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Mobile Phones Utilization and Learners' Academic Performance

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ABSTRACT

This study aimed to determine the extent of mobile phone utilization and learners' academic performance. This study employed a descriptive research design using a self-made test instrument to assess the mobile phone utilization of 81 senior high school learners. The results revealed that most of the respondents were males, belonging to higher-income families, from the TVL-automotive strand, and with many siblings. Overall, the extent of mobile phone utilization by learners was great. When grouped according to variables, the extent of mobile phone utilization of learners was also great. The level of academic performance of learners when grouped according to profile variables was very satisfactory. There was a significant difference in the extent of mobile phone utilization in the areas of communication and collaboration and e-learning platforms when compared according to their sex. In addition, there was also a significant difference in the extent of mobile phone utilization in the areas of e-learning platforms and materials and equipment when compared according to average family monthly income. Moreover, there was a significant difference found in the level of academic performance of learners when compared according to sex and academic strand. Further, a significant relationship was found between the extent of mobile phone utilization and the level of academic performance of learners. This study calls for educational institutions and teachers to take action to ensure that students' use of mobile phones and other related devices inside and outside the classroom will help enhance learning and will not negatively impact their academic performance.

Keywords: Academic performance, learners, mobile phones

How to Cite:

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INTRODUCTION

Mobile phones have emerged as one of the most significant technological advancements of the 21st century. Mobile phones offer immediate access to communication, information, entertainment, and various innovative applications, including social media platforms, search engines, teleconferencing, and audio and video conversations (Yadav et al., 2021). In addition, the use of mobile technology provides students with a highly motivating learning environment that is informal, contextual, rich, and ubiquitous, allowing them to have control over their learning opportunities, such as when they learn, where they learn, and how quickly they learn (Ortiz et al., 2023).

In the Philippines, DepEd Order No. 83, s. 2003 strictly prohibits the use of mobile phones during class hours. Teachers and parents should devise ways to educate students on the responsible use of mobile phones to prevent them from engaging in misguided and immoral activities. The widespread use of mobile phones among students has raised concerns about potential unintended consequences (Samante, 2019). According to Patil and Dhanawade (2023), students' behavior may change due to excessive use of mobile devices and exposure to unsupervised content, affecting their academic performance.

Most students bring their mobile phones to school in the present research venue. A mobile phone gives student's confidence and satisfaction in their senior high school lives. It enables students to document and build their memories and relationships as they grow, fostering a positive school environment where they feel happy to attend every day. However, some students use mobile phones for leisure activities rather than educational purposes, which leads to distractions and compromises their focus on learning.

On the other hand, keeping students from using their phones during class hours is one of the most challenging tasks for teachers. The use of this device appears to be uncontrollable among students, creating a distraction during classroom instruction and sometimes influencing them to cheat on quizzes and exams. Controlling the use of mobile phones during class hours is a challenge, as we, as teachers, also use phones in our education delivery. With these, the researcher was motivated to determine the dependence on mobile phones among senior high school students. The findings of this study will provide valuable insight for education authorities to revisit or amend some guidelines for using mobile phones in the senior high school program. Likewise, teachers and students will be informed about effective methods for regulating mobile phone usage and optimizing its role in modern classrooms.

OBJECTIVES OF THE STUDY

The primary objective of this study was to assess the extent of mobile phone utilization and its impact on learners' academic performance in a rural high school located in a district of a large school division for the 2024-2025 school year. Specifically, this sought to answer the following questions: 1) the extent of mobile phone utilization by learners in terms of the area communication and collaboration, e-learning platforms, and materials and equipment; 2) the level of learners' academic performance during the first and second quarters of the school year 2024-2025 when grouped according to the aforementioned variables; 3) the significant difference in the extent of mobile phone utilization of learners when grouped and compared according to the aforementioned variables; 4) the significant difference in the level of learners' academic performance when grouped and compared according to the aforementioned variables; and 5) the significant relationship between the extent of mobile phone utilization and the level of learners' academic performance.

