

University Students' Perception on Android Based Text-book in Calculus

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ABSTRACT

With the emergence of the internet, e-mastering has more and more more emerge as the promising answer that maintains to develop day after day. Considering college college students' belief in the direction of e-mastering is critical in a success improvement of e-mastering in better education, on account that mindset of consumer in the direction of utility of statistics generation is one of the best factors. This take a look at targets to decide college college students' perceptions of the use of calculus textbook for with android-based. University students' perceptions are carefully associated with their achievement. The mastering media according with the preference of college students will cause them to motivated. This studies is qualitative records evaluation turned into performed descriptively. The records received on this take a look at comes from researchers as the principle instrument, the records questionnaire and interview records is unstructured. The effects are college students' perceptions of the use of calculus textbook for with android-based are withinside the advantageous category.

Keywords: ICT Literacy, Android, Perceptions, Calculus.

1. INTRODUCTION

In the 21st century, digitalization is blanketed in each thing of existence and turns into part of modern-day rapid and sensible existence necessities. No exception withinside the global of training needs era to simplify and help the mastering method to the maximum. Mobile mastering is visible because the modern opportunity in supporting and motivating human beings to research the language at the go [1]. The improvement of era has a tremendous effect on statistics exchange, together with withinside the discipline of training. One of the speedy boom of era these days is the usage of smartphones with the Android running device in any respect degrees of society, together with students. This taken into consideration having an effect, which is right and effective to help the college in handling academic institutions, enhancing the excellent of mastering, and growing pupil mastering activity. The use of era in mastering may be incorporated via mastering gear withinside the shape of media. Learning media is one of the strategic gear that could enhance the excellent of training. Learning media offer pupil stories to discover extra in mastering sports [2]. Also, the usage of academic media makes it clean to supply fabric and conquer teachers' boundaries

withinside the classroom. The use of android-primarily based totally media implements mastering patterns withinside the 21st century [3]. The use of Android-primarily based totally media can boom the effectiveness of mastering [4,5]. In mastering, there are additives of goals, substances, strategies, and critiques interconnected in order that mastering is stated to be a device. Learning should have a clean purpose; those targets are defined in coaching substances which are conveyed the usage of unique approaches, models, strategies, or mastering techniques which are deemed suitable and suitable to students' conditions [6]. Learning affords a brand new expertise and insights into experience they've new insights to help their existence needs. During coaching practice, the studies outcomes at the remedy of adoptive technological mastering or exactly proved to be extra supportive of growing velocity and easy calculation competencies than traditional paper-primarily based totally mastering in general [6]. Along with the want for powerful and green mastering strategies and concepts, statistics era may be very varied, specifically withinside the digitalization enterprise 4.0, which does now no longer get away the position of the today's media improvements usually developing rapidly. Media is interpreted as a shape and channel that could gift statistics [3]. Nowadays, the usage of E-books may be very acquainted amongst the

overall public, that's a made of uncooked substances blended with sure programming for use or functioned instead for published substances. Of course, this may be an innovation this is very probable to be advanced to offer consolation in interacting and withinside the context of training, etc. Especially withinside the modern cutting-edge technology in which clever system gadgets have penetrated each age degree in addition to withinside the training area which felt to benefited due to the short and clean acceleration of statistics via hands. The modern truth makes it viable for sports completed via many different Android-primarily based totally cellphone technologies. Being a aggressive technology is essential to evolve to social alternate with out being separated from the factors of talents and capabilities that should be possessed.

It is inversely proportional to the instructional state of affairs that has now no longer furnished extra powerful centers for optimizing current technological gadgets. Each mastering media's effect could deliver special influences as a result of the implementation process [7]. This increasing number of state-of-the-art technological improvement revolution gives an exquisite possibility to apply generation gadgets which are so extensive and an increasing number of accessible, inclusive of Android-primarily based cellphone structures which are presently pretty acquainted to the overall public. Social alternate in this period of generation needs the era to reply actively to fulfill human desires of their lives. The flexibility of e-mastering is presently very dominant. Hence its usefulness and characteristic are very useful in developing the traits of mastering today, which can't break free technological developments [8]. Because of this mobility and convenience, a few research are inquisitive about exploring this cellular mastering generation's usefulness. In the 21st century, generation and records ought to be used to switch records via way of means of professional educators in instructional establishments and enhance coaching and mastering

environments, now no longer least via way of means of the usage of Android devices as exciting media in mastering [9,10].

