



COMPREHENSIVE ANALYSIS ON LEARNING AND RECOLLECTION PROCEDURE BY THE HIGH SCHOOL STUDENTS OF ICSE BOARD SCHOOLS IN THE CITY OF AHMEDABAD

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ABSTRACT The aim of this research paper is to investigate school students' perceptions of ICT usage by teachers, staff and themselves for learning and recollecting concepts. A questionnaire was administered to a randomly selected group of hundred high school students of ICSE board schools in the city of Ahmedabad. It was done to find out their views on the extent to which they and academic staff utilise ICT during learning and teaching. Data was analysed thematically after interrogating the responses through coding. Results showed that students perceived 'technology for learning' as a means to using a computer. They were satisfied with its use and functionality since it helped them understand, memorise and remember their studies. Students also reported that even though most teachers do not use ICT for teaching but still for the ones where ICT as used, it helped them in better learning and retention of concepts.

KEYWORDS : high school education, ICT based learning, academic performance, ISCE schools, Ahmedabad

Introduction to the research topic

Information and technology has a major role to play in forming the new worldwide economy to deliver fast changes in the society. Within the previous decade, ICT has advanced and changed at breathtaking speed. Technology has the potential to renovate the ways of instruction, where and how learning occurs and the roles of students and educators in the instructional process (UNESCO, 2002a). It is widely recognized that learners are motivated and purposefully engaged in the learning process when concepts and skills are complemented with technology. Learning and teaching aims to provide resources for practitioners, parents and pupils to engage with these technologies in order to inform and enhance the learning experience (Wesley, Krockover & Hicks, 2008). The use of ICT has a positive influence on students' achievement, motivation and learning process. Although classrooms are considered a face-to-face traditional learning environment, but at the same time classrooms with ICT learning equipment whether completely online or blended, on average produces stronger learning outcomes and motivation than learning face-to-face alone. In addition, ICT motivate both teachers and students. There appears to be some consensus that both teachers and students feel that ICT use in the class greatly contributes to students' motivation for and engagement in learning. "A very high 86% of teachers worldwide agree that students are more motivated and attentive when computers and the Internet are used in class... ICT has strong motivational and positive effects on students' learning behaviour, communication and process skills." (Balanskat, 2006).

Objectives of the study

- To investigate students' perceptions of ICT usage in teaching by their teachers/mentors and its impact on their learning and concepts recollection
- To what extent is ICT used by the teachers to impart education
- To what extent is ICT used by the students for their personal learning and conceptual learning.
- To what extent ICT helps the students in their academic tasks completion
- To what extent ICT helps the students in their engagement with the study topics and in achieving academic achievements

Research Design

The study adopted the interpretive research approach. The intention was to tap the students' experiences with ICT in classrooms by the teachers and them using ICT for their learning and concepts recollection purpose.

Sample size

100 high schools students of ICSE board schools in the city of Ahmedabad

Sampling method

Non-probability sampling method: Convenience Sampling

Data collection

A questionnaire with varied choices as answers was administered to a randomly selected group of hundred high school students of ICSE board schools in the city of Ahmedabad.

Collection technique

- Primary Data - Questionnaire method
- Secondary Data - Existing reports / Books / Journals and magazines / Websites

Data analysis

Out of 100 students surveyed, 78 were boys and 22 were girls.

For the statement, "What do you do to find solutions to problems?" 41% of respondents cited as "I take necessary steps on my own to find the solution". 28% of respondents cited as "I find the solution through discussion with my teachers and friends: 23% of respondents cited as, "I find the solution by visualizing the problem". Only 8% of respondents mentioned as "They take the help of technology/social media/internet to find solution"

For the statement, "What books do you prefer to read while travelling or for entertainment?" 46% of respondents cited that, I like reading novels, thrillers or books written in the form of dialogue. 32% of respondents cited that, I like reading books that have many pictures or diagram. 12% of respondents cited as I like to read from tablets/ kindle/ or any electronic reader. 10% of respondents cited as I like reading books of puzzles or drawing with instructions.

For the statement, "Which class do you prefer to attend during free period?" 54% of respondents cited that they liked to attend sports activities. 21% of respondents mentioned that they preferred to go to computer lab. 13% of respondents mentioned that they preferred to go to the school library. 12% of respondents mentioned that they preferred to attend drawing or art classes.

For the statement, "What do you like when someone tells you a story? I enjoy stories most", 62% of respondents cited that the enjoyed watching the animated version of the story. 21% of respondents cited that they liked it when someone told a story with clear enunciation (speech). 11% of them cited that they liked it when someone shows paintings or photographs related to stories. 6% of respondents mentioned that they enjoyed when someone enacted the stories.

For the statement, "What disturbs you when you try to concentrate?" 48% of respondents cited that Mobile ringing, sms chat alerts, latest updates on You Tube etc. 27% of respondents mentioned that, Games or activities disturb me or divert my attention. 25% of respondents mentioned that, Noise disturbs me or diverts my attention.

For the statement, "What do you do to identify the correct spelling of words?" 65% of respondents cited that they would write the spelling of

words or consult a dictionary to know the spelling. 7% of respondents mentioned that they would correct themselves by looking at the spelling of words. 14% of them said that they would check the internet and Wikipedia for spelling correction. Only 4% of respondents said that they took the help of elders for spelling check

For the statement, "How do you prepare for examination?", 61% of respondents cited that I remember information by preparing chart or diagram of it. 23% of respondents mentioned that I remember information by reading it aloud. 10% of respondents cited that I remember points better by reading printed materials. Only 6% of respondents mentioned that I prefer reading from some gadget/ laptop/ mobile phone/ tablet.