LITERATURE REVIEW

Mobile phone utilization has become pervasive, with its excessive use even linked to nomophobia, an irrational fear of being without one's phone (Kenutis, 2024). While mobile phones offer vast learning opportunities, they can also be distracting, requiring students to regulate their usage to avoid risks such as anxiety and internet addiction (Allred & Atkin, 2020). As communication and collaboration tools, mobile phones enhance interaction through video, sound, and image-sharing features (Dev, 2024), and support real-time collaboration between teachers and learners via social networking platforms and multimedia projects (Becton, 2024). They also serve as powerful e-learning tools, enabling continuous access to academic resources both inside and outside institutions (Seralidou & Douligeris, 2016), functioning like portable computers with diverse applications that support distance education (Fawareh & Jusoh, 2017). Moreover, mobile phones provide cost-effective access to educational materials anytime and anywhere (Masiu & Chukwuere, 2018), while their recording and storage capabilities foster higher-level thinking, computational skills, and serve as valuable references for learning (Ahmad, 2020; Becton, 2024).

Mobile phones, widely used by youngsters, are considered one of the greatest technological gifts of the 21st century, offering vast resources but also posing risks such as behavioral changes and declining academic performance when overused. While the Department of Education initially banned mobile phones during class hours (DepEd D.O. No. 83, s. 2003), their use has since become acceptable for educational purposes (Gemina et al., 2023). As communication and collaboration tools, they enable real-time interaction and support teacher-student engagement (Ortiz et al., 2023), while also enhancing classroom instruction and

research through educational apps (Adlit et al., 2023; Sampelo, 2023). Mobile phones further serve as e-learning platforms, granting access to online classes, academic resources, and digital tools that improve understanding and study efficacy (Asio et al., 2021; Toquero & Talindong, 2020; Lim & Arcilla, 2021). They also function as practical learning equipment, replacing dictionaries, calculators, and stopwatches, while supporting experiments and study references (Sampelo, 2023). Beyond academics, smartphones provide entertainment through gaming, music, and multimedia features, making them both indispensable educational assets and sources of leisure (Concha, 2024).

Research on mobile phone use and academic performance reveals both positive and negative impacts. Ifeanyi and Chukwuere (2018) found that while many students believed mobile phones aided research, assignments, and lecture comprehension, they also reported distractions, reduced schoolwork, and lack of sleep. Similarly, Almansour and Alzougool (2017) highlighted their role in university learning activities, while Akaglo and Nimako-Kodu (2019) noted benefits for Ghanaian students in self-paced research and lesson preparation. Patil and Dhanawade (2023) emphasized that mobile phones can enhance learning but may also be harmful depending on usage patterns. Anjali (2021) and Rabiu (2016) observed that age, gender, and socio-economic status did not significantly affect academic performance, though Moradi et al. (2023) linked higher screen time to socio-economic factors. Hossain (2019) underscored mobile phones as essential study tools, offering instant access to educational resources, while Zhao et al. (2018) concluded that proper, monitored use of mobile phones in classrooms can positively influence GPA and overall academic achievement.

Studies on mobile phone use among students reveal both benefits and drawbacks. Caaya (2021) found that smartphones help learners contact teachers and access academic materials, with effective use offering more advantages than disadvantages. Pajarillo-Aquino (2019) reported no significant link between mobile phone use and academic performance but still recommended classroom use. Sampelo (2023) noted proficient study habits among students, though academic performance varied by usage frequency, highlighting the need for teacher guidance and school regulation. Adlit et al. (2023) showed mobile phones as effective learning aids, with differences in convenience and digital literacy but no gender-based disparities. Ortiz et al. (2023) emphasized their usefulness in digital learning, recommending mobile-friendly tools while cautioning against overuse. Lacificar (2021) revealed that while many students achieved high GPAs with daily phone use, excessive usage (5–8 hours) negatively correlated with academic performance, suggesting the need for regulation and reduced screen time.

