Title: Empowering Education: Unleashing the Potential of Digital Mobile-Based Learning

Abstract

Among Several other survey questions asked there was an indication that if textbook content are hosted in any app whether it will be acceptable and would that be welcome by the students, nurtured by government bodies.

Introduction:

In an ever-evolving digital landscape, educational institutions are embracing the power of technology to enhance learning experiences. In this research conducted a comprehensive survey to gauge the efficacy and impact of digital mobile-based learning on students' academic growth and overall engagement. The purpose of this survey was to explore the benefits, challenges, and future potential of integrating mobile devices into the learning process. This article presents the key findings and insights from the survey, shedding light on the transformative journey of digital mobile-based learning in schools.

Methodology:

The survey was conducted over a period of four weeks, with 50 High schools in Dhaka and Bogura district of Bangladesh. It encompasses only English subject areas Teachers who teaches in high schools from class six to class Ten and teaches regularly in the school. A questionnaire was distributed to teachers allowing us to gather a well-rounded perspective on the utilization of digital mobile-based learning. The questions focused on aspects such as frequency of technology usage among students for learning daily class tutorials, preferred learning activities related to specific apps, perceived advantages, and areas for improvement for a proposed solution.

Survey Questionaries

* School or Organisation Details (name, School or Organisation Location (full address), School Type (Secondary/High School etc)
* School Infrastructural Condition, Number of Students Estimated, Number of Students in Each Class or Section)
* Teachers Details (Name, Phone Number, Year of Teaching Experience)
* Teachers' Social Sites address (e.g. FB, Linkedin, instagram etc)
* Graduation major was not English but currently teaching English subject
* English Teaching class or level
* Frequency of using digital content for teaching or digital medium for teaching and learning
* Internet or Mobile app to teach students or asked students to find solutions or learning materials from 16. Having experience of using mobile app for teaching and learning? Used internet or Mobile App such as (e.g. Youtube Tutorials)
* Do you think teacher will use a customized proposed mobile app for teaching
* Do you think students will use customized app for learning?
* Do you agree with the concept that mobile App and mobile based technology motivates students for learning English
* Do you agree with the concept that mobile App and mobile based technology App can replace guide book
* Do you think mobile app-based learning can improve English proficiency of students
* Any specific ideas How customized app can be improved specially for learning English for the context of Bangladesh
* Do you think Govt should promote these types of innovation for education sector

Findings:

We have done extensive analysis with the survey data collected. In our data collection highest priority is given for the secondary class student teachers who teach between 6-10th class about 46%. High school, KG college and KG High school. Details about the statistics are depicted in the following figure. Adjacent chart explains the percentage of teachers who teach in which class. Hence, from these two figures we can get a vivid image of collected dataset resources about the participating teachers.

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| Forms response chart. Question title: 3. School Type. Number of responses: 50 responses. | Forms response chart. Question title: 13. English Teaching class or level. Number of responses: 50 responses. |

The infrastructure's overall quality and condition, which is generally above average, are shown in the following statistics. The majority of school owners are privately held 45%, yet there are some of variable quality. 32% of which are MPO institutes—non-government educational institutions that receive funding from the government nonetheless—and 22% of which are government institutes. There are quite a few students overall. Over 1000 students attend almost 40% of the institutions. A sizable number of pupils are present in each section and class. A significant percentage of classes—38%—have a size greater than 50. So, we can presume that the participating teachers have quite a bit of experience teaching a lot of children.

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| Forms response chart. Question title: 4. School Owner. Number of responses: 50 responses. | Forms response chart. Question title: 5. School Infrastructural Condition. Number of responses: 50 responses. |
| Forms response chart. Question title: 6. Total Number of Students Estimated. Number of responses: 50 responses. | Forms response chart. Question title: 7. Number of Students in Each Class or Section. Number of responses: 50 responses. |

For the data privacy and security issues Teachers were reluctant to provide their social website address to the surveyor. Among 50 participants only 12 has, that means 24% attendees provided their social sites address to use them for research purpose.

