

Use Your Own Device (UYOD) in Higher Education: Opportunities and Challenges

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ABSTRACT This study examines the role of students' personal digital device integration in higher education classrooms and its influence on learning outcomes, confidence, and collaboration. Guided by the Technological Pedagogical Content Knowledge framework, the research aimed to explore faculty perspectives on both the benefits and challenges of device use in teaching. A qualitative design was employed, involving semi-structured interviews with 31 faculty members who had experience integrating students' personal devices. Thematic analysis was used to identify recurring patterns in the data. Findings indicate that device integration enhances student organisation, independent learning, academic performance, self-confidence, and collaborative engagement. However, issues such as classroom distraction and unequal access to technology limit its effectiveness. The study concludes that structured implementation, clear guidelines, and equitable access strategies are essential to maximise the educational value of personal device integration.

INTRODUCTION

The user-driven (UYOD) integration in the pedagogical approaches in the teaching and learning domain is one of the most remarkable changes in the pedagogical landscape in this era in which technology is increasingly being used in educational institutions (Alias et al. 2024; Samala et al. 2025). Smartphones, tablets and laptops afford students access to vast databases of information, research applications and interactive platforms, allowing them to be active, independent learners; to immerse themselves in course content; and to be able to access information anytime, anywhere (Yoon et al. 2021; Chambi et al. 2023). The potential of UYOD for autonomous learning, higher student engagement, and better interaction among peers is great in the context of higher education, especially in the social sciences (Loglo and Zawacki-Richter 2023; Fioravanti et al. 2024). This capability of the students to use their own gadgets can gen-

erate dynamic and interactive learning situations that will allow teachers to create more immersive, collaborative learning situations because students will not only have access to real-time resources but will also participate in more immersive and collaborative learning situations (Santos et al. 2021; Laumann et al. 2025).

Although these are promising benefits, the implementation of UYOD in the education practice is full of challenges. One of the main issues is the risk of major distraction, especially by non-academic services like social media, games, and messaging services (Flanigan et al. 2023; Flanigan et al. 2025). Such distractions may compromise the concentration of students and their engagement (Arden et al. 2024; Chilton et al. 2025). In addition, the ongoing problem of disparity in access to gadgets and dependable internet connectivity worsens educational inequalities, especially among socioeconomically disadvantaged learners, which forms an obstacle to the equalisation of learning opportunities

(Ncube and Ngulube 2026). Moreover, teachers have significant difficulties with classroom disciplines and proper use of personal devices because it is easy to abuse them, making it challenging to manage the classroom (Mawere et al. 2022; Crick et al. 2023).

Although current studies have reported the beneficial impact of UYOD on student engagement and academic performance, the long-term impacts of the intervention on student self-esteem, collaborative skills, problem-solving abilities, and critical thinking have not been thoroughly investigated (Alias et al. 2024; Siddique et al. 2026). Also, limited research has been done on the effects of UYOD on group dynamics, communication, and teamwork among higher education students, although these are pillars of academic and professional success (Fioravanti et al. 2024; Samala et al. 2025). Considering the intricacies of such problems and opportunities, it is essential to critically analyse how multifaceted the effect of UYOD on multiple areas of student learning has been. This exploration must focus on the possible advantages and the natural problems that are bound to come with the ubiquity of personal technology in education.

Objectives of the Study

This study aimed to investigate the impact of integrating students' personal digital devices into teaching and learning in higher education. In particular, the study aimed to investigate faculty perceptions on how students' use of devices affects academic performance, confidence, collaboration, and classroom management. It also aimed to understand the opportunities and obstacles of the structured use of personal digital devices in instructional contexts.

Theoretical Background

The Technological Pedagogical Content Knowledge (TPACK) framework offers a solid foundation for understanding the integration of UYOD in education (Buluma and Walimbwa 2021; Hsu et al. 2023). TPACK revolves around the overlap of three knowledge areas that are crucial, namely, content knowledge, pedagogical knowledge, and technological knowledge (Singh 2022; Tseng et al. 2022). Content knowledge re-

fers to a teacher's understanding of the subject matter, pedagogical knowledge encompasses the strategies and methods used to teach, and technological knowledge involves the ability to effectively incorporate technology into the teaching process (Pham 2023). These three domains are interwoven in a deliberate, effective, and successful teaching, enabling educators to design learning experiences that utilise technology to increase student engagement and learning outcomes (Hsu et al. 2023; Kgosi et al. 2026). The TPACK framework is applicable in the context of UYOD to assist educators in recognising how they could utilise personal devices such as smartphones, laptops and tablets to promote independent learning, collaborative learning, and more active engagement (Scarlett 2022; Taolane and Jita 2024). Integrating technology with pedagogical approaches can lead to enhanced student engagement and higher-order thinking (Hsu et al. 2023; Kgosi et al. 2026). Moreover, the TPACK model offers a framework to resolve issues like distractions due to non-academic apps and unequal access to technology (Nusi and Yusran 2026). With a well-balanced approach to these areas, teachers can make sure that UYOD is applied in a way that does not interfere with the quality of curriculum. This framework guides educators in maximising the benefits of UYOD while overcoming the challenges of their integration into the classroom.

