



Impact of information & communication technology on numerical, verbal and writing ability among students

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Abstract

The present article is highlighting the use of information & communication technology among youth and its impact on individual's personal abilities and capacities. Present study assessed Numerical Ability (NA), Verbal Ability (VA) vocabulary and understanding of proverbs ability with the help of David's Battery for Differential abilities (DBDA) and writing ability was assessed by passage writing of 27 undergraduate students. The study was conducted in two conditions with and without technical assistance. Current study reveals that participants were perform significantly better with the assistance of computer and internet in comparison to without any assistance in context of number of errors. During the study it is also observed that many of participants were cross checked their responses even they had written correctly. Hence for it was proved that advancement of information & communication technologies are enhancing individual's performance but simultaneously it is reducing their self-abilities, self-confidence and memory. It is developing dependency on Information & communication technology which is a dark side of it. It needs to be handled carefully before it become harmful for individual and/or society.

Keywords: information & communication technology, self-abilities and dependency

Introduction

Human is a special living organism on the earth by their abilities and everyone born with their different abilities. Individual's abilities help to love their life and make it beautiful as per their need/desires and in era of globalization everything is moving for a new change where information technology is helping to achieve it. Information and communication technology helps to make easier our work by its easy availability, accessibility and affordability. In the process of this it make life easier, now it became important and necessary part of everyone's life. In recent few years it is observed that students are taking assistance of technology and internet for each and every activity and the telecom companies have started providing free or very minimal charges of internet services which help to bear affordability for everyone and it consequently increases their users. Today almost everyone (children, adolescents, young adults, adults and older) is using mobile phone and internet services. According to Kleiner Perkins's report of The Internet Trends 2017, internet data consumed by Indian has increased significantly. In June 2016 less than 200 million gigabytes use in a month but in March 2017 it has reached more than 1.3 billion gigabytes in a month for different purposes and which help them in many things. The report further highlights that Indians are spending more than 28 hours of time on mobile phone in a week, 45% time for entertainment, 38% on search, social media, massaging and shopping, rest of the time for other works Interestingly, 72% of internet users in India are less than 35 years of age which is crucial period of an individual's life for their academic achievements, social identity and integration, family development and responsibilities, career growth and future

security by using their different self-abilities and/or competencies. Every individual born with their own special abilities and enhance their competencies by education, practice and experiences.

Information & communication technology is definitely beneficial for many things but along with the benefits it is also becoming problematic for them not only in context of professional, even personal and social life. youth are spending much time on internet for many purposes such as enhancing information, knowledge, entertainment etc. but it also affect their self-abilities/competencies such as memory, learning, perception, thinking, problem solving, reasoning, analyzing, judgment and psychomotor activities.

By this way Individuals are becoming more dependent on information technology/internet day by day and become just puppet of technology. They are always trying to get information from internet not trying to remember their previous knowledge, information, vocabulary, spellings, tables, simple calculation etc. even sometimes they know and remember the things but verify to ensure whether they are right or wrong which affects their learning thinking and problem solving abilities, self-confidence and self-esteem. Number of times they reported that they become more confused because of overloaded information and knowledge. They start doing work at a point and they gradually shift from the objective to somewhere else and spend lot of time for other things and in last they found that they lost their goal and reach somewhere else. That again affects their thinking, organizing, and self-control and self-direction abilities and also along with these it affects their psychomotor abilities. Children as well as parents who are tech savvy have been

shifted from outdoor game to indoor and online games which ultimately affect their physical health and strength. They also increase interaction on social networking sites in comparison to face to face interaction which affects their interpersonal relationship, social interactions and communication skills. Similarly it is observed that it affects young adult's personal, social and professional life. Internet decreases individual's privacy and affects their interpersonal relationships. Many a times individual sitting with others or with their friends or partner but simultaneously they are busy on internet and mobile phone which leads miscommunication, confusion, feeling of ignorance, neglecting by others, negative thinking, suspicious thinking etc that negatively affect their intimate relationship. It also increases number of physical, psychological, and behavioral problems and decrease their overall quality of life.