The following graphs give an overview of the English teaching experiences of the teachers as well as the general consensus regarding the use of digital content and mobile apps in everyday teaching and learning. Almost 62% of teachers have been teaching for more than 8 to 10 years, and some of them have been teaching for decades in higher secondary education. 32% of teachers have three to eight years of experience, while just 6% are fresh to the profession. Around 83.7% of teachers The language of instruction during their graduation was English, and their major was also English. Very few teachers 13.3% graduation major is something other than English yet teaching English in secondary schools probably have sufficient English language proficiency.

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| Forms response chart. Question title: 11. Experience of Teaching English (years). Number of responses: 50 responses. |  |
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Facts:

More than half of teachers, or 58%, have no prior experience utilizing mobile apps or technology for teaching, but 90% of them agree, and more than 45% strongly agree, that it encourages pupils to engage actively in their learning. However, they (almost 60%) also hold the opinion that a notebook cannot be completely replaced, despite the fact that mobile apps may solve many problems and provide technological support for teaching and learning. Promisingly optimistic approximately 40%, although thinking that the notebook-based content memorizing learning method can be replaced, feel that mobile app-based learning can replace it permanently.

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| **Questions** | **yes** | **No** |
| Do you use digital content for teaching or digital medium for teaching and learning | 84% | 16% |
| Have you ever used Internet or Mobile app to teach students or asked students to find solutions or learning materials from internet or Mobile App such as (e.g. Youtube Tutorials) | 76% | 24% |
| Education during graduation was English and English was used for learning | 83.70% | 16.30% |
| **Customized mobile app for Learning and Teaching English** | | |
| Do you think teacher will use this mobile app for teaching | 92% | 8% |
| Do you think students will use this app for learning? | 80% | 20% |
| Do you think mobile app based learning can improve English proficiency of students | 86% | 14% |
| Do you think Govt should promote these types of innovation for education sector | 98% | 2% |

This study proposes the Englisher mobile app and presents it to the participating teachers to gather their insightful feedback. 92% of teachers reported that they would use this type of mobile app for teaching if it were made available after using the trial version of the offered customized Englisher app. Teachers anticipate that 80% of students will utilize this app during class. 86% of respondents believed it may help students' English proficiency, and 98% agreed that the government should support this kind of innovation in the education sector.

**Englisher Mobile App:**

**Mobile app will be developed to incorporate NCTB English Textbook content. Using the NLP's data mining techniques we have collected all the words, sentences of class 6 English for Today book.**

**Generate list of keywords based on various categories or segments such as: chapters, lessons, exercises**

**Adopt effective learning techniques such as flash card, game based approach, quiz contest etc. Students can play quiz and performance is saved in the history which can be retrieved and checked for future improvements.**

**World list will be classified according to various criteria, such as: chapters, sections, lessons or most occurred word to least.**

**Filtering options will be provided in the app by which student can see them as a sorted order list**

**Lessons will be represented in a playful enjoyable environment.**

**Synonyms of the words will be displayed which will show a diverse range of option to answer different question related to particular section**