METHODOLOGY

Research Approach and Philosophy

This study follows a qualitative research approach to explore the integration of students' own devices in teaching and its impact on learning and classroom dynamics. The study is based on the interpretivist philosophy of research, which focuses on the subjective experiences of the participants. The interpretivism enables discussion of the way in which faculty members make perception of their classroom practices, especially the way they use personal devices and the following impact on the performance, engagement, and collaboration of students. This strategy was selected to get the perceptions and experiences of the faculty members in detail.

Sampling Technique and Data Collection

A purposive sampling technique was employed to select 31 faculty members from public and private higher education institutions in Pakistan. The participants were selected for their direct experience of using students' personal digital devices in the classroom context. The respondents for data collection were selected from 31 faculty members of the public and private higher education institutions in Pakistan. The participants included 2 lecturers, 3 assistant professors, 9 associate professors and 17 professors. The teaching experience was in the range of 1-15 years, including 10 participants with experience of 6-10 years and 15 participants with more than 10 years of experience. In terms of teaching level, 11 participants were teaching at the graduate level, and 20 participants were involved primarily in postgraduate teaching. The disciplines represented were education, social sciences, psychology, research methodology, development studies, Pakistan studies, sociology and related disciplines. Semi-structured interviews were used to gather data in line with the study's objectives and the TPACK model. In-depth interviews were conducted in person and via digital platforms and were audio-recorded with the participants' consent and transcribed verbatim.

Research Instrument and Trustworthiness

The interview protocol comprised open-ended questions that covered the areas of digital integration practices, student engagement, academic performance, confidence, collaboration, and classroom challenges. Two educational technology and qualitative research experts assessed content validity. They provided feedback which was used to make small adjustments. To ensure reliability and trustworthiness, verbatim transcription, member checking and independent review of thematic coding were conducted for enhancing the reliability and the consistency of interpretation.

Data Analysis

Thematic analysis was used in the data analysis of this study, which is a qualitative tech-

nique that helps identify, analyse, and report patterns or themes in the data. Thematic analysis was chosen because it is flexible and can dive into the richness and complexity of the qualitative information obtained during interviews. The initial stage of the analysis was the familiarisation of the interview data by the means of the verbatim transcription and repetition. This procedure guaranteed the thorough comprehension of the material of the interview and made it possible to identify the emerging ideas and tendencies to create the basis of the thematic framework. Primary notes were recorded to capture any possible patterns or knowledge that would be of relevance to the research questions. The stage of creating initial codes began as soon as familiarisation had taken place. Coding entails classifying the data into significant blocks or categories. The transcripts were discussed line-by-line, with the pertinent parts highlighted with the codes, depending on the recurring ideas in accordance with the research questions, such as student engagement, academic performance, self-esteem, collaboration, and issues related to the use of devices. The coding was done inductively, that is, the codes were directly brought out by the data, not predetermined, which enabled a grounded and unbiased interpretation of the data.

The second step after the coding process was to sort the code into possible themes. This was done by grouping some similar codes into common categories, which showed significant patterns in the data. Identification of initial themes was followed by critical review and refinement to ensure that there was coherence and representation of data in the themes. The coded data was re-read with the aim of finding out whether the themes were enough to reflect the significant issues of the experiences of the people involved. The last step involved defining and labelling the themes to summarise the data. Each theme was assigned with a short name, and a definition of the theme was made. This was then tabulated, and each of the themes and sub-themes was written up with the corresponding snippets of the data to validate the findings. The last report talked about the effects of personal devices on student engagement, academic performance, self-esteem and collaboration, as well as issues that educators face in controlling the use of devices in the classroom.

RESULTS

The results explored five dimensions, such as Digital Device Integration, which explored the use of devices in instruction, Student Engagement, which explored participation, Academic Performance, which explored learning growth, Self-Esteem, which explored confidence and problem-solving, and Collaboration, which explored teamwork. There were also concerns that were raised, such as distraction, inequitable access and misuse of devices, and ideas that were presented on how things could be improved with clear guidelines, monitoring and collaboration to get better outcomes.

