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## A STUDY OF TABLET PC EDUCATION'S PERSPECTIVES AND POSSIBILITIES

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**Abstract:** A large number of student's population of India are demanding different types of educational tools across various streams of epistemology and a tablet PC is an internet enabled device-provides a powerful platform and an environment to deliver quality education to the student fraternity. This study was conducted to explore students' attitude and perception towards Hi-tech tablet education in schools in Kota and to find out the causes of not introducing this new educational teaching learning tool in practice. The investigator has adopted mixed research design. 500 secondary grade students were sampled through simple random sampling method out of them 300 hundred were boys and 200 were girls. An investigator's constructed questionnaire was properly filled and return to researcher by respondents. Collected data was categorized in tables and represented in graphs. The study findings presents that there is an ample awareness for hi-tech tablet education between girls and boys. In the end of this research investigator has found that 70% students want hi-tech education, 86% students are thinking that India is backward in tablet education, 84% students want education especially by tablet and 71% are accepting that schools in Indian education system are not appropriate according to 21<sup>st</sup> century where we are planning to become a developed country because schools are meant for preparation of colleges and now days colleges are extremely techno friendly. On the basis of in-depth interviews with 5-CBSE, 5-RBSE administrators and 5-ICT experts, 22 benefits of tablet PC education and 31 causes to not introducing it in Indian circumstances have been explored. This research will develop a sense and present a model for understanding school students' awareness of tablet PC (TPC) as a means to study, teaching learning, forecast, explain, and improve their usage pattern in education.

**Keywords:** Challenges in Tablet PC education, Hi-Tech Education, Tablet Education, Tablet PC.

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**Introduction:** Modern age is the age of information and communication technology (ICT). Everyone wants to complete work with the support and use of ICT. ICT is playing a vital role in education. Whenever teachers implement new aspects of teaching learning pedagogy, children are always benefited. In hi-tech 21<sup>st</sup> century anything can be learnt at anytime, anywhere with the support of technology by learners. In the field of education many technologies have done tremendous miracles like introduction of e-learning, m-learning, laptops, I-Pads, tablet education, digital classes, smart classes, CDs, DVDs, online education etc. Effective teaching in the 21<sup>st</sup> century must be student centered and must infuse technology into the learning experience for both rigour and relevance and emphasise higher order thinking skills. A large number of student's population of India are demanding different types of educational tools across various streams of epistemology because after school they have to go for higher education in prestigious colleges/institutions where education is being provided by latest technology. The tablet PC is an internet enabled device-provides a powerful platform and an environment to deliver quality education to the student fraternity. It is one of the newest innovations in education ICT. This device consists of a standard notebook PC configured containing a screen that acts as both a display device as well as an input device. It can be define as "a type of notebook computer that

has an LCD screen on which the user can write using a special-purpose pen, or stylus. The handwriting is digitized and can be converted to standard text through handwriting reorganization, or it can remain as handwriting text." (Webopedia 2004).

The Tablet PC having the potential to fulfil all the learning objectives of the education. For promoting learning-centered education, it is required to launch tablet education in schools. The tablet PC (TPC) is increasing in popularity and becoming more common for instructors to utilize (Stickel,2009). The tablet PC (TPC) device can promote teaching and learning in students through interaction, collaboration, active learning, class engagement, and high-quality feedback (Klara, 2009; Steinweg, 2006). The tablet PC (TPC) is becoming increasingly popular and more common for instructors to utilize. The tablet device can create numberless opportunity for promoting teaching and learning through student, class engagement, active learning, high quality feedback, collaboration and interaction. It's the advance stage of laptops with inking capabilities using a stylus as an input device that allows writing on the screen. It enhances the mobility provided by the laptops by providing the ability to capture hand writing using a magnetic pen.

Tablet PCs also enhance classroom interaction by a affording a greater range of tools for extending a static curricular structure by providing real time opportunities for formative assessment and digital

forms of summative assessment. It also enhances the collaboration and communication in small group exercises. Students can solve their problems and complete their assignments by communicating each other visually.