For the statement, "How do you collect additional information related to your subject?" 45% of respondent cited that they explored the internet for existing documents, videos, images or live sessions on the same. 31% of them said that they read books or watched CDs available for sale. 18% of them mentioned that they would listen and discuss their issues with teachers. Only 6% of them mentioned that they took the help of their friends

For the statement, "How do you spend your free time?", 49% of them said that they spent time playing games, doing some activities or making things. 29% of them mentioned that they surfed the internet and social media during their free time. 13% of them mentioned that they read books and only 9% of the respondents cited that they listened to radio or music during their free time.

For the statement, "What do you do to present your project work before class?", 51% of the respondents mentioned that they properly used power point presentation to present their project work. 24% of them said that they collected all related information and presented using computer systems. 13% of them said that they orally liked to present their project work and 12% of them mentioned that they present by pictures and clipping collected related to their work

For the statement, "During examination what do you do to remember the content that you read?" 30% of them mentioned that they tried to remember by referring to the smart board presentations, videos and soft copies of topics handed by their class teacher. 28% of respondents mentioned that they tried to remember and recollect activities, done by the teacher, related to the topic. 20% of them mentioned that they tried to remember and recollect the definitions given by their teachers and 12% of them said that they tried to recollect the blackboard writings and class notes.

For the statement, "When I wish to learn new things", 33% of respondents equally cited that they observed how teachers do that thing and looked for existing videos on internet. 29% of them mentioned that they tried to observe by themselves how things worked. And only 5% of them said that they talked to teachers about doing things.

For the statement, "Which characteristics of teachers do you appreciate?" 47% of them cited that they appreciated teachers using visual aids (charts, models, filmstrips, file slide, projector) while teaching. 33% of them said that they enjoyed good delivery of lectures by their teachers and 20% of them said that they appreciated teachers teaching through activities and demonstrations

For the statement, "What do you do to memorize mathematical formulae?" 66% of them cited that they took the help of apps like BYJU's, internet or YouTube videos to memorize mathematical formulae. 16% of them equally cited that they tried to read formulas from books/ charts or by writing it down many times. Only 2% of them mentioned that they tried to memorize my speaking them out loud.

For the statement, "What do you do to memorize numbers / digits?" 65% of them cited that they counted on fingers and used some write through techniques. 23% of them cited that they used the internet for learning purpose and 12% of them collectively said that they tried to learn by heart the necessary figures/ numbers.

For the statement, "When do you learn better in the classroom?" 66% of respondents mentioned that when lessons are taught using computer, white board, smart boards etc they understood better. 14% of them mentioned that they learnt better when someone explained the topics to them. 20% of them mentioned that they learnt better with demonstrations and activities conducted in class.

For the statement, "How do you learn the use of new electronic equipment such as scientific calculator, mobile phone and computer?" 29% of them mentioned that they took the help of online videos. 28% of them cited that they tried using electronic gadgets on their own. 22% of them mentioned that they requested someone else to guide them and 21% of them mentioned that they read the instruction manual and learnt on their own.

For the statement, "Which of the following techniques is best, according to you, to memorize information?" 65% of them mentioned that they preferred to prepare charts to memorize information. 31% of them mentioned that they preferred to watch online videos and educational apps to memorize information better and only 4% of them mentioned that they remembered points by reading out printed materials.

CONCLUSIONS

Students perceived ICT particularly the computer, as impacting positively on their academic success. We concluded that despite the challenges such as underutilisation of ICT techniques for teaching, the students perceived ICT in their learning as useful. Students' perceptions in the use of ICT by themselves and their teachers did not differ much. Moreover, from their responses it can be seen that there are ways how teachers can use more ICT for teaching and learning purposes. On this basis, the paper suggests that schools should sustain their ICT based teaching methods and train their teaching staff by channelling financial support if student academic performance and quality are to be enhanced. The positive impact of such initiatives makes a strong case for massive investment in e-learning programmes especially among academic staff.

Students have perceived ICT in their learning to be very useful. It can be noted that students use a variety of ICT gadgets in their high school study purpose. The findings revealed that ICT positively affects students' academic accomplishment and retention in all subjects. We can conclude that ICT literacy is imperative in high school education context. ICT based teaching and learning helps in increasing students' attention and curiosity. They are motivated to ask questions and explore more possibilities. Motivation plays an important role on students' learning behaviour because it energizes, directs, and sustains behaviour. Research evidence by Coleman (2006) supports this notion by showing that ICT stimulates, motivates and sparks students' appetite to learning, and helps in creating a culture of success.

The low usage of ICT by teachers might have the potential to demotivate students. Students have appreciated the presence of teaching gadgets like computers, projectors, smart boards and photocopying machines in their school. ICT increases students' engagement in homework and assignments process. When students are taught using computer or other ICT components, they stay focused and remain on the task with full concentration.

The library is perceived as part of ICT probably because it harboured ICT related gadgets. Kay (2007) indicated that students benefit and engage more in task if computers are used as an instructional device. Kay (2007) further asserted that ICT that utilize a visual dimension, including digital video, photography or video conferencing are found to be engaging for students.

ICT motivates students, increases their engagement time on task, increases their retentive capacity and enables students to learn on their own. It is strongly recommended that the infrastructure of the schools should be designed in such a way that ICT could be used successfully. Students have preferred to study on their own due to the availability of information related to their subjects in Internet and in study related apps.

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