The thematic analysis reveals that the use of students' own digital devices improves engagement, learning outcomes, self-confidence and group work, as well as fosters autonomous learning. Challenges including distraction and inequitable access, however, demand structured guidelines, institutional support and balanced

pedagogical approaches towards digital technologies in the classroom to ensure that digital technologies are used effectively (Table 1).

Digital Device Integration

Question 1: How have you integrated students' Use Your Own Devices (UYOD) into your teaching? How would you describe your experience with students using their devices for study purposes, and what activities do you encourage them to use these devices for?

Integration of UYOD into Teaching

Most faculty indicated they incorporated students' UYOD in their instruction, and many have been doing so over several years. As an illustration, one of the faculty members said, "Yes, it has been 6 years as of now since students started using mirror apps for their classroom LEDs, and multimedia laptops have been used

Table 1: Thematic analysis

Aspect	Themes	Subthemes
1. Digital Device Integration	1. Integration of UYOD into Teaching	Adoption duration; routine use; technology tools
	2. Student Engagement and Device Usage	Participation; digital readiness; varied attitudes
	3. Encouraged Activities and Academic Benefits	Research tasks; presentations; note-taking; group work; online resources
2. Perceived Impact on Students' Self-Appropriation and Learning	1. Academic Performance and Learning Growth	Task management; timely completion; structured learning; conceptual clarity
	2. Increased Engagement and Confidence	Active involvement; organised teamwork; academic assurance
	3. Shift in Learning Approach	Independence; reduced dependency; adaptability
	4. Positive Changes in Learning Behaviour	Curiosity; digital organisation; proactive learning
3. Perceived Impact on Students' Self-Esteem and Self-Efficacy	1. Influence on Self-Esteem and Self-Confidence	Critical thinking; initiative; independent solutions
	2. Improvement in Problem-Solving and Initiative	Self-assurance; self-reliance; learning control
	3. Shift in Learning Approach	Autonomy; flexibility; active learning
4. Perceived Impact on Students' Collaboration	1. Enhancing Collaboration and Communication Through UYOD	Communication; resource sharing; teamwork
	2. Examples of Device-Facilitated Collaboration	Messaging groups; shared documents; real-time editing
5. Challenges and Suggestions	1. Challenges in Device Usage	Distraction; misuse; monitoring issues; access inequality
	2. Suggestions for Maximising UYOD Impact	Guidelines; training; supervision; policies; equal access
	3. Maximising Collaboration and Learning Impact	Role clarity; guided activities; monitoring; balanced approach

for over 14 years. We use numerous online resources, including tablets and laptops, to present and complete assignments. It's now a fundamental part of how we engage students."

This protracted history of gadgets demonstrates a transition to implementation of UYOD in education settings. One of the other faculty members remarked, *"I began to permit students to bring their own devices approximately three years ago. I was at first a little shy, particularly with the distraction issues, yet as time went on, I realised the advantages. Today it became a part of my teaching routine."*

The change of scepticism to embrace can be noticed in these experiences, where the faculty members adopt new methods as they realise positive results.

Student Engagement and Device Usage

The overall experience of faculty members regarding student engagement with UYOD was positive. The use of devices was considered a boost to student participation and involvement in learning activities. One faculty member described, *"Overall, it was an enjoyable experience. The students will be more at ease with their own devices, and it will assist them in remaining active in the classroom. They are ready, usually with digital notes, and they take part more actively."*

To certain faculty, it was evident that use of UYOD was empowering students as they became more confident and active during discussions. But not every student was as enthusiastic. One faculty member noted, *"There are students who are eager to work with their own equipment, and most of the students said that they felt burdened to carry laptops. Those who use their own devices for study are generally more organised, but not all students have the same attitude toward it."*

This indicates that as much as the use of devices helped many to engage, there was a variation in the readiness and ease of students, as they integrated their personal technology in their learning process.

Encouraged Activities and Academic Benefits

The faculty resoundingly urged students to use their devices in conducting various academ-

ic assignments. The most mentioned activities were research, assignments and presentations. One faculty member noted, *"I encourage students to use their devices mainly for academic research and completing assignments. They also make presentations on their laptops, which makes them organise their thoughts more effectively and have access to a lot of information on the Internet."*

An additional faculty member explained the benefits of the use of the devices in terms of interactive learning, *"The most common activities that students engage in with their devices are preparing presentations and taking notes in lectures. They also go online to find pertinent academic material. This will keep them interested and gain better insight into the subject. It enables them to be more independent in their approach to learning."*

Besides individual work, UYOD was also common in group work and collaborations. One of the members of the faculty commented, *"The devices are primarily applied in group projects, presentations and research. Digital tools enable students to work together. They contribute resources, collaborate on common documents, and give each other real-time feedback, which greatly enhances collaboration and engagement in the classroom."*

This teamwork aspect of UYOD usage not only improves academic performance but also promotes the nature of collaborative teamwork and communication among students.

Perceived Impact on Students' Self-appraisal and Learning

Question 2: In your opinion, how has using their own devices influenced students' academic performance or overall learning growth? Moreover, have you observed any changes in how students approach learning tasks when they use their own devices compared to traditional methods?

Academic Performance and Learning Growth

Most of the faculty members have indicated significant changes in the academic performance of the students, where the devices have assisted students in handling their assignments better. An example is when one of the faculty mem-

bers commented, *"They can cope with their work punctually. They can be better academically than other students. Such devices are useful in augmenting knowledge."*

The capacity of students to remain organised, finish tasks promptly and take charge of their learning was also a notable faculty observation theme. One of the members of the faculty commented, *"I think students have a better performance in school when they use their own devices. They can handle their tasks better. Their education is more structured and self-assured."*

This was specifically seen in the capacity of students to be more active in the learning materials. According to one faculty member, *"Devices help students to comprehend concepts better. Their learning is slowly enhanced. Learning becomes effective."*

Increased Engagement and Confidence

One of the significant changes seen by faculty was the greater participation and confidence in the students when they used their devices. One faculty member pointed out, *"The students are more at ease with their own learning pace, and development in academics is reflected."*

Devices were especially instrumental in assisting students to become more engaged in classroom discussions and work on their assignments. According to one of the faculty, *"Group work is better organised, students divide the tasks, follow the progress, and create professional-quality presentations with the help of apps."*

Students were more independent in learning tasks. According to one of the faculty members, *"Learners will be more engaged in learning as opposed to being passive when they utilise their personal devices. They are more interested in accomplishing a task and engage more in lectures."*

Shift in Learning Approach

Faculty members observed also that there was a change in the learning behaviours of students when they were using their own devices. Students were more active and assumed responsibility in their learning. One of the faculty members described it as, *"Students feel more at ease with learning activities using digital devices. They are less dependent on the teacher and*

attempt to seek information on their own. This change causes learning to be self-directed and more independent."

Unlike in the past, where students tended to be more dependent on the instructor, digital devices enabled students to interact with materials more flexibly and independently. One faculty member noted, *"Using digital devices makes the learning approach more adaptable and up-to-date. Students are easy adapters to learning activities. They are more actively involved in classroom activities."*

This shift to more independent, self-directed learning was observed in a variety of subjects, including research methodology and group projects. The faculty observed that students were more organised and took more initiative to get things done.

Positive Changes in Learning Behaviour

The overwhelming consensus of the faculty was that UYOD brought about a positive change in the learning behaviour of students. One faculty member related, *"There is a positive change in students' learning behaviour with device usage. They are more curious and engaged in their tasks. They are more engaged compared to traditional learning."*

This change towards a more dynamic and self-directed approach to learning was among the most noticeable changes. It was also observed by faculty members that students were able to better handle projects, work effectively, and interact with course materials in new ways. One member of the faculty said the following, *"Students are now going to organise their learning in a digital form and tend to make summaries and images to get a better grasp of the information."*

The incorporation of UYOD in the learning setting has not only enhanced the performance of students academically but also altered the way students handle and interact with their learning activities. This change has led to confident, independent, and engaged learners who are more prepared to handle their academic duties.

Perceived Impact on Students' Self-Esteem and Self-Efficacy

Question 3: How do you perceive the influence of device usage on students' self-esteem or self-confidence in their academic abilities?

Have you noticed any differences in students' ability to solve problems, take initiative, or manage their own learning when using their devices compared to traditional methods?

Influence on Self-Esteem and Self-Confidence

Faculty members observed significant positive effects on students' self-esteem and self-confidence because of using Use Your Own Devices (UYOD) in their learning. This change was mainly because the students were much more independent and in control of their academic activity, and devices offered easy access to the necessary materials and enhanced their problem-solving skills. One of the faculty members commented, *"Students having their own devices are high in their self-esteem. They are quite self-assured, and they do well in the schooling environments."*

UYOD provided more confidence since the students could control their own learning and get answers on their own, which had a positive influence on their self-esteem in school. A faculty member commented, *"As they have more information and these devices develop their problem-solving and critical thinking, they are more confident."*

Critical thinking and problem-solving skills allowed the students to feel more confident in their academic skills, which positively influenced their confidence. Moreover, some faculty members claimed that students were becoming more self-reliant and competent, which translated into an improved academic performance and self-esteem. As one of the faculty members said, *"I feel that students' self-confidence increases when they use their own devices for learning. They become more self-sufficient and can deal with academic activities themselves. This feeling of overseeing learning has a positive impact on their self-esteem during classroom learning."*

Students were empowered by self-reliance in accessing resources, and this capacity resulted in a greater confidence in their academic capacities.

Improvement in Problem-Solving and Initiative

Besides the impact on self-confidence, the faculty members also noted that problem-solv-

ing skills, initiative, and learning management skills of students improved tremendously with the application of UYOD. According to one faculty member, *"Students who are tech-savvy learn to solve problems and are better at taking initiatives compared to those who do not use them."*

The use of devices made students more independent in their learning, develop problem-solving skills and can work on tasks without being guided all the time. The relationship between devices and independent problem-solving was also emphasised by another faculty member, *"The performance of the students in terms of problem-solving is enhanced when they employ their own devices. They attempt to find their own solutions rather than being completely reliant on the teacher. This also enables them to handle their learning assignments in a more assured way."*

Devices gave students the means of discovering solutions to their problems independently, which increased their self-reliance and capability to solve learning assignments without depending on the teacher. One faculty member noted, *"The use of devices makes students more self-reliant in solving problems. They are proactive with regards to locating academic material. This assists them in dealing with learning better."*

The self-directed learning space provided by UYOD resulted in better organisation of tasks and increased responsibility of the students, which reinforced their problem-solving skills and boosted confidence.

Shift in Learning Approach

Faculty members also observed a definite change in the way students were approaching learning. In UYOD, students became more active and self-reliant and took more responsibility for their learning. One of the faculty members referred to the following, *"Students approach learning tasks more comfortably with the help of digital devices. They are less dependent on the teacher and attempt to discover things on their own. This change renders learning more self-directed and autonomous."*

This passive to active learning transition was manifested in the sense that students welcomed this autonomy that UYOD afforded. The other

member of the faculty highlighted the adaptability and newness of digital devices in the learning process, *“The learning approach becomes more flexible and modern with digital device use. Students are flexible to learning activities. They are more involved in classroom activities.”*

Devices enabled students to work with materials more flexibly and self-directedly, which enhanced their general learning experience. In general, the use of UYOD was agreed upon by a significant part of the faculty, as it led to more active, independent and more engaged students. One of the faculty members concluded, *“Students are beginning to organise their learning in digital format, where they tend to make summaries and visual aids to comprehend concepts better.”*

This strategy not only improved academic performance but also taught students to think critically, initiate and develop self-confidence.

Perceived Impact on Students’ Collaboration

Question 4: In your experience, does the use of UYOD enhance collaboration among students? Can you share any examples where device usage facilitated better communication or teamwork among students?

Enhancing Collaboration and Communication Through UYOD

Generally, faculty members noted that the application of UYOD greatly improves students’ collaboration, but there were mixed views on the impact of devices on collaboration dynamics depending on the availability of technology to students. Several faculty members pointed out the beneficial impact of the UYOD on group work and communication. An example of faculty member sharing is the following, *“In certain cases, the UYOD is beneficial in promoting cooperation among students. In most cases, those who have them do not share views/work with those who do not have them.”*

Although there are challenges regarding access to devices, there was agreement that UYOD largely enhances collaboration among students who have them. Several members of the faculty have indicated that the use of digital devices helped them to communicate more effectively in groups and helped them coordinate their tasks.

According to one member of the faculty, *“Yes, they can communicate and share resources and work on a group project.”*

This basic yet efficient interaction enabled the students to maintain constant contact, exchange academic content, and collaborate with each other on projects more easily. Another faculty member observed, *“Yes, there is an evident improvement in collaboration among students because of using UYOD. They can communicate more readily in group assignments and exchange ideas immediately. This enhances collaboration and gives students an opportunity to learn among themselves.”*

This remark herein brings out the importance of digital tools in not only enhancing communication but also creating a learning environment where students can share ideas in teamwork in a more effective way, prompting more effective teamwork. The other faculty members noted how digital tools positively affected group work arrangement and made it more efficient. One of the faculty members said, *“I have found out that students work better with their own devices. They plan the work of groups more effectively and share academic information with ease. This enhances collaborative learning within the classroom.”*

This finding indicates that UYOD was beneficial to keep students organised and involved, which has led to improved group dynamics and collaboration.