*World's Tablet Selling Report* shows that tablet shipments surpass shipments of notebooks in 2013. Strong growth of tablets will continue into the future, allowing tablets to overtake the entire PC market in 2015. The tablet market in US Education grew by an explosive 103% year-over-year in 2012 and continues the same through 2013. Shipments of end-user devices (including tablets, notebooks and desktop PCs) in the US education sector are up 15.3% to 8.5 million units, despite weaker PC sales. Tablets accounted for 35.4% (3ML) of the market in 2012, up from 19.4% in 2011, with significant room for future growth. As the movement toward a fully digital classroom continues, the growth of tablets as the end user device of choice will continue to grow exponentially. 46% of technology directors rate tablets as a high priority over the next three years. In large districts the number increases to 51%. None of the respondents consider tablets a low priority. So we can't deny and ignore tablets advantages.

At present Kota has become an education hub for students all across India and also neighbouring countries. Many school administrators are introducing latest ICT in their schools. Recently a school group, St. Joseph's group of schools has launched its and north India's first hi-tech tablet based school. So to assess the knowledge regarding tablets and hi-tech education in both CBSE and RBSE schools' administrators and students this study has been conducted.

**Statement of the Problem:** "A Study Of Tablet PC Education's Perspectives And Possibilities"

**Significance of the study**

In recent years, excessive use of ICT in the education sector, administrators are demanding a proper guidance and way to choose right technology because market is filled with the spark of glamour and

students are demanding hi-tech technology to meet out their desires and compete with the future. The outcomes of the current study will draw an attention of administrators regarding students' perceptions and views of schools' founders and ICT experts for tablet education's positive and negative aspects. Before introducing tablet education in their schools, initially the administrators should have a feel of the types of problems they can encounter during implementation and should find the solutions before-hand only. Investigator believes that the researchers, educationists, teachers, lectures, professionals, administrators will find this study a valuable research/resource document.

**Objectives:**

- To explore the students awareness and perception for tablet education.
- To know the benefits of the tablet education from students, teachers and administrators prospective.
- To find out the obstacles in launching of tablet education from administrators point of view.
- To suggest a appropriate model for tablet education to upcoming schools those want to establish tablet PC based schools.

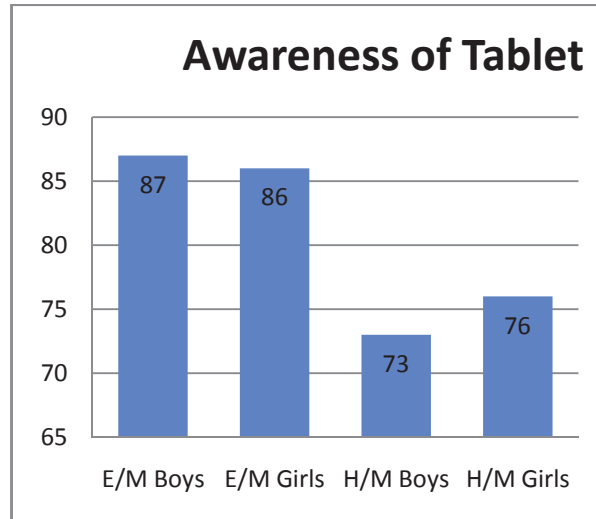
**Research Methodology:** Present Study is an exploratory research as not a single study went through the sight of the researcher on the "A Study Of Tablet PC Education's Perspectives And Possibilities Among Students" and as per the requirement of the study mixed sequential exploratory design methods was selected. As explained by **Creswell, Clark, Gutman & Hanson, (2003)** in the hand book **Mixed Method In Social And Behaviour Research** "Sequential Exploratory Design is characterized by an initial phase of qualitative data collection and analysis followed by a phase of quantitative data collection and analysis".

**Sample Size:** To achieve the objectives of the study following sample has been selected from both Hindi and English medium schools through simple random sampling technique.

Table No. 1 Total Sample Size							
English Medium		Hindi Medium		Total	CBSE Founder	RBSE Founder	ICT Expert
Boys	Girls	Boys	Girls				
200	100	100	100	500	5	5	5

**Tool:-** To know about tablet education's merit and demerits interview with open ended questions had been taken with 5 CBSE and 5 RBSE school's founder members and their responses were analyzed by content analysis. For Quantitative research

descriptive survey method was selected in which self made questionnaire was used by investigator in which 10 questions were there regarding tablet education awareness. 5 interviews had been taken with ICT experts to know the technical aspects of