Several studies have been published exploring students' perceptions and expectations about e-learning [11]. Recent research with the aid of using the Center for National Education Statistics displays a growing call for and recognition of online learning [12]. This has a look at goals to decide the perceptions of college students in the use of android-primarily based calculus textbooks. Students' perceptions are carefully associated with their achievement. Learning media that observe the needs of college students will lead them to be motivated.

2. METHOD

This takes a look at used a qualitative descriptive technique to explain college students' perceptions of the improvement effects of calculus textbooks primarily based totally on android. The tool on this takes a look at using a pupil and instructor belief questionnaire. The facts supply of these studies had been college students who take calculus courses. Furthermore, the facts received had been analyzed the usage of descriptive facts evaluation through explaining the facts and verifying it. The study's effects had been received via this method withinside the shape of pupil and instructor perceptions of growing calculus textbooks primarily based totally on android. Data received from pupil and instructor questionnaires had been then analyzed after which transformed right into a qualitative shape the usage of a Likert scale.

3. RESULT

Table 1 is the data from the recapitulation of teacher perceptions towards learning multimedia based on android.

Table 1. Results of The Recapitulation of Students' Perceptual Questionnaires

	Aspect					
	Relevance	Organizing	Language	Content	Evaluation	Layout
Sum	62	25	13	38	64	52
Average	4,13	4,16	4,33	4,22	4,26	4,33
Overall average	4,23					

Based on the recapitulation of records in Table 1 that is students' perceptions of calculus textbooks primarily based totally on android, it may be defined in six elements. These elements consist of six factors, specifically 1) elements of the relevance of center talents and simple talents; 2) traits of the cloth business enterprise; 3) components of language; 4) elements of the cloth content material; five) assessment elements; and 6) textbook show elements. On the issue of

relevance, center talents, and simple talents acquired a mean rating of 4.13. The issue of organizing the cloth acquired an average rating of 4.16. The language issue receives a rating of 4.33. The content material issue of the cloth acquired an average rating of 4.22. The assessment issue acquired an average rating of 4.26. In the remaining element, the textbook show issue was given a mean rating of 4.33. The use of photograph media with an appealing look each visually and audio-

visually can triumph over pupil problems in gaining knowledge of [5]. In the part of gaining knowledge of target relevance in textbooks, the common rating is 4.66, which may be very viable.

The feasibility evaluation on this issue includes five signs: the suitability of center talents and simple talents, conformity of gaining knowledge of targets, the accuracy of gaining knowledge of substances, the suitability of cloth selection, and value of cloth with gaining knowledge of targets. The issue of the relevancy to align gaining knowledge of targets with the targets and gaining knowledge of substances in order that gaining knowledge of may be accomplished as a result with education. The elements of the relevance are supported with the aid of using factors of the cloth business enterprise that include cloth to reap simple talents and readability theory. Based on those signs, the cloth organizing issue received a mean rating of 4.13, which changed into protected withinside the viable category. Organizing the cloth is supplied via the usage of sound and accurate language to aid this issue. It is likewise assessed via the usage of language elements. In language usage, it's miles evaluated with the aid of using signs withinside the shape of ease of expertise the cloth via the usage of language. The feasibility of the use of the language received a rating of 4.33, which is protected withinside the viable category. Students' perceptions of the elements of the cloth's content material were given an average rating of 4.22 with a respectable variety. To aid the success of gaining knowledge of targets via textbooks primarily based totally on Android, there's an evaluation of the book's assessment issue or exercise questions. The assessment issue received an average rating of 4.26 withinside the very viable category. The assessment's feasibility is classified from six signs withinside the shape of readability of commands in exercise, readability of commands in query exercising execution, the relevance of inquiries to competence, range of styles of questions, and degree of issue of exercise questions. The remaining issue of pupil evaluation of Android-primarily based total textbooks is the visible issue of books. The shown issue acquired a rating of 4.33 withinside the very viable category. In this issue, it's miles assessed primarily based totally on 4 signs: the accuracy of the advent of textual content and images, the suitability of choosing fonts withinside the application, the accuracy of selecting images, and the elegance of media designs. Based on the six elements above, students' perceptions of textbooks primarily based totally on Android programs received a typically suggest rating of 4.23. This suggests that the pupil's evaluation of growing books primarily based totally on android programs is viable to be used in gaining knowledge of activities.