Methods

The aim of present study is to assess the Numerical Ability (NA), Verbal Ability (VA) writing ability of undergraduate students, for which the objectives has been made which is to explore the effect of information and communication technology on Numerical Ability (NA), Verbal Ability (VA) and Writing Ability in undergraduate students.

The researchers examined 27 undergraduate student's Numerical Ability (NA), and Verbal Ability (VA) with the help of two subtests of David's Battery for Differential abilities (DBDA). The Numerical Ability and Verbal Ability

Result and Discussion

Table 1: Differences between numerical, verbal and writing ability with and without Technological Assistance (TA)

	Statistics				
	N	Mean	Std. Deviation	Z	P
Numerical Ability Without TA	27	2.40	.91	3.49	.000**
Numerical Ability With TA	27	5.07	.96		
Verbal Ability Without TA	27	5.47	1.12	3.57	.000**
Verbal Ability With TA	27	7.20	1.01		
Writing Without TA	27	12.60	1.24	3.43	.000**
Writing With TA	27	2.33	1.11		

P < .001

The results Table.1 shows mean scores of without and with information technology of study participants on various aspects such as numerical ability, verbal ability and writing ability. Mean score of students on numerical ability was 2.40, SD \pm .91 and 5.07 and SD \pm .96 without and with assistance respectively which is statistically significant (P < .001). Mean score of verbal ability without assistance was found 5.47, and SD \pm 1.12 while with assistance mean score was 7.20, and SD \pm 1.01 which is also strongly significant (p < .001), similarly mean score on writing ability without assistance was found 12.60, and SD \pm 1.24, while with assistance was 2.33, and SD = \pm 1.11 which again highly significant on statistics, (p < .001).

The result findings and test behavior observation suggests that the participants were performed better with the assistance of computer/calculator/mobile phone and internet in comparison to without any assistance in context of number of errors. During the experiment it is also observed that many of

scales reliability is .79 while writing ability was assessed by passage writing which is taken from a noble.

Procedure

This study was conducted in two conditions. Before to start the study brief information was shared with all participants and taken their willingness of participation. In the first condition all participants were completed all tests without technological tools assistance. In this condition the researcher given the instruction of all participants they cannot use technological tools. It's observed that all participants were become anxious and they reputedly asked for allowing mobile phone or calculator for calculation. In feedback session they also reported that last few years when we are started using mobile phone or calculator not doing it manually and they were unable to do simple calculation while earlier they were able to do like it.

After 15 days gap of first condition, the second condition of the study was completed on the same participants. In this condition instruction was given to all participants that they can take help of computer or mobile phone with internet facilities. After completion of this condition feedback were again taken from all participants and they were reported that they were able to do easily and quickly in compression to last time when mobile phone or computer was not allowed to use. Through experiment, obtained data were analyzed by using Wilcoxon Signed Ranks test with the help of SPSS 20 version. This non parametric test was used because sample size was small.

participants became tense and repeatedly asked to get help from mobile phone/calculator/computer and internet and in second condition of research it is observed that many of participants were cross checked their responses even they were wrote and/or did correct. There for it proves that advancement of information & communication technology are enhancing individual's performances but simultaneously it reducing their self-abilities, self-confidence and recall ability because they are not giving time to process their memory to recall as well as to work their mental abilities which leads to self insufficiency and make them dependent on Information & communication technology which is dark side of human life. It is very harmful for individual as well as society. So for there is urgent need to think in this direction and take all the precautionary steps for management.

Hence information and communication technology (internet) policy of service providers are in-fact having many more positive & negative impacts on user's life. A guided approach

or with all precaution, the information & communication technology should be handled. Handling it with caution, influences life in suitable way and make life healthier.

In conclusion it can highlighted that it is an upcoming new challenge in individual's life as well as in society that is occurring as declinment in cognitive abilities (Numerical, verbal and writing ability), it is also knocking the door of researcher and clinicians to be alert and conscious for assess, identify, manage, reduce and prevent the alarming challenges before to spread wide negative effect on individual and society.

References

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