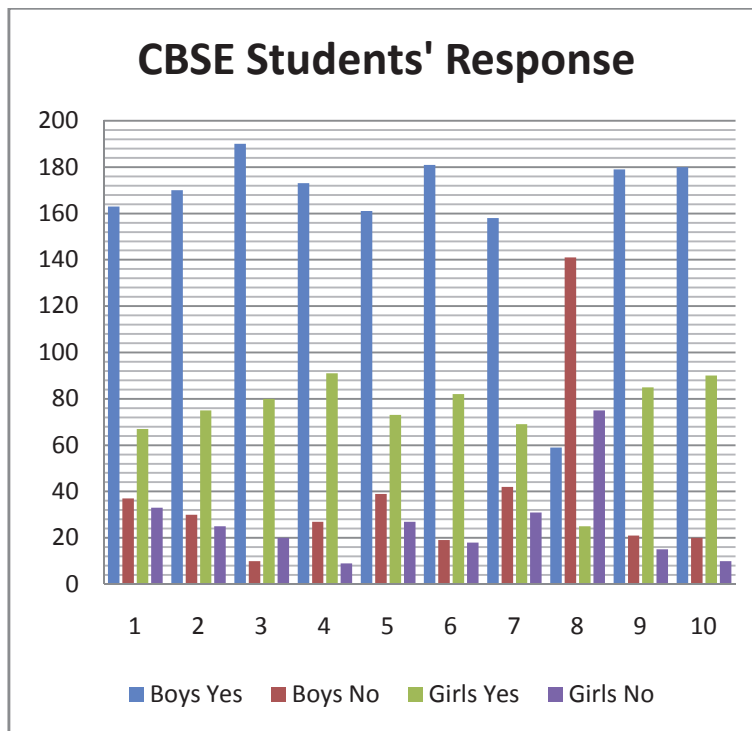


Graph No. 1

tablet PCs.

Result and Discussion : 1. Here graph one shows that there is tremendous awareness for tablets in the students. When a question was asked related to tablet awareness and use of tablet in education students' reply was positive. 82.33% boys (87% of English medium and 73% of Hindi Medium) and 81% girls

(86% of English medium and 76% of Hindi Medium) are aware about this new technology of education as they are watching news and advertisements. In Hindi medium schools girls are more aware than the boys and in English medium boys are aware than girls. But there is very less difference between girls and boys awareness.



Graph No. 2

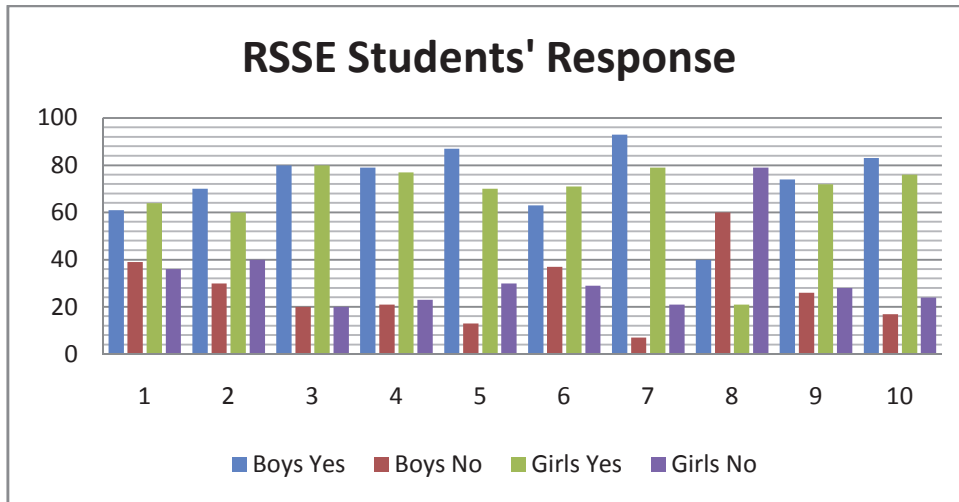
2. Graph no. 2 presents the opinion of CBSE schools' students.