Learning the use of an Android software may be accessed every time and anywhere; except that, studying cloth may be enriched with diverse studying sources, inclusive of multimedia, and also can be up to date quick via way of means of lecturers. This studying additionally helps interplay among college students and lecturers. Therefore, getting college students used to studying to apply interactive studying media desires to be performed to grow the studying process's flexibility and interactivity may be realized. Also, ICT facilitates college students to benefit from deeper expertise of the challenge remember and improves pupil achievement [13-15]. Being aggressive technology is essential to conform to social extrude without being separated from the factors of competencies and talents that ought to be possessed [16].

4. CONCLUSION

Students' perceptions of the Calculus textbook based on the Android software are assessed from the components of the relevance of middle abilities and fundamental abilities, components of cloth organization, language components, components of cloth content, components of evaluation, and components of look which fall into the very viable category.

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REFERENCES

- [1] Chachil, K., Engkamat, A., & Sarkawi, A. (2015). Interactive Multimedia-based mobile application for learning Iban language. *Procedia - Social and Behavioral Sciences*, 167, 267-273.
- [2] Leow, F. T., & Neo, M. (2014). Interactive multimedia learning: Innovating classroom education in a Malaysian university. *Turkish Online Journal of Educational Technology*, 13(2), 99-110.
- [3] Calimag, J. N., Mugel, P. A., Conde, R. S., & Aquino, L. B. (2014). *Ubiquitous learning environment using android mobile application*. *International Journal of Research in Engineering & Technology*, 2 (2), 119-128.
- [4] Subiyantoro, S. (2018). Android-based Instructional Media Development Procedure to Enhance Teaching and Learning in The Age of Disruption 4 . 0. In *International Conference on Applied Science and Engineering (ICASE 2018)* (Vol. 175, pp. 152-155). Atlantis Press.

- <https://doi.org/https://dx.doi.org/10.2991/icase-18.2018.41>
- [5] Nugroho, A. A., Putra, R. W. Y., Putra, F. G., & Syazali, M. (2017). Pengembangan blog sebagai media pembelajaran matematika. *Al-Jabar: Jurnal Pendidikan Matematika*, 8(2), 197-203.
- [6] Mercier, E. M., & Higgins, S. E. (2013). Collaborative learning with multi-touch technology: Developing adaptive expertise. *Learning and Instruction*, 25, 13-23.
- [7] Stalbovs, K., Scheiter, K., & Gerjets, P. (2015). Implementation intentions during multimedia learning: Using if-then plans to facilitate cognitive processing. *Learning and Instruction*, 35, 1-15
- [8] Ozuorcun, N. C., & Tabak, F. (2012). Is m-learning versus e-learning or are they supporting each other? *Social and Behavioral Sciences*, 46, 229-305.
- [9] Chalkiadaki, A., (2018). A Systematic literature review of 21st century skills and competencies in primary education. *International Journal of Instruction*, 11(3), 1-16.
- [10] Falahudin, I. (2014). Pemanfaatan Media dalam Pembelajaran. *Jurnal Lingkar Widayaiswara*, (4), 104-117.
- [11] Wang, Y. S.(2004); “Assessment of Learner Satisfaction with Asynchronous Electronic Learning Systems”; *Information & Management*, Vol. 41, pp. 75-86.
- [12] Waits, T. & Lewis, L (2003). Distance education at degree-granting postsecondary institutions: 2000-2001 (NCES 2003-017). U.S. Department of Education, National Center for Education Statistics.
- [13] Cox, M. J., & Marshall, G. (2007). Effects of ICT: do we know what we should know? *Education and Information Technologies*, 12, 59–70.
- [14] Kulik, C.-L. C., & Kulik, J. A. (1991). Effectiveness of computer-based instruction: an updated analysis. *Computers in Human Behavior*, 7, 75–94.
- [15] Cox, M., Abbott, C., Webb, M., Blakeley, B., Beauchamp, T., & Rhodes, V. (2003). ICT and attainment: A review of the research literature. ICT in Schools Research and Evaluation Series No.17. Coventry/London: Becta/DfES.
- [16] Puncreobutr, V. (2016). Education 4.0: New Challenge of learning. *St Theresa Journal of Humanities and Social Sciences*. 2(2), 92-97.