Learners' academic performance has become a global concern influenced by diverse factors such as educational systems, socio-economic disparities, and cultural contexts (Al-Tameemi et al., 2023; Alsaad et al., 2023). Beyond individual traits, elements like family background, parental support, learning environment, and resource availability significantly shape outcomes (Rabia, Mubarak, Tallat, & Nasir, 2017). Home conditions—including distractions from siblings, household demands, poor study environments, and psychological stressors—can hinder learning skills (Bocar & Tizon, 2017). Moreover, technological advancements, particularly mobile phones, present both opportunities and risks; while they provide vast resources, excessive use may lead to behavioral changes and declining academic performance among adolescents (Yadav, 2021; Mukhdoomi, 2020). Thus, consistent research is essential to assess whether smartphone use enhances or undermines students' educational success.

Learners' performance is typically assessed through knowledge gained, measured by teacher evaluations and educational goals achieved via continuous assessments or examinations (Leander & Fabella, 2020). Academic outcomes are influenced not only by student-related factors but also by extracurricular activities and mobile phone use, which can either enhance or diminish motivation depending on interest, stress reduction, and social interaction (Gimena et al., 2023). While mobile phones provide opportunities for learning, they also pose challenges, as their presence in classrooms often leads to distractions that teachers struggle to control (Caaya, 2021). Some studies suggest mobile phone use can improve academic performance (Buenafe, 2023), while others argue it negatively impacts achievement (Gallego, 2023). Excessive use, in particular, disrupts concentration and reduces study time, ultimately lowering academic success (Sampelo, 2023).

Studies reveal mixed findings on the impact of mobile phone use and other factors on students' academic performance. Kaur (2018) noted that reliance on mobile phones during class negatively affects performance, with young students showing dependency on smartphones, while Anjali (2021) found no significant influence of age, gender, or socio-economic status on performance despite mobile phone use. Mukhdoomi (2020) highlighted rising smartphone addiction among youth, stressing the need for further research on its effects. Shahjahan et al. (2021) linked poor performance to irregular attendance, low parental education, weak family support, social media use, and excessive gossip, suggesting counseling interventions. Meanwhile, Alfifi and Abed (2017) identified study habits, learning preferences, and daily study hours as positive contributors to achievement, with females and married students performing better, while factors like class size, age, family income, and parental education showed no significant impact.

METHODOLOGY

This section presents the discussion of the research methodology used, the subjects and respondents of the study, the research instruments used, the validity and reliability of the instruments, the procedure for data gathering, and the statistical tools and procedure for data analysis.

Research Design

This study utilized a descriptive research design to examine the extent of mobile phone utilization and learners' academic performance in a rural high school during the 2024–2025 school year. As Aggarwal and Ranganathan (2019) explain, descriptive research systematically gathers and analyzes factual data, making it suitable for identifying prevailing conditions, practices, opinions, processes, effects, and emerging trends. The researcher deemed this design most appropriate, as it provides valuable insights into the characteristics of the study population and supports informed professional judgments and recommendations.

Study Respondents

The study's respondents were 81 learners from a total population of 101. Since the number of respondents is quite large to handle, the stratified random sampling technique was used, and the Cochran formula was used to find the sample size. The Cochran formula enables you to calculate an ideal sample size based on a desired level of precision, a specified confidence level, and the estimated proportion of the attribute present in the population. Cochran's formula is particularly suitable for situations involving large populations (Glen, 2023). After determining the proper sample size, the researcher employed a stratified sampling approach. Stratified sampling is a method of random sampling where researchers first divide a population into smaller subgroups, or strata, based on shared characteristics of the members and then randomly select among these groups to form the final sample (Nickolas, 2021).

Instruments

This study utilized a self-designed questionnaire divided into two parts: Part I gathered respondents' profiles (sex, family income, strand, number of siblings), while Part II measured the extent of mobile phone use across communication and collaboration, e-learning platforms, and materials/equipment, with 30 items rated on a 5-point Likert scale. Validity, defined as the accuracy of an instrument in measuring its intended function (Sudaryono et al., 2018), was established through face and content validation by three expert validators in education, yielding a validity index of 4.83, interpreted as "excellent." Reliability, referring to consistency of results (Imasuen, 2022), was tested using Cronbach's alpha on 30 learners outside the study sample, producing a reliability index of 0.779, which is considered "acceptable" (Taber, 2017).

Data Gathering Procedure

To facilitate the smooth conduct of the study, the researcher employed the following procedures: A letter of request was addressed to the Schools Division Superintendent for approval to conduct the study. Upon approval, a letter of request was also given to the head of the subject school. After securing approval for the second request, questionnaires were administered to target respondents. The questionnaire was administered during the students' free time to minimize disruptions to classes. The data gathered from the respondents' responses were tallied and tabulated using the appropriate statistical tools. SPSS was used in the computer processing of encoded data.

Data Analysis and Statistical Treatment

Objective No. 1 employed a descriptive analytical scheme and mean to determine the extent of mobile phone utilization among learners.

Objective No. 2 employed the descriptive analytical scheme and mean to assess the level of learners' academic performance.

Objective No. 3 used the comparative analytical scheme and Mann-Whitney U test to determine the significant difference between the extent of the use of mobile phones of learners when grouped and compared according to the aforementioned variables.

Objective No. 4 used the comparative analytical scheme and t-test to determine the significant differences between the level of learners' academic performance.

Objective No. 5 employed a relational analytical scheme and Spearman's rho to identify the significant relationship between the extent of mobile phone use and learners' academic performance levels.

Ethical Consideration

This study aims to minimize the risk of harm to its target respondents by ensuring the confidentiality of their responses and maintaining their anonymity throughout the entire research process. At the outset, the researcher secured the free, prior, and informed consent of the participants and assured them of their right to withdraw from participation in the research if deemed necessary. No personal data compromising the respondents' identity will be collected, in adherence to the Data Privacy Act of 2012, specifically regarding access to the data by both the researcher and the analyst. The respondents assured that no information that discloses their identity was released or published without their prior consent, except in extremely urgent circumstances. All collected materials were disposed of appropriately, either by machine shredding or dissolved in water, after the study was submitted. At the same time, soft copies of the data were deleted, ensuring that there is no chance of future retrieval.

RESULTS AND DISCUSSION

This section deals with the presentation, analysis and interpretation of data gathered to carry out the objectives of this study. All these were made possible by following certain appropriate procedures so as to give the exact data and solution to each specific problem.

Table 1

Extent of Mobile Phones Utilization of Learners According to the Communication and Collaboration

Items	Mean	Interpretation
As a learner, I use mobile phones to…		
1. contact my teachers for educational-related purposes.	3.86	Great Extent
2. maintain social relationships with friends and relatives.	4.06	Great Extent
3. receive important announcements and instructions from teachers and the school head.	4.12	Great Extent
4. communicate and share information with my fellow learners.	3.94	Great Extent
5. send/share learning materials with my classmates.	3.68	Great Extent
6. collaborate with members in accomplishing group assignment tasks.	3.95	Great Extent
7. get feedback and comments from others.	3.46	Moderate Extent
8. receive important files and photos via Messenger related to my studies.	4.02	Great Extent
9. become confident in communicating with others.	3.67	Great Extent
10. join online educational forums.	3.33	Moderate Extent
Overall Mean	**3.81**	**Great Extent**

Table 1 presents the extent of mobile phone utilization among learners in the area of communication and collaboration. The respondents obtained an overall mean score of 3.81, interpreted as a great extent. The data indicate that respondents use mobile phones to some extent as a means of communication and collaboration.

Investigating further, respondents reported a highest mean score of 4.12 on item No. 3, stating, 'I use mobile phones to receive important announcements and instructions from teachers and the school head,' and interpreted it as 'to a great extent.' On the other hand, the lowest mean of 3.33 was observed for item No. 10, which asked if I use mobile phones to join online educational forums, indicating a moderate extent of use.

The results imply that most respondents seldom participate in online educational forums using their mobile phones. The reason is that most online educational forums were not related to their strand, particularly in sugar food processing and automotive. The finding suggests that the content of the forums does not align with the specific interests or fields of study of the respondents, leading to a lack of engagement. Consequently, their mobile devices are underutilized for participating in these forums. The result aligns with that of Ghana, Akaglo, and Nimako-Kodu (2019), which highlights that using a mobile phone enhances learning activities by allowing students to research at their own pace and retrieve relevant and up-to-date information for their assignments and projects without physically visiting the library. Additionally, it enabled students to read before class, giving them a fair idea of the lessons yet to be taught.

Table 2

Extent of Mobile Phones Utilization of Learners According to the e-Learning Platforms

Items	Mean	Interpretation
As a learner, I use mobile phones to…		
1. search for necessary information I need while learning.	4.09	Great Extent
2. watch educational videos to sharpen your understanding of the topics and lessons.	3.81	Great Extent
3. subscribe to online learning platforms applicable to my strand.	3.63	Great Extent
4. have quick access to information online.	3.89	Great Extent
5. enhance my digital literacy.	3.68	Great Extent
6. do my assignments and learning tasks without going to the library.	3.78	Great Extent
7. quickly determine the meaning of the words in the online dictionary application.	3.96	Great Extent
8. gain extra skills and experience outside the classroom	3.72	Great Extent
9. watch and listen to online learning programs from DepEd.	3.74	Great Extent
10. follow and share educational vlogs that are useful for my studies.	3.67	Great Extent
Overall Mean	**3.80**	**Great Extent**

Table 2 discloses the extent of mobile phone utilization of learners in the area of e-learning platforms. The respondents obtained an overall mean score of 3.80, interpreted as a great extent. This indicates that respondents use their mobile phones to a great extent for quick searches of information on e-learning platforms.

Analyzing further, respondents assigned the highest mean score of 4.09 to item No. 1, stating, "I use mobile phones to search for necessary information I need while learning," and interpreted it to a great extent. On the other hand, the lowest mean of 3.63 was on item No. 3, which stated that I use mobile phones to subscribe to online learning platforms applicable to my strand, and this is interpreted to a great extent.

The result implies that most respondents rarely subscribe to online learning platforms applicable to my strand. This trend is due to the limited availability of online learning platforms that are relevant to their strand and align with their learning interests. Additionally, some online learning platforms interest the respondents; however, they require subscription fees. These costs can deter potential users who may be hesitant to invest in subscriptions without a guarantee of valuable content. Consequently, this situation illustrates the importance of more accessible and affordable online learning options that cater to the specific needs of these learners.

The finding aligns with that of Masiu & Chukwuere (2018), which highlights that mobile phones enable students to access educational materials at any time and from anywhere. This makes this opportunity highly cost-effective, as it relies solely on the mobile phone function. Users of mobile phones can download recorded online lectures and e-books to improve their learning experience.

Table 3

Extent of Mobile Phones Utilization of Learners According to the Materials and Equipment

Items	Mean	Interpretation
As a learner, I use mobile phones to…		
1. listen to music while reviewing my lessons.	3.67	Great Extent
2. watch movies during my free time.	3.86	Great Extent
3. enhance my cognitive skills through educational online games.	3.11	Moderate Extent
4. serve as my alarm clock.	4.05	Great Extent
5. schedule my school activities with reminders.	3.73	Great Extent
6. record lectures delivered by teachers that I missed or find difficult to understand.	3.56	Great Extent
7. calculate simple mathematical operations.	3.70	Great Extent
8. take and store important pictures useful for my studies.	4.14	Great Extent
9. record and save short videos for educational use.	4.04	Great Extent
10. download educational learning materials related to my strand.	4.04	Great Extent
Overall Mean	**3.79**	**Great Extent**

Table 3 reveals the extent of mobile phone usage among learners in the area of materials and equipment. The respondents obtained an overall mean score of 3.79, interpreted as a great extent. This suggests that the use of mobile phones is a significant aid to respondents' daily activities.

Examining further, respondents assessed the highest mean score of 4.14 on item No. 8, stating, 'I use mobile phones to take and store important pictures useful for my studies,' and interpreted it to a great extent. On the other hand, the lowest mean of 3.11 was observed for item No. 3, which stated that I use mobile phones to enhance my cognitive skills through educational online games, indicating a moderate extent.