Examples of Device-Facilitated Collaboration

Besides the overall enhanced cooperation, some faculty members gave specific cases of how digital devices served to enhance collaboration and communication. As an example, one of the faculty members outlined how students have been collaborating using WhatsApp, *“Students usually form WhatsApp groups to talk about assignments and share notes. They can communicate fast and explain their doubts to each other, and this enhances coordination and group work.”*

This demonstrates that instant messaging applications can enable students to engage in fast, informal messaging, which can be used more effectively during non-classroom hours. The other member of the faculty provided an

example of how group work was achieved with the help of digital platforms such as Google Docs, *“I have observed children using laptops and cell phones to make group presentations. They break down assignments on the internet and remain in touch with each other even when out of school. This enhances communication and interaction.”*

Google Docs allowed students to work together due to the possibility of real-time editing and sharing documents that provided effective collaboration and ensured a smoother organisation of tasks. When discussing research assignments, a faculty member commented, *“In research methodology, students were able to compile survey data together through Google Sheets, organise data analysis in real-time on the internet, and present the results in digital form, which enhanced efficiency and collaboration.”*

This case demonstrates the immense influence of online tools to improve the quality and efficiency of work in groups. Lastly, one faculty member talked about using digital tools to organise a cognitive psychology project, *“In one cognitive psychology project, students were split into WhatsApp groups and were given the same Google Docs to split tasks, share research articles, and peer-review their parts of the assignment, which culminated in a complete final submission.”*

This case highlights the significance of digital tools in ensuring uninterrupted interaction and feedback, which eventually leads to quality group work.

Challenges and Suggestions

Question 5: What challenges, if any, have you encountered when students use their own devices in the learning environment? What recommendations would you give to maximise the positive impact of UYOD initiatives on students' growth, esteem, efficacy, and collaboration?

Challenges in Device Usage

A wide range of challenges emerged from faculty observations regarding the use of UYOD in the classroom. Among the concerns was the disruption of concentration in the classroom by non-academic apps, including social media and

games, which influenced the concentration of students. An example of this is that one faculty member observed, *“Among the key issues that I have noticed is distraction due to social media and non-academic applications. Certain students are likely to lose attention during lectures. Teachers are no longer able to monitor the use of devices all the time. This may have an impact on classroom discipline.”*

This underscores the role of extraneous variables in the use of devices that can potentially interfere with student interaction, which in the end disrupts the learning process. Besides distractions, another major issue was unequal access to the devices. One of the faculty members commented, *“One of the obstacles is the unequal access to digital devices of students. Students do not have an appropriate device and have a reliable internet connection. This brings imbalance in learning opportunities. It even hinders the involvement and self-confidence of pupils.”*

This inequity in device access was viewed as a significant obstacle to providing equal learning opportunities for all students and was identified as a classroom divide. The other significant obstacle was that it was hard to track the digital activities of the students. The faculty members reported that during classes, some students abused devices to do non-academic activities, and this needed to always be monitored. One of the faculty members described it as, *“Student supervision of online activities is one of the problems. Other students use the devices for purposes other than academic learning and are unaware of the impact. This has an impact on their learning. It must be controlled properly.”*

This underscores the need for teachers to be watchful, in addition to their duties, so that gadgets are utilised properly without making them disrupt their studies.

Suggestions for Maximising UYOD Impact

To overcome these difficulties and realise the best advantages of UYOD programmes, several members of the faculty underlined the necessity of the clarity of guidelines and organisation of supervision. One of the faculty members recommended the following, *“To achieve the greatest benefit, the usage of the devices should have clear guidelines. Students should be educated*

on responsible and scholarly usage. The teachers are encouraged to closely observe the use of devices in the classroom. Training on the devices can be conducted regularly, and both students and teachers can learn to use the devices."

This indicates the need to have organised training in the faculty and students so that devices can be responsible and effectively utilised in the classroom. The other guideline was regarding institutional policies. A faculty member commented, *"Policies within an institution are needed to facilitate the integration of devices. Educators need to be trained in how to conduct digital classrooms. There are also awareness sessions students should be aware of how to use. This will help minimise abuse and enhance learning."*

This explains why there should be clear and uniform policies on the use of devices in learning institutions to ensure that they are used properly to avoid misuse. Besides institutional policies, inclusive access to digital tools was a suggestion that was repeated. One of the faculty members recommended the following, *"Inequality in access to devices ought to be tackled. Students without access to the appropriate technology should be supported by institutions so that all students are able to engage in digital learning activities."*

By eliminating this disparity, schools will be able to make sure that every student will enjoy the benefits of device integration, irrespective of their socio-economic status.

Maximising Collaboration and Learning Impact

Another aspect emphasised by the faculty was the need to encourage the collaboration of students with devices. Proposed by one of the faculty members was, *"Encourage collaboration with digital media where teammates are motivated to collaborate. There should be clear roles and responsibilities for each student to bring about an efficient and equal partaking."*

This suggestion is essential, as it highlights the need to use devices to not only do tasks at an individual level but also collaboratively learn as a team, which can empower teamwork and critical thinking. Moreover, the other members of the faculty also mentioned the need to be

closely monitored and do systematic homework to prevent any distractions and make the best out of school, *"Devices will be included, and the teacher needs to be monitored to remain focused on learning. Regular check-ins and feedback on how the devices are used will assist the students to use the tools in a responsible and efficient way."*

This recommendation can promote further teacher involvement to ensure that devices are used efficiently and with minimum distractions. The overall recommendation of the faculty members was that, under better supervision, definite guidelines and equal opportunities, the further use and development of UYOD strategies would be able to make a better contribution to the academic and social growth of students. One of the faculty had stated, *"I will also be capable of using classes with guided activities and instructions using devices. I provide instructions and feedback and encourage the students to find innovative ways of using assignments, research, and presentations. Having a balance between the old and new will see them acquire academic skills and teamwork competency."*

This strategy will help to focus on the balance between the conventional process of learning and digital technologies to make sure that the devices can promote, but not impede, the overall progress of students.

DISCUSSION

This study has explored the impact of the implementation of Use Your Own Device (UYOD) on teaching practices and learning. It turned out that the degrees of engagement, academic success, self-esteem and self-efficacy and the degree of cooperation between the learners increased with the inclusion of equipment in classroom instruction aids. Simultaneously, issues like distraction, unequal access, and misuse of devices were noted, which led to suggestions of more explicit policies, surveillance, and systematic usage plans. All findings were compared with prior empirical studies on technology integration in education, thereby enabling a more critical alignment with existing scholarly evidence.

The research found that the incorporation of UYOD by students in education improves engagement, participation and academic

achievement. There were positive results reported by the faculty members, especially in student organisation and independent learning. This is consistent with the results of Alam et al. (2025) and Liu (2025), who have shown that digital tools are a significant boost to interactive learning and engagement. Likewise, Chathuranga et al. (2025) and Zoupanou (2026) demonstrated that technology integration helps to create interactive and cooperative classroom learning. Galimova et al. (2025) and Rakha (2025) also emphasise the significance of technology in the context of active learning, citing the ability to engage with the content in real-time as a factor contributing to the understanding gained. Besides, Okai-Ubaje et al. (2022) and Siddique et al. (2026) stated that the online instruments give students control and participation in learning, thereby making it efficient. Accordingly, To-gaibayeva et al. (2022) and Jatileni et al. (2024) concluded that the devices promote more interactive contexts in the classrooms and encourage real-time interaction. All these studies strengthen and critically support the result of the present studies because the studies show that in UYOD, students learn at their own speed and at their own pace.

The research also established that students who applied for UYOD performed better academically, were more organised, and managed time better. This is in line with Limniou et al. (2021) and Tulião et al. (2025), who found that academic performance improves with device use due to better efficiency in completing assignments. Similarly, Alhasani and Orji (2025) and Song et al. (2025) discovered that digital tools enhance the capacity of students to organise their work well. Perez-Sanagustin et al. (2021) and Mou (2023) also provide evidence of the fact that improved organisation and time management directly lead to better academic results. On the same note, Chang et al. (2022) and Ale-Ruiz et al. (2024) demonstrated that higher interaction with learning materials results in improved performance. Higher-order thinking, which is supported by technology, is noted by Pedraja-Rejas et al. (2024) and Galimova et al. (2025), and the better performance in the subjects where critical thinking is required was also proved by the earlier studies of Ninghardjanti and Dirgatama (2021) and Gamarra-Vargas et al. (2026). This

alignment of evidence points to both consistency and the overall validity of the results of this work in the larger scholarly framework. All these studies demonstrate that technology can enhance academic ability due to improved management of tasks, engagement, and cognitive development.

Additionally, the study revealed that UYOD has a positive impact on students' self-esteem and self-confidence in terms of developing independence in problem-solving. Chang et al. (2022) have greatly supported this by having established that self-efficacy grows when the individual is empowered to work out issues on his or her own. Similarly, evidence by Carab-regu-Vokshi et al. (2024) and Song et al. (2025) shows that increased digital literacy results in increased autonomy and self-confidence. In this context, the achievement of independence and confidence was found by Sophonhiranrak (2021) and Okai-Ubaje et al. (2022) to be encouraged by digital tools. Durak and Uslu (2024) and Guerra-Macias and Tobon (2025) also highlight the significance of autonomy as a means of self-esteem development. Moreover, Pedraja-Rejas et al. (2024) and Galimova et al. (2025) found that self-directed learning of course content resulted in students' confidence. The results are consistent with previous studies and further knowledge on autonomy-driven learning environments' effects on psychological outcomes. All these findings indicate that UYOD enables students to become owners of their learning, which enhances self-efficacy and self-esteem.