**App will show how to use synonyms by providing example sentences.**

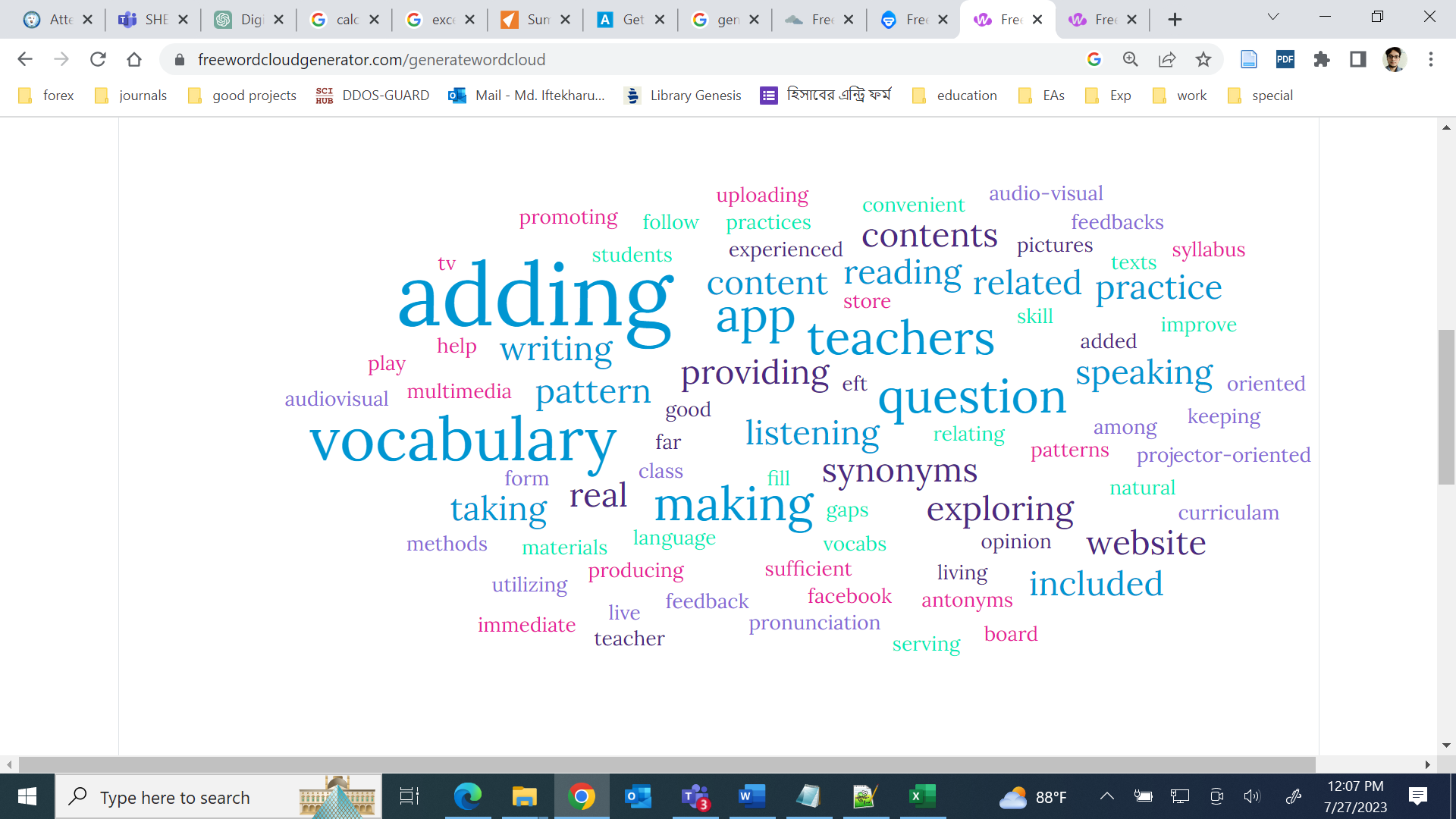
**Teachers or students learn gradually how to use particular words effectively and efficiently**