The results imply that most respondents seldom use their mobile phones to enhance their cognitive skills through educational games. This is because not all respondents consistently have internet connectivity, and some prefer playing online games rather than educational games like word games or Sudoku. Most respondents engage in non-Internet activities, such as taking pictures and videos for educational purposes. Additionally, many individuals may not prioritize educational games, perceiving them as less entertaining than other gaming options. Therefore, this trend highlights the importance of raising awareness about the cognitive benefits that result from engaging in more intellectually stimulating activities.

Ahmad (2020) supports this result. Mobile phones facilitate higher-level thinking and computational skills. Mobile phones can store and record material for later use, allowing lecturers to utilize mind-mapping tools to gauge better how students think and process information.

Table 4

Level of Learners' Academic Performance During the First and Second Quarters of The School Year 2024-2025 When Grouped According to the Aforementioned Variables

Variable	Categories	Mean	Interpretation
Sex	Male	86.35	Very Satisfactory
	Female	87.76	Very Satisfactory
Average Family Monthly Income	Lower	87.19	Very Satisfactory
	Higher	86.71	Very Satisfactory
Strand	TVL-Sugar Processing	87.73	Very Satisfactory
	TVL-Automotive	86.25	Very Satisfactory
Number of Siblings	Few	86.65	Very Satisfactory
	Many	87.05	Very Satisfactory

Table 4 presents the level of learners' academic performance when grouped by sex, average family monthly income, strand, and number of siblings.

As presented in the table, all groups of respondents obtained a very satisfactory rating. However, there is a slight advantage in the overall ratings: females performed better than males, respondents from low-income families outperformed those from high-income families, TVL-sugar processing strand respondents received higher ratings than TVL-automotive respondents, and respondents with many siblings had a slight advantage over those with few siblings.

This implies that female respondents from lower-income families with the TVL-sugar processing strand and with many siblings exhibit better performance than their counterparts. Female learners were goal-oriented in performing learning tasks to earn high grades. Learners with good family resources can help contribute to completing learning tasks. Learners with fewer siblings may be more focused and dedicated to achieving academic success. According to Buenafe (2023), students exhibit above-average academic performance and high rates of mobile phone use. However, according to Gallego (2023), using a mobile device would affect children's academic achievement.

Table 5

Difference in the Extent of Mobile Phones Utilization of Learners According to the Communication and Collaboration When Grouped and Compared According to Sex, Average Family Monthly Income, Strand, and Number of Siblings

Variable	Category	N	Mean Rank	Mann-Whitney U	*p*-value	*Sig. level*	Interpretation
Sex	Male	48	36.64	582.50	0.043		Significant
	Female	33	47.35				

Average Family Monthly Income	Lower	36	43.51	719.50	0.388		Not Significant
	Higher	45	38.99				
Strand	TVL-Sugar Processing	37	42.01	776.50	0.721		Not Significant
	TVL-Automotive	44	40.15				
Number of Siblings	Few	26	41.48	702.50	0.899		Not Significant
	Many	55	40.77				

Table 5 presents the inferential statistics on the difference in the extent of mobile phone utilization among learners in the area of communication and collaboration when grouped and compared according to variables.

The computed p-values for the variables average family monthly income, strand, and number of siblings are 0.388, 0.721, and 0.899, respectively, all of which are greater than the 0.05 level of significance and are thus interpreted as not significant. Therefore, the hypothesis that states "there is no significant difference in the extent of mobile phone utilization of learners in the area of communication and collaboration when grouped and compared according to average family monthly income, strand, and number of siblings" was accepted.

However, for the variable sex, the computed p-value is 0.043, which is less than the 0.05 level of significance and thus interpreted as significant. Therefore, the hypothesis that states "there is no significant difference in the extent of mobile phone utilization of learners in the area of communication and collaboration when grouped and compared according to sex" was rejected.

The result implies that the extent of mobile phone usage among learners in communication and collaboration varies by gender. This variation is because most female respondents more often used their mobile phones as their means of communication than male respondents. This trend suggests that female learners may prioritize connectivity and social interaction more than their male counterparts. Consequently, this difference in usage patterns could influence group dynamics and collaborative efforts in educational settings.

The result contradicts that of Rabiu (2016), who discovered in his research that gender did not significantly impact mobile phone use and academic performance among senior secondary school students. The use of mobile phones has a considerable impact on the academic performance of both male and female students in their final years of secondary school.

