IMPLEMENTATION OF ICT SKILLS FOR THE STUDENTS OF THEIR EMPLOYMENT IN SKILL BASED JOBS

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IMPACT OF ICT TOOLS IN TEACHING, LEARNING AND EVALUATION PROCESS, WITH SPECIAL REFERENCE TO PROFESSORS OF ARTS AND SCIENCE COLLEGES IN POLLACHI AND UDUMALPET TALUK

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ABSTRACT

Technology keeps on changing and it changes the entire world. Most of the educational institutions started using information and communication technology in teaching, learning and even evaluation process. ICT methods include digital classroom, Google workspace,gamification and so on. The present study aims at exploring impacts of using ICT methods in teaching, learning and evaluation process. It covers the selected respondents of college professors who work in the colleges in Pollachi and Udumalpet Taluk. The sample of 75 respondents was taken based on convenient sampling and the data were collected using Google forms. The data were analysed using statistical tools and methods. The results showed that most of the professors use ICT methods due to its flexibility and interestingness. Almost two- third of the total respondents use ICT methods frequently. