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Impact Of Blended Learning Method On Students' Engagement In The Subject Of Mathematics At Secondary Level: A Comparative Perception Of Male And Female Students

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ABSTRACT

This study compares the perceptions of male and female students to examine how the blended learning approach affects secondary students' interest in mathematics. A structured questionnaire measuring five aspects of engagement—behavioral, cognitive, emotional, social, and technological—was completed by a sample of 517 students (265 males and 252 females). Gender-based differences were investigated using Cohen's *d* and independent samples *t*-tests. The results show that there are no statistically significant differences in the behavioral, cognitive, emotional, and social engagement that blended learning improves for either gender. Nonetheless, female students' technological engagement was noticeably higher, suggesting that there are gender-specific differences in how students use digital tools. According to the findings, blended learning successfully encourages general mathematical engagement by encouraging participation, teamwork, and cognitive investment. In order to maximize blended instructional practices and create inclusive and interesting mathematics learning experiences for all students, educators are urged to adopt equitable technology strategies and professional development.

Introduction

The digital revolution in education that has been very fast in the twenty first century has grossly transformed the teaching and learning practices that have been practiced traditionally all over the world. The new information and communication technologies have allowed the educators to make a step further as compared to traditional classroom teaching to newer, more flexible, interactive and student-centered teaching methodologies. Of these innovations, blended learning has come out as one of the most powerful instructional strategies, which incorporate face-to-face learning and online learning experiences in an effort to promote education. This method has become especially relevant in secondary education where learners are supposed to acquire high-order thinking, self-directed learning, and long-lasting academic involvement. Within the topic of math, which is usually viewed as abstract and difficult, blended learning can present some valuable potential of enhancing student motivation, engagement, and conceptual knowledge.

The blended learning is usually understood as the intentional combination of the conventional in-the-classroom instruction with the aspects of online learning spaces, allowing students to enjoy the advantages of the direct teacher instruction and technological-mediated learning activities. This teaching model enables learners to learn and access a variety of resources, cooperation with students, and instant feedback as well



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as learn at their own paces. Graham (2021) states that blended learning settings allow flexibility and individualization, which have the capacity to support different learning styles and enhance student engagement with academic materials. Combination of synchronous and asynchronous learning activities also encourages higher level of thinking and engagement hence it is especially applicable to intricate subjects like mathematics.

The interaction with students is known to be one of the most important factors of academic performance. Engagement is behavioral, emotional and cognitive as it involves the active participation of the students in learning activities, interest and motivation as well as their readiness to put efforts in order to learn material. Engagement is particularly relevant to mathematics education since a lack of engagement can result in anxiety, poor performance, and unfavorable feelings toward the subject. Studies have shown that the engaged students tend to be more persistent, able to solve their problems, and show positive learning results (Maamin, Maat, and Iksan, 2022). In turn, the educational reforms are gradually focusing on those instructional approaches that promote meaningful interaction as opposed to the transmission of the knowledge passively.

Empirical studies have shown the efficacy of blended learning in improving the level of engagement. Blended environments offer interactive multimedia, collaborative and self-directed learning and all these stimulate the interest and participation of the students. As an example, comparative studies have demonstrated that students in blended learning classrooms have a better engagement concerning behavior in comparison to traditional classroom (Bond, Buntins, Bedenlier, Zawacki-Richter, and Kerres, 2021). This kind of environment helps students to feel ownership of their learning and engage in discussions and apply mathematical concepts in the real world.

There are special challenges that face mathematics education at secondary level that make it especially important. Some students are not adept at abstract things, sophistication of procedures, and cumulative knowledge. Conventional lecture-based education is not very effective in fulfilling the different learning needs, thus leading to disengagement and low performance. However, blended learning provides possibilities of visualization, simulation and interactive problem solving which may allow to make mathematical concepts more open. Egara and Mosimege (2024) discovered that mathematics results and retention among secondary school students taught via blended learning are significantly high in contrast to those taught using conventional methods. Such results demonstrate the possibility of the blended methods in order to make classrooms in mathematics more engaging learning environments.

The other significant area in terms of the blended learning researches is the difference between the perceptions and experiences of genders among students. The educational psychology literature indicates that boys and girls might have different learning preference, attitude towards the technology, and mode of engagement. These differences are critical in the process of designing inclusive learning approaches that satisfy the needs of every learner. Research in blended mathematics classrooms has given inconsistent findings on gender effects. There are studies indicating similar benefits of both genders and there are studies that show differences in certain outcomes i.e. retention or motivation. Egara and Mosimege (2024) reported that the overall improvement in achievement was similar, whereas females students showed that they were slightly better retained in mathematical concepts in blended learning environments.

Perceptions related to gender are especially topical in the field of secondary education, where the social expectations, confidence rates, and previous experiences may have an impact on the attitude towards mathematics and technology among the students. Female students might be advantageous in cooperative and encouraging learning situations,



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whereas male students can react variously to self-paced activities on the computer. Exploring these perceptions is instrumental in making sure that there is fair access to effective learning. Also, unequal access to education and technological exposure in most of the developing countries such as Pakistan can further influence the gendered experience in the blended learning settings.

The COVID-19 pandemic expedited the use of blended and hybrid learning models globally, which signified its potential and its challenges. Schools also had to combine online materials with the classroom to teach students and make teachers rethink their standard pedagogical methods. This change proved that blended learning is not a one time solution but a long term solution to future learning. According to Attard and Holmes (2022), mathematics learning classrooms of secondary schools, which adopted blended strategies, also had an improved level of student involvement and more interactive learning experiences. These results support the need to research the impact of blended learning on engagement in various groups of students.

Literature Review

Blended Learning in Secondary Education

Blended learning is a prevailing paradigm in modern day education that combines classroom teaching with the use of digital learning spaces to form a unified teaching framework. It focuses on flexibility, access, and learner control, and allows students to go through content inside and outside the classroom. Horn and Staker (2022) note that the concept of blended learning reverses the role of teachers as carriers of information transmitters but as facilitators of the learning process who should guide the students through unique ways of learning with the help of technology. This transformation happens especially at the secondary level where the students will be expected to acquire the ability to learn independently and have the skills to think critically.

Interactive simulations, video tutorials, online tests and collaboratively based learning platforms can be used in blended learning in mathematics education to enable students to visualize complex concepts and practice problem solving. Online technology use in advance of face-to-face learning is beneficial in meeting various needs of learning and enhancing knowledge of concepts in an in-depth manner. Blended learning models, used to teach secondary education, yielded moderate (or even significant) improvements in achievement and engagement, and in STEM disciplines specifically (Sustanto, Rohmat, Atabik, and Purnomo, 2025). These results indicate that blended solutions not only work in terms of learning but can be used to promote active learning as well.

Student engagement is a multidimensional construct that is behavioral, emotional, and cognitive. Behavioral engagement means working on scholarly tasks, emotional engagement presupposes curiosity and pleasure, and cognitive engagement means being interested in learning complicated concepts. Engagement is an important aspect of mathematics since the subject needs to be studied over an extended period and have problem solving abilities. It has been shown that involved students are more successful and persistent. Fredricks, Blumenfeld, and Paris (2021) pointed out that engagement is a mediating factor between learning outcomes and instructional practices. Students will develop positive attitudes to mathematics and surmount challenges when they are actively engaged in learning activities. On the other hand, avoidance behaviors, anxiety, and poor performance may be the results of disengagement.

Blended learning classes are especially favorable to the development of engagement since they offer diverse learning opportunities. Online elements enable the student to study at his or her own pace whereas at a classroom, the student is able to interact and receive



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instant feedback. Blended scenarios were more effective in creating a high degree of engagement than non-blended ones as Bond et al. (2021) discovered.

There have been many researches on the effect of blended learning on mathematics achievement. Achievement is not the only measure of education success but it gives good responses to the effectiveness of instructional strategies. Egara and Mosimege (2024) have shown that students in mathematics taught by blended learning scored higher and had better retention than the students taught by traditional means in secondary schools. The researchers credited such improvements to collaborative activities, interactive resources and student-centered teaching integrated into blended settings.

On the same note, Balayan, Oliveros, and Tagalog (2024) found that hybrid mathematics learning improves conceptual learning, problem-solving abilities, and mathematical communication. These are skills that are required to engage fruitfully, since the student that comprehends concepts well is likely to engage actively in the learning activities. Blended learning is also flexible and enables the student to revisit the areas that they find challenging and this brings frustration to a minimum and confidence to a maximum.

Instructional design and the quality of teaching is a major factor that determines the effectiveness of blended learning. The mere integration of both online and offline elements does not ensure greater results but instead the learning tasks should be meaningful and interesting. According to Rulida, (2025) perceived teaching performance and critical thinking activities are the key predictors of student engagement in blended mathematics courses. The optimal way to maximize the advantages of blended learning is by utilizing teachers who can design interactive activities that involve a discussion and can offer feedback promptly.

Problem-based learning, collaborative projects, and formative assessments are some of the strategies that can be used as active learning processes and they work well in blended settings. These techniques facilitate higher levels of learning since the students are asked to analyze, synthesize and apply mathematical concepts. Besides, using digital tools, visualization and experimentation may be provided thus making abstract ideas more tangible.

The nature of gender discrepancy in mathematics education is not a new topic of research and studies have been conducted to investigate the difference in achievement, attitudes, and participation. Although there are studies that indicate males are doing better in mathematics than females, recent studies show that there is a narrowing of gender gaps that may be depending on circumstances. It is more likely that the disparities are because of engagement patterns rather than differences in abilities.

According to Zhao et al. (2023), engagement in blended learning environment is affected by demographic factors, such as age and academic performance; gender differences were however not significant in all instances. This is an indication that contextual variables might be even more significant than gender. Likewise, research studies that have been done in high school also indicated that both male and female students have the same level of cognitive, affective, and behavioral engagement when they are given supportive learning conditions. Nevertheless, other studies show slight variations in preferences of learning. It is also common to find that female students favour group work and systematic instructions whereas the male students may appreciate individual discovery as well as competition. Such preferences may determine the reaction of students to such elements of blended learning as group discussions or self-paced modules.

The attitude of the students toward the blended learning greatly impacts their interaction and learning results. Positive impressions have the ability to boost motivation whereas a negative experience may cause resistance or disinterest. In a study carried out in Pakistan,



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it was found that most students have positive attitudes towards blended learning and refer to flexibility and better communication as the key advantages (Soomro, Soomro, Bhatti, and Gulzar, 2022). The paper also observed that technology-enhanced instruction was valued by both male and female students, but there were problems with the infrastructure, and training was also mentioned.

The perceptions are influenced by the technological expertise, experience, and culture. The anxiety associated with technology use by female students can be evident in such situations when the level of access to digital resources is different. On the other hand, environments that are positive and supportive of team work and give specific direction can also boost confidence and participation of girl students.

The world-wide pandemic increased blended learning, which was considered a luxury feature earlier, to a need. Online courses quickly became part of traditional classroom methods in educational institutions exposing the possibilities and constraints of online learning. Attard and Holmes (2022) noted that in the few years, secondary mathematics classes that adopted blended methods during this time had more interaction and student involvement. Educators claimed that online technologies provided them with a greater level of customization and instant feedback. Equity, access, and preparedness of teachers also became emphasized during the pandemic. Lack of internet connection and absence of devices were some of the issues that disadvantaged students had to contend with, and this may influence the level of engagement. The challenges are critical to blended learning because they need to be addressed to ensure that the learning process is beneficial to all students.

Interaction is not only a result but a contributor to academic success. Emotionally engaged students stand more chances of persevering when faced with challenges and excelling in their studies. Maamin et al. (2022) have stressed that engagement is a predictor of mathematical performance and should be the primary consideration of the instructional design. Blended learning gives the possibility of developing engagement due to interactive content, collaborative learning, and self-regulated learning. In addition, the engagement helps in the acquisition of life-long learning skills, such as autonomy, critical thinking, and digital literacy. Such skills are crucial to success in college and contemporary employee environment. Thus, increasing involvement with secondary mathematics education has long-term effect, which is not only immediate academic achievements.

Research Objectives

To compare how male and female students perceive the effect of the blended learning approach on secondary school students' behavioral engagement in mathematics.

To investigate how male and female students perceive the effects of the blended learning approach on secondary school students' cognitive engagement in mathematical thinking.

To compare how male and female students perceive the effects of the blended learning approach on secondary school students' emotional engagement with mathematics.

To examine how male and female students perceive the effects of the blended learning approach on social engagement in secondary school mathematics classroom interactions.

To ascertain whether male and female students' opinions about the influence of the blended learning approach on technological engagement in secondary mathematics education differ significantly

Hypotheses

H₀₁: Perceptions of how the blended learning approach affects behavioral engagement in mathematics at the secondary level do not significantly differ between male and female students.

H₀₂: Perceptions of the effect of the blended learning approach on cognitive engagement in



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mathematical thinking at the secondary level do not significantly differ between male and female students.

H₀₃: Perceptions of how the blended learning approach affects secondary students' emotional engagement with mathematics do not significantly differ between male and female students.

H₀₄: Perceptions of how the blended learning approach affects social engagement in secondary mathematics classroom interactions do not significantly differ between male and female students.

H₀₅: Perceptions of the impact of the blended learning approach on technological engagement in secondary mathematics education do not significantly differ between male and female students.

Methodology

With an emphasis on contrasting the perspectives of male and female students, the study used a quantitative comparative research design to examine how the blended learning approach affected secondary school students' involvement in mathematics. 517 secondary school pupils, 265 of whom were male and 252 of whom were female, made up the sample. A structured questionnaire measuring the behavioral, cognitive, emotional, social, and technological aspects of student engagement was used to gather data. A Likert scale was used to record responses in order to gauge how involved students were in blended learning math classes. The mean scores of male and female students were compared across engagement dimensions using independent samples t-tests for data analysis. To ascertain the extent of gender-based differences, Cohen's d was also computed.

Table 1: Comparative View of Male and Female Students Regarding Impact of Blended Learning Method on Student's Behavioral Engagement in Mathematics Learning at Secondary Level

Group	N	Mean	SD	t	df	Sig. (2-tailed)	Mean Difference	Cohen's d
Male	265	4.247	0.481	0.740	515	0.459	0.036	0.06
Female	252	4.211	0.615					(negligible)

Table 1 shows the comparative study of the perception of the male and female students on how the blended learning method influences their behavioral engagement in mathematics at the secondary level. Male students (M = 4.247, SD = 0.481) have a mean score that is marginally larger than the female student (M = 4.211, SD = 0.615). Nonetheless, the independent samples t-test reveals that this difference is not statistically significant, $t(515) = 0.740$, $p = 0.459$ because the p-value exceeds the value of 0.05. In addition to that, the difference in the means (0.036) is insignificant, and the Cohen d (0.06) is an insignificant effect size. Thus, the null hypothesis (H₀₁) is accepted. On the one hand, it can be concluded that learning mathematics in both sexes at the secondary level with the use of blended learning does not have a specific effect on the behavioral engagement.

Table 2: Comparative View of Male and Female Students Regarding Impact of Blended Learning Method on Student's Cognitive Engagement in Mathematical Thinking at Secondary Level

Group	N	Mean	SD	t	df	Sig. (2-tailed)	Mean Difference	Cohen's d
Male	265	4.186	0.577	-0.129	515	0.897	-0.007	0.01
Female	252	4.193	0.588					(negligible)

Table 2 shows the comparative perception of male and female students about the effects



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of the blended learning approach on cognitive involvement in mathematical thinking in the secondary level. The mean score of male students ($M = 4.186$, $SD = 0.577$) is nearly equal to the means score of the female students ($M = 4.193$, $SD = 0.588$). The independent samples t-test shows that the difference between two groups is not significant, $t(515) = -0.129$, $p = 0.897$, the p-value is far higher than the p-value level of significance which is 0.05. The difference (-0.007) is very minimal and the d (0.01) of Cohen shows that the effect size is negligible. As such, the null hypothesis (H_{o2}) is accepted. It has been concluded that the blended learning application has a similar effect on the cognitive engagement in mathematics among both male and female students.

Table 3: Comparative View of Male and Female Students Regarding Impact of Blended Learning Method on Student's Emotional Engagement toward Mathematics at Secondary Level

Group	N	Mean	SD	t	df	Sig. (2-tailed)	Mean Difference	Cohen's d
Male	265	4.138	0.583	-	515	0.112	-0.082	0.14
Female	252	4.219	0.581	1.591				(small)

Table 3 shows the comparison of the male and female students in relation to the role of blended learning in influencing them in terms of their emotional engagement with mathematics at the secondary level. The average score of female students ($M = 4.219$, $SD = 0.581$) is a bit more than the average score of male students ($M = 4.138$, $SD = 0.583$). Nevertheless, the independent samples t-test shows that such a difference is not significant, $t(515) = -1.591$, $p = 0.112$, because this p-value is not below the level of significance, 0.05. The difference mean (-0.082) is not very big and Cohen d (0.14) displays the small size of the effect. Thus the null hypothesis (H_{o3}) is adopted. It can be inferred that there are similar effects of blended learning on the emotional interest in mathematics among secondary level male and female learners.