Table 6

Difference in the Extent of Mobile Phones Utilization of Learners According to the e-Learning Platforms When Grouped According to Sex, Average Family Monthly Income, Strand, and Number of Siblings

Variable	Category	N	Mean Rank	Mann-Whitney U	*p*-value	*Sig. level*	Interpretation
Sex	Male	48	35.20	513.50	0.007	0.05	Significant
	Female	33	49.44				
	Lower	36	47.63	571.50	0.023		Significant

Average Family Monthly Income	Higher	45	35.70				
Strand	TVL-Sugar Processing	37	44.70	677.00	0.193		Not Significant
	TVL-Automotive	44	37.89				
Number of Siblings	Few	26	42.88	666.00	0.620		Not Significant
	Many	55	40.11				

Table 6 presents the inferential statistics on the difference in the extent of mobile phone utilization among learners in the area of e-learning platforms when grouped and compared according to specific variables.

The computed p-values for the variables "strand" and "number of siblings" are 0.193 and 0.620, respectively, which are all greater than the 0.05 level of significance and thus interpreted as not significant. Therefore, the hypothesis that states "there is no significant difference in the extent of mobile phone utilization of learners in the area of e-learning platforms when grouped and compared according to strand and number of siblings" was accepted.

However, for the variables sex and average family monthly income, the computed p-values are 0.007 and 0.023, which are less than the 0.05 level of significance and thus interpreted as significant. Therefore, the hypothesis that states "there is no significant difference in the extent of mobile phone utilization of learners in the area of e-learning platforms when grouped and compared according to sex and average family monthly income" was rejected.

The finding implies that the extent of mobile phone utilization among learners in the area of e-learning platforms differs according to sex and average family monthly income. Female respondents with financial resources tend to explore more e-learning platforms than their counterparts. This result suggests that both gender and economic factors play a significant role in how students engage with digital learning resources. Consequently, addressing these disparities could enhance access to and participation in e-learning for all learners. The finding contradicts that of Anjali (2021), suggesting that gender and socio-economic status do not significantly impact their mobile phone use or academic performance.

Table 7

Difference in the Extent of Mobile Phones Utilization of Learners According to the Materials and Equipment When Grouped According to Sex, Average Family Monthly Income, Strand, and Number of Siblings

Variable	Category	N	Mean Rank	Mann-Whitney U	*p*-value	*Sig. level*	Interpretation
Sex	Male	48	37.98	647.00	0.163		Not Significant
	Female	33	45.39				
Average Family Monthly Income	Lower	36	47.19	587.00	0.034		Significant
	Higher	45	36.04				

Strand	TVL-Sugar Processing	37	42.09	773.50	0.700		Not Significant
	TVL-Automotive	44	40.08				
Number of Siblings	Few	26	44.50	624.00	0.356		Not Significant
	Many	55	39.35				

Table 7 summarizes the inferential statistics on the difference in the extent of mobile phone utilization of learners in the area of materials and equipment when grouped and compared according to variables.

The computed p-values for variables sex, strand, and number of siblings are 0.163, 0.700, and 0.356, respectively, which are all greater than the 0.05 level of significance and thus interpreted as not significant. Therefore, the hypothesis that states "there is no significant difference in the extent of mobile phone utilization of learners in the area of materials and equipment when grouped and compared according to sex, strand, and number of siblings" was accepted.

However, for the variable average family monthly income, the computed p-value is 0.034, which is less than the 0.05 level of significance and thus interpreted as significant. Therefore, the hypothesis that states "there is no significant difference in the extent of mobile phone utilization of learners in the area of materials and equipment when grouped and compared according to average family monthly income" was rejected.

The finding implies that the extent of mobile phone utilization by learners for materials and equipment varies based on their average family's monthly income. Respondents with good socio-economic status may have the resources to utilize mobile phones to a greater extent than respondents with lower financial capability. This evidence suggests that financial resources play a significant role in how effectively students can access and use mobile phones for learning. Consequently, individuals from higher-income families may derive greater benefits from mobile technology in their educational pursuits. The finding supports that of Moradi et al. (2023), which found that screen time and use of phones and tablets were higher in adolescents with high socio-economic status.