The research also found out that UYOD enhances positive cooperation among the students, especially when it comes to group work. This fact can be evidenced by Duan et al. (2024), who discovered that digital devices could improve collaboration through better communication and sharing of resources. In the same manner, Huertas-Abril and Palacios-Hidalgo (2024) and Tsui and Mok (2024) found better coordination in group activities when using a device. Engelbrecht et al. (2024) and Trilisiana et al. (2025) also emphasised that digital tools can be used to provide real-time feedback when collaborating. Jalil and Mohamad (2024) and Kanyika et al. (2024) pointed out that the possibility of sharing ideas and documents instantly enhanced collaboration, whereas Kokkinos (2024) and

Chilton et al. (2025) discovered that devices facilitate better organisation of teamwork. Likewise, Alias et al. (2024) and Lohr et al. (2024) noticed better coordination and group outcomes. This strong agreement across studies underscores the role of digital environments in fostering collaborative competencies. All these studies show that UYOD improves collaboration because it helps to create effective communication, coordination, and sharing of tasks.

Nevertheless, the research also found that there were difficulties related to UYOD such as distractions and unequal access as well as the inability to control the use of devices. The latter issue is justified by Keane and Keane (2022) and Park et al. (2025), who identified that social media and gaming applications may divert students from their academic work. Likewise, Das and Ahmed (2024) and Kumayas et al. (2025) also identified the problem of off-task behaviour as associated with using digital devices. Miah (2024) discovered the issue of unequal access, and Keane and Keane (2022) highlighted the impact of the digital divide on learning opportunities. This issue is also supported by Khezrlou and Stockwell (2025) and Kumayas et al. (2025), who suggested the need to tackle access inequalities. Ameli et al. (2024) emphasised the significance of teacher supervision in controlling device use and were supported by Khezrlou and Stockwell (2025). However, these challenges also highlight critical gaps that require structured policy interventions and equitable technological access. These results indicate that although UYOD has significant advantages, it requires clear guidelines, organised monitoring, and fair accessibility.

CONCLUSION

The investigation was on the use of digital tools, specifically, personal devices in the field of education. Technology use in the classroom was determined to have a positive impact on student engagement, involvement and learning. The faculty members have reported that they feel more confident and competent in using virtual tools, and this has helped them to better organise learning. However, challenges to this included weak connectivity, distractions and lack of technology access. These are suggested to

be managed by implementing clear guidelines, enhancing monitoring efforts and encouraging collaboration. The research highlights that digital technologies can be very effective when managed and used appropriately to enhance learning. Additionally, research promotes constant change with new technologies and the essence of a growth mindset in faculty members and learners. Further research should also explore the need for long-term impacts and how the remaining concerns are to be addressed to sustain the concept of digital integration in schools.

RECOMMENDATIONS

This research has several important implications for educators, institutions and policymakers. First, the fact that UYOD positively influences student engagement, academic performance, and self-esteem prompts educators to think more actively about the use of devices in their teaching plans. However, the obstacles mentioned such as distractions and unequal access to devices need clear institutional guidelines and policies to provide a successful implementation. Training that can empower faculty members to handle the possible adverse effects of technology and utilise its advantages to help students learn might be of value. In addition, the results of the research suggest the necessity of schools and higher education institutions to pay more attention to the issue of digital equity to provide every student with an equal opportunity to access the required technology. To further bridge the digital divide and to provide inclusive learning opportunities, learning institutions should also have contingency measures to assist those students who may lack access to personal devices or improved internet access.

FUTURE RESEARCH

Future studies in this field might develop this research by filling some of the key gaps. First, a more comprehensive understanding of the effects of the implementation of digital devices would be possible by examining the attitude of students towards the use of their UYOD as a learning tool. A comparison of the experiences of the faculty and students would help to dis-

cover some valuable information about the perception and use of the devices in different ways by these two groups. Longitudinal research might observe the long-term impact of using UYOD on academic performance, enabling researchers to determine the long-term effects of the use of digital tools on student learning and engagement. The research could also explore in future the type of devices and applications that are most useful in various fields. In addition to this, studies on the relationship between integration of digital devices and pedagogical practices can yield information on best practices to follow when integrating technology into various subjects in an effective manner. The effectiveness of integrating the devices into the classroom could be researched on the influence of the guidelines and training programmes on classroom use of technology as well as on the institutional policies for using technology.

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