Results shows that both boys and girls are interested in getting e-education with 76.67% (81.50% & 67%), with 81.67% (85% & 75%) they having feeling that

India should start tablet education at large scale because it is the requirements of their future colleges, with 90% ( 95% & 80%) they are thinking that India

is backward in hi tech education, with 88% (86.50% & 91%) they want to get education in that school where education will be provided on tablets by teachers, with 78% (80.60% & 73%) they want that India should start online education in schools, with 87.67% (90.50% & 82%) they think that by removing books from the school students can save time, money, energy and reduce the bag load, with 75.66% (79% & 69%) they think that hi -tech School would

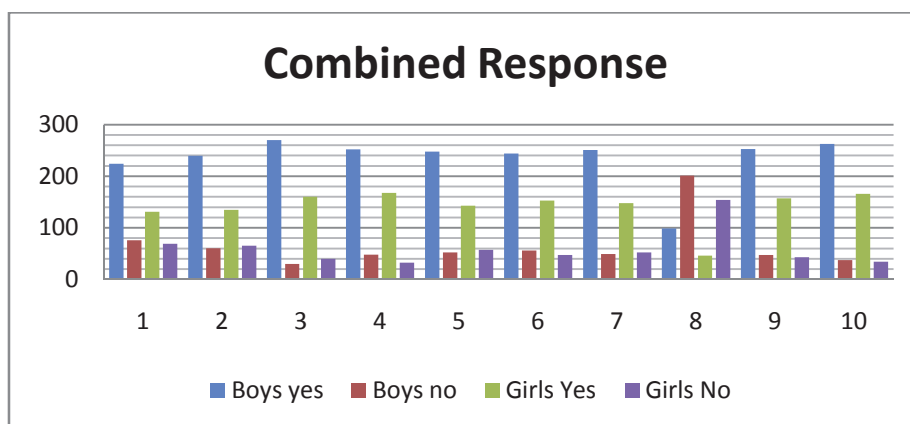
help student to develop their personality and increase the learning capacity, with 72% (70.50% & 75%) they are thinking that Indian schools are not appropriate according to 21st century and its demands, with 88% (89.50% & 85%) they think that e-Learning and tablet will reduce work in class and with 90% (90% each) they think that learning and studying on tablet are interesting.



3. Graph no. 3 presents the opinion of RBSE schools' students.

Response of RBSE students shows that both boys and girls with 62.50% (61% & 64%) are interested in getting e-education, with 65% (70% & 60%) they having feeling that India should start tablet education at large scale, with 80% (80% each) they are thinking that India is backward in hi tech education, with 78% (79% & 77%) they want to get education in that school where education will be provided on tablets by teachers, with 78.50% (87% & 70%) they want that India should start online education in schools, with 67% (63% & 71%) they think that by removing books

from the school students can save time, money, energy and reduce the bag load, with 86% (93% & 79%) they think that hi -tech School would help student to develop their personality and increase the learning capacity, with 69.50% (60% & 79%) they are thinking that Indian schools are not appropriate according to 21st century and its demands, with 73% (74% & 72%) they think that e-Learning and tablet will reduce work in class and with 79.50% (83% & 76%) they think that learning and studying on tablet are interesting.



4. Graph no.4 presents the common responses of both CBSE and RBSE schools' students. **Graph no. 4**

It shows that both boys and girls of both medium are positive for tablet education with 71% (74.67% & 65.50%) and are interested in getting e-education only 25.33% boys and 34.50% don't want e-education, with 75% (80% & 67.50%) they having feeling that India should start tablet education at large scale, with 86% (90% & 80%) they are thinking that India is backward in hi tech education, with 84% (84% each) they want to get education in that school where education will be provided on tablets by teachers, with 78.20% (82.67% & 71.50%) they want that India should start online education in schools, with 79.40% (81.33% & 76.50%) they think that by removing books from the school students can save time, money, energy and reduce the bag load, with 79.80% (83.66% & 74%) they think that hi -tech School would help student to develop their personality and increase the learning capacity, with 29% (33% & 23%) they are thinking that Indian schools are appropriate for 21st century which is very less, with 82% (84.33% & 78.50%) they think that e-Learning and tablet will reduce work in class and with 85.80% (87.67% & 83%) they think that learning and studying on tablet are interesting.

If we throw light on the complete result we shall find that girls' responses are less than boys because boys were more exposed to ICT tools at home and cyber cafes. Even Hindi medium students' responses are less than English medium because of economic circumstances of their families and less competency with ICT tools.