Table 8

Significant Difference in the Level of Learners' Academic Performance When Grouped and Compared According to Sex, Average Family Monthly Income, Strand, and Number of Siblings

Variable	Category	N	Mean	*t*-value	*p*-value	*Sig. level*	Interpretation
Sex	Male	48	86.35	-2.247	0.028		Significant
	Female	33	87.76				
Average Family Monthly Income	Lower	36	87.19	0.783	0.436	0.05	Not Significant
	Higher	45	86.71				
Strand	TVL-Sugar Processing	37	87.73	2.394	0.019		Significant
	TVL-Automotive	44	86.25				
	Few	26	86.65	-0.548	0.587		Not Significant

Number of Siblings	Many	55	87.05

Table 8 presents comparative statistics on learners' academic performance, grouped and compared by sex, average family monthly income, strand, and number of siblings.

The computed p-values for average family monthly income and number of siblings are 0.436 and 0.587, respectively, both of which are greater than the 0.05 level of significance. Based on the results, it was interpreted as not significant. Therefore, the hypothesis that states, "there is no significant difference in the level of academic performance when they are grouped and compared according to average family monthly income and number of siblings," was accepted.

However, for variable sex and strand, the computed p-values are 0.028 and 0.019, respectively, which are less than the 0.05 level of significance; thus, they are interpreted as significant. Therefore, the hypothesis that states, "there is no significant difference in the level of academic performance when they are grouped and compared according to sex and strand," was rejected.

The finding implies that the level of learners' academic performance varies when compared according to sex and strand. A female with a TVL-sugar processing strand performed better academically than a male with a TVL-automotive strand. This result suggests that gender and the specific academic focus can have a significant influence on students' performance. The comparison highlights how different strands may align better with specific learners' strengths, regardless of their gender. Alfifi and Abed (2017), who demonstrated that female students outperform male students, support this result. While class size, age, residential area of a student, family size, family income, and parents' education level have no significant influence.

Table 9

Relation Between the Extent of Mobile Phone Utilization and the Level of Learners' Academic Performance

Variables	N	*r*	p-value	Level of Significance	Interpretation
Extent of Mobile Phone Utilization	81				
		.480	.000	.005	Significant
Level of Learners' Academic Performance	81				

As presented in the table, the computed *r* was 0.480 with a *p*-value of 0.000, which is less than the 0.05 level of significance; thus, it is interpreted as "significant." Therefore, the hypothesis that states "there is no significant relationship between the extent of mobile phone utilization and level of academic performance was rejected.

The finding suggests that mobile phone use positively impacts the academic performance of learners. This means that the higher the utilization of mobile phones for learning, the better the academic performance of the learners. This evidence suggests that incorporating mobile phones into educational practices can enhance students' learning outcomes. Therefore, effectively using mobile technology in the classroom may lead to improved academic success. The finding is supported by Zhao et al. (2018), who found that mobile phone use has a positive effect on academic performance when used correctly. Students who used cell phones for educational purposes, such as contacting their professors or taking pictures of educational materials, saw an increase in their GPAs. The study concluded that cell phone usage in the classroom can have a positive impact on academic performance, but it should be monitored for educational purposes only.

CONCLUSION

The study found that most respondents were male, from higher-income families, in the TVL-automotive strand, and with many siblings, with overall mobile phone utilization rated as great and academic performance very satisfactory. Significant differences in mobile phone use were observed across sex and family income, while academic performance varied by sex and strand, showing a strong relationship between mobile phone utilization and performance. Conclusions highlight that demographic variable influence usage, mobile phones are widely helpful for learning, and higher utilization correlates with better academic outcomes, though performance still needs improvement.

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RECOMMENDATIONS

Recommendations include seminars on communication and collaboration tools, subscriptions to e-learning platforms, parental monitoring of online activities, and policies promoting responsible use of mobile phones, alongside initiatives like educational game contests and time management training to maximize benefits and minimize distractions.

Conflict of Interest

The authors declare that this research has no conflict of interest.

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