Table 4: Comparative View of Male and Female Students Regarding Impact of Blended Learning Method on Student's Social Engagement in Mathematics Classroom Interactions at Secondary Level

Group	N	Mean	SD	t	df	Sig. (2-tailed)	Mean Difference	Cohen's d
Male	265	4.161	0.537	-	515	0.081	-0.081	0.15
Female	252	4.242	0.511	1.750				(small)

Table 4 demonstrates the relative perception of both male and female students in the effect of blended learning on social engagement in mathematics classroom interaction at the secondary level. The average of female students ($M = 4.242$, $SD = 0.511$) is in fact a bit larger than the average of male students ($M = 4.161$, $SD = 0.537$). Nevertheless, the independent samples t-test shows that this difference is not statistically significant, $t(515) = -1.750$, $p = 0.081$, because the p-value is bigger than the 0.05 level of significance. The difference between the mean is not massive (-0.081) and the effect size is also small based on Cohen d (0.15). Hence, the null hypothesis (H_{o4}) is accepted. One can conclude that blended learning also has an impact on social interaction in mathematical classroom interactions among male and female students in the secondary level.

Table 5: Comparative View of Male and Female Students Regarding Impact of



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Blended Learning Method on Student's Technological Engagement in Mathematics Learning at Secondary Level

Group	N	Mean	SD	t	df	Sig. (2-tailed)	Mean Difference	Cohen's d
Male	265	4.086	0.591	-	515	0.021	-0.120	0.21 (small to medium)
Female	252	4.205	0.582	2.316				

Table 5 illustrates the comparison between the perceptions of male and female students on the influence of blended learning on learning mathematics based on technology use in the secondary level. Mean score of female students ($M = 4.205$, $SD = 0.582$) is just higher than the mean score of male students ($M = 4.086$, $SD = 0.591$). This difference is statistically significant with the help of the independent samples t-test, $t(515) = -2.316$, $p = 0.021$ because the p-value is below 0.05. The mean difference (-0.120) means that there is a little difference, and Cohen d (0.21) means that the effect size is little to media. Thus, the null hypothesis (H_0) is dismissed. Conclusively, it can be said that the extent of technological engagement of female students in learning mathematics at the secondary level is very high compared to that of male students in blended learning.

Discussion

The findings showed that male and female students were not significantly different in behavioral engagement with the male students had a slightly higher mean score. Behavioral engagement is the active involvement of students in academic activities of attending classes, assignment completion, and classroom work. The fact that the effect size is negligible proves that blended learning facilitates equal amounts of participation between genders. This observation is in line with earlier studies that indicate that blended learning classrooms provide equal possibilities of participation by integrating the organized face-to-face teaching with the flexible online learning.

As an example, Bond et al. (2021) found that technology-mediated learning spaces substantially promote the active engagement of students of all gender types since online platforms offer numerous ways of engagement not achievable in the real classroom. Equally, Graham (2021) stressed that blended learning systems help to minimize engagement barriers through enabling students to learn materials at their own rate without losing the teacher support.

The capability of blended learning to maintain interaction between genders is of special interest in mathematics education where there is a tendency to disengage as a result of perceived difficulty. Horn and Staker (2022) claimed that blended models offer a personalized learning pathway that ensures the consistent engagement of the behavior through meeting the needs of various learners. Thus, the fact that the present research did not show gender differences may indicate that blended learning may be effective in facilitating equal participation in the secondary mathematics classrooms.

The outcome of cognitive engagement showed that both male and female students had nearly the same mean scores with the difference not being statistically significant. Cognitive engagement entails how far students will go to make effort in comprehending complex ideas, using strategies, and continuing with problem solving. The insignificant effect size shows that both genders had an equal positive impact on the intellectual needs of the blended mathematics lesson. This observation conforms to studies which show that blended learning facilitates deep learning by means of interactive materials, formative evaluations and self-regulated learning opportunities. Maamin, Maat, and Iksan (2022) discovered that engagement with students, specifically cognitive engagement, is one of the



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strongest predictors of mathematical success, which makes it important to focus the instructional strategies on evoking thinking and fostering the development of this specific mental process. Mixed classrooms offer multimedia descriptions, simulations and practice activities that improve conceptual learning to every learner.