**Teachers and students will get hints how to answer questions from a wide range of options.**

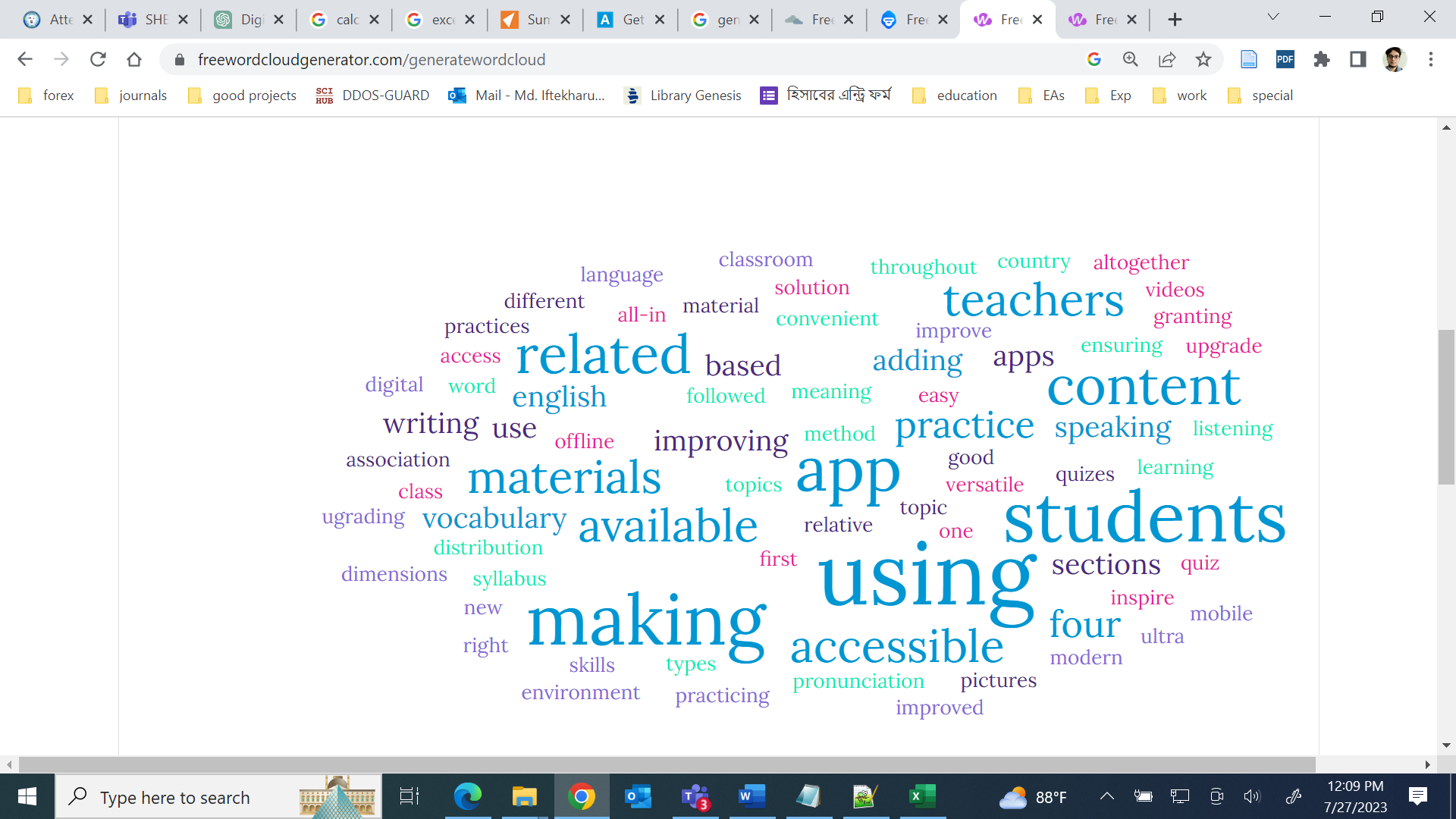


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**24. How this app can be improved:** The participants offer a variety of viewpoints for this question. Some of them mentioned that we could add additional vocabulary and involve more experience teachers who have greater experience in digital learning and teaching. Some participants, including teachers, made the suggestion that adding images, graphics would enhance the apps' usefulness and make them more visually appealing to users. More practice resources and exercise would be helpful. Practices for reading, writing, speaking, and listening are all possible. Another strategy is to provide antonym, synonym, and syllabus-related instances as well as audiovisual engagement with the app. Additionally, parental supervision may be used, and the app may benefit from parental comments to make improvements. The relevance of various terms used by participants is displayed in the word cloud below.



**25. How English learning can be improved using Mobile App:** Since the domain of both questions' question and response areas is the same, this follow-up question actually produced nearly identical answers. The app should be accessible to both students and teachers, various types of practice materials should be included, curriculum-based content and practice materials related to topics should be included in the app, related to topics would encourage users to use it diligently. These suggestions were among the many different ones that were discovered. The figure below illustrates the most prevalent words found in the responses.



