was small and diversity was little due to the qualitative approach. There was variability in technology integration and teaching methods. It was too difficult to measure tools and methodologies. Six students of the education department were interviewed.

5.4 Recommendations

Teacher training and support to all faculties must be ensured. Technology infrastructure and resources may be provided on a priority basis according to the modern needs of the students. Curriculum integration is very important for blended learning; therefore, this area may be focused properly. The student-teacher ratio must be kept in mind to provide educational facilities in IT Labs. Parental involvement must be ensured while using technological Apps in the classroom for learning motivation. School culture and policies must be according to the nature and levels of the students.

It is also recommended that teachers integrate classroom technological practices in a way that complements teaching methods. The professional development institutes may provide ongoing teacher training and support; ensure equitable access to technology; monitor and evaluate technology effectiveness; and encourage responsible classroom technological practices.

It is also suggested that the TAM-Technology Acceptance Model; UTAUT-Unified Theory of Acceptance and Use of Technology; SAMR-Substitution, Augmentation, Modification, Redefinition (SAMR) model; and TPCK-Technological Pedagogical Content Knowledge framework may be practiced for the learning motivation and better performance of students.

It is also recommended that the same topic be investigated with a quantitative approach with a large sample size to get more generalizability or with a mixed methods approach to get a deeper understanding of the phenomenon.

It is also suggested that instructors, professors, and lecturers may optimize classroom technological practices and integration to enhance teaching competencies and learning motivation for optimum learning.

For future researchers, it is suggested that the following topic may be explored.

1. Investigate the impact of Artificial Intelligence on learning motivation.
2. Explore the role of technology in promoting social-emotional learning.
3. Develop and validate instruments to measure technology-enhanced learning motivation.

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