5. Tablet PCs provide a great mechanism for allowing instructors, teachers and students to incorporate active and innovative learning into their teaching and learning practice. Tablet PCs can enhance learning stamina, capacity and experiences with the requirement of 21st century. In order to find the merits of tablet PCs when deep open ended questionnaire interviews were conducted with the CBSE, RBSE schools' founder members and ICT experts, many positive aspects related to tablets and tablet education were highlighted by them. Some of many pioneer advantages and merits of tablet education in the education sector are stated here :-

1. Provides freedom of study,
2. Substitute of traditional method of teaching and learning,
3. Substitute of teaching and learning text,
4. Easily accessible,
5. Improve handwriting skills,
6. Grow organizational skills,
7. Improve communication skills,
8. Digital citizenship,
9. Research and information fluency,
10. Enhance creativity and innovation capacity of students,

11. Improve problem solving, critical thinking and decision making qualities,
12. Instant feedback,
13. Decreases absentees,
14. Enhance students' engagement,
15. Learning centered education,
16. Digital text books,
17. Availability of free educational software and move to cloud based curriculum,
18. Tablets are compact, lightweight,
19. Easy to carry,
20. Decrease costs of books,
21. Having interactive applications and
22. Lessons can be planned to met out the needs of individuals.

After in depth open ended questionnaire interviews with the CBSE, RBSE schools founder members and ICT experts many negative aspects related to tablets and tablet education came in light most important limitations and demerits of tablets are as follow:-

1. Lack of systemic approach to hi-tech education implementation,
2. Lack of positive attitude towards hi-tech education,
3. No administrative support,
4. Requires hi-technical support,
5. Regular transformation in hi-tech education,
6. Staff Development problem,
7. Lack of ownership,
8. Inadequate funds,
9. Lack of awareness,
10. Fear of unsuccessful implementation,
11. Parents' traditional tendency,
12. Parents' fear to get eye side weak,
13. Fear of using social networking sites on tablets by students,
14. Administrators and staff are unable to understand the concept of hi-tech education,
15. Lack of techno friendly teachers,
16. Expensive education,
17. Unmanaged multimedia components and contents,
18. Hi speed internet requirement,
19. Poor service of Server ,
20. Software related problem,
21. In India there is no tendency to take initiatives. Indians just follow the ideas of European and western countries,
22. Lack of latest ICT ,
23. Server error and server down problem,
24. Lack of effective teaching strategy,
25. Problem with wireless connectivity,
26. Problem with USB port,
27. Tablets having less battery life,
28. Oversensitive mouse or touch problem,
29. System hang,

30. Screen orientation and

31. Tablets having insufficient internal memory.

**Conclusion:** Tablet PCs are one of the newest innovations in computing and communications tools, offering an opportunity to positively impact the way in which students and faculty use technology to support teaching and learning. After getting knowledge from tablets students will be able to find themselves confident for social performance, efforts expectance, technologically sound, construct knowledge, effective in communicative skills, developing new ideas and products, collaborative work, and facilitating conditions. Students will use their critical, logical thinking in creative activities, solve their problems, take their genuine decisions and behave ethically. "Students can prepare themselves for next college generation in which modern schools

are failed. (Steven Rudolph "Key to Success" 2014).

Negative thoughts are strongly associated with technical and ICT literacy. Staff members and traditional teachers are not comfortable with new hi tech technology. They don't want to use new tools of ICT. It is a point to be thinking that only 71% viewers are thinking that our so called modern schools are not appropriate according to new technological generation and 86% are thinking that India is backward in hi-tech education.

There is a strong requirement of having positive thinking for new educational technologies. Schools

should pay attention on new ICT tools and paradigms of teaching pedagogy. Before establishing any tablet based school a detail study is required to know all the dimensions of ICT and tablet PCs' concepts so that school wouldn't suffer the problems of tablet based education system. For successful implementation of tablet PC based education faculty should work on integrating ICT into their teaching environment.

**Future Scope:**

1. A significant number of students have been involved in the research. In future a grand study can be conducted on the implementation of tablet in Kota. As a tablet based school is established in the city.
2. Students' experiences can be measured with their tablet handling.
3. In future inferential statistics can be used to measure the significant difference between groups' demographic variables.
4. The study was limited to Kota city only. In the next year a detail comparative study can be conducted on rural and urban areas' students and along with other states cities' students so we can generalise the results, because Kota is a well educated city with all those educational facilities which are not available in rural areas.
5. Effects of tablet education on students can be measured by experimental research methodology.

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