Moreover, Egara and Mosimege (2024) found that students who were subjected to blended mathematics instruction showed a high level of retention and problem-solving capabilities without a significant gender gap in the results of the achievement. This evidence is further extended in the present study to demonstrate that cognitive engagement, rather than achievement, is also similarly observed between the male and female students. This is an indication that blended learning facilitates the fair intellectual engagement in mathematics and both groups acquire the ability to think at a higher level.

The difference in emotional engagement was not significant even though female students were slightly more engaged. Emotional engagement is related to interest, enjoyment and positive attitudes of students in learning. The emotional aspects of mathematics like anxiety or confidence are significant determinants of the learning outcome. The results suggest that blended learning provides a conducive learning condition that prevents the negative emotional reactions of both sexes. According to Attard and Holmes (2022), with interactive digital tools and collaborative tasks, blended mathematics classrooms foster student motivation as opposed to traditional instruction which leads them to experience anxiety. These environments enable the students to re-discuss difficult matters in privacy boosting confidence and minimizing fear of failure.

Studies also indicate that instructions design plays a greater role in influencing emotional involvement as opposed to gender. Fredricks, Blumenfeld, and Paris (2021) pointed out that interesting tasks, positive teacher-student interactions, and feedback that is significant will lead to positive emotions about learning. The current results affirm that in the event of incorporation of these factors into blended learning, the interests and enjoyment levels of mathematics among the male and female learners are similar.

The researchers did not find any statistically significant difference between the genders in the area of social engagement, yet the female students were slightly higher in the mean score. The social engagement is defined as the communication with peers and teachers, as well as group work and discussion. Online forums, collaborative tools, and classrooms are some of the activities that tend to improve social interaction in blended learning environments. Such outcomes are in line with the previous studies which show that blended learning facilitates cooperative learning regardless of gender. The authors indicated that the blended models made communication and teamwork easier as they mix the digital collaboration with physical interaction (Sustanto et al., 2025). They can contribute ideas and address problems together, as well as get feedback using multiple channels, which encourages inclusive participation of students.

Furthermore, according to Soomro et al. (2022), the perceptions of blended learning were positive among Pakistani students, who were able to communicate and collaborate with each other better. The present results indicate that these advantages are equally spread among male and female students of secondary level. The female mean is a bit higher, possibly due to the preference to learn in groups, but it is not statistically significant, which means that both sexes are socially involved in blended mathematics classrooms.

As opposed to the other dimensions, technology engagement had a statistically significant gender difference, and the female students had a higher technological engagement. The technological engagement is defined as the communication between students and digital technology, online resources, and multimedia employed in blended learning. This outcome refutes the past belief that male students are more technologically oriented. Modern studies



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indicate that the gender disparity in the use of the technology is decreasing, especially among the younger generations who have been brought up using digital technology. As Zhao et al. (2023) discovered, the contextual and motivational factors affect engagement in blended learning environments in a greater way than gender does. If female students are given quality instructions and valuable assignments, they can be more technologically engaged.

In addition to the presence of strong student engagement in hybrid mathematics instruction, Balayan, Oliveros, and Tagalog (2024) note that supportive online activities could help to boost technological confidence. There are situations, when female students are more diligent in internet work and use digital resources as academic activities and this is why they get higher scores in the current study. In addition, Rulida (2025) highlighted the fact that perceived teaching effectiveness and critical thinking activities have a considerable impact on engaging in technology-based learning. With the help of a proper design of instructions and constant assistance by teachers, the learners, particularly females, might be more inclined to work with digital tools. The small-to-medium effect size implies that the difference was statistically significant, but it was not big enough to imply that there was a significant difference.

Recommendations

Improve Technological Interaction: Adopt specific interventions, e.g., practical workshops and scaffolding the use of digital resources, to make male students more technologically involved in mathematics.

Implement Blended Learning: The blended learning strategies, which are a combination of online resource, interactive activities, and group work, should be continued to maintain behavioral, cognitive, emotional, and social engagement of all students.

Teacher Development: Continuous development of teachers on digital pedagogy and instructional design based on engagement: To develop an inclusive, interactive and technology rich mathematics lesson that maximizes engagement and learning outcomes in both genders.

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