Additionally, we used Linguistic Inquiry and Word Count (LIWC) in this situation. To ascertain the general sentiment of the responses given and interactions with the participants, the LIWC-22 analysis of the text sample was performed. When we used LIWC to analyze the responses, we discovered that the majority of respondents had a mix of optimism and skepticism regarding the use of mobile apps in teaching and learning. During the interrogation session, their tone was cordial and enticed thought process.

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|  | How this app can be improved | | How English learning can be improved using Mobile App | |
| Traditional LIWC Dimension | Answer Text | Average for | Answer Text | Average for |
|  |  | Formal Language |  | Formal Language |
| I-words (I, me, my) | 0 | 4.77 | 0 | 0.67 |
| Positive Tone | 2.54 | 3.96 | 3.91 | 2.33 |
| Negative Tone | 0 | 1.1 | 0 | 1.38 |
| Social Words | 2.54 | 6.87 | 5.65 | 6.54 |
| Cognitive Processes | 13.56 | 9.35 | 18.26 | 7.95 |
| Allure | 2.54 | 7.79 | 3.04 | 3.58 |
| Moralization | 0 | 0.2 | 0 | 0.3 |

Special Remarks:

For the data privacy and security issues Teachers were reluctant to provide their social website address to the surveyor. Among 50 participants only 12 have, that means 24% attendees provided their social sites address to use them for research purposes.

1. Enhanced Learning Flexibility:

The survey revealed that digital mobile-based learning significantly improved learning flexibility for students. Access to educational content anytime, anywhere, allowed learners to adapt their study schedules to suit individual preferences and commitments. This increased autonomy positively impacted student motivation and overall engagement.

2. Diverse Learning Resources:

Participants appreciated the diverse range of learning resources available through mobile devices, including interactive e-books, educational apps, and multimedia content. These resources facilitated a deeper understanding of complex topics and catered to different learning styles, nurturing a more inclusive learning environment.

3. Real-world Relevance:

Digital mobile-based learning facilitated a seamless connection between classroom concepts and real-world applications. By leveraging mobile technologies, teachers could integrate current events and practical examples into lessons, making learning more relevant and relatable to students.

4. Instant Feedback and Assessment:

Teachers noted that digital mobile-based learning tools offered real-time feedback on students' progress, enabling prompt identification of learning gaps and individualized support. This data-driven approach enhanced the efficacy of formative assessments and ultimately contributed to improved academic outcomes.

5. Parental Involvement and Support:

Parents appreciated the increased transparency in their child's education through mobile-based platforms. Regular updates, assignment notifications, and progress reports allowed parents to actively participate in their child's learning journey, fostering a stronger teacher-parent-student partnership.

Challenges:

1. Technological Constraints:

While the benefits were evident, some students faced challenges due to unequal access to mobile devices and internet connectivity. Addressing these disparities will be crucial to ensure equal opportunities for all learners.

2. Digital Distractions:

A few educators expressed concerns regarding potential distractions arising from unrestricted mobile access during class. Developing effective strategies to manage screen time and maintain focus on educational content will be essential.

Future Outlook:

Based on the survey results, the potential for digital mobile-based learning in our school is immense. Moving forward, we aim to:

1. Implement Device Equity Initiatives:

By securing additional resources, we plan to ensure that all students have access to mobile devices and reliable internet connectivity, leveling the playing field for everyone.

2. Professional Development for Educators:

Providing ongoing training and support to teachers will empower them to effectively integrate digital mobile-based learning into their pedagogy, optimizing its impact on student outcomes.

Conclusion:

The school survey on digital mobile-based learning reaffirmed its potential to revolutionize education, promoting flexibility, engagement, and personalized learning experiences. By embracing this transformative approach, we aim to empower our students to become adaptive, tech-savvy learners, well-equipped to thrive in an increasingly digital world. The journey towards an empowered future of education has just begun, and we are committed to embracing the challenges and opportunities that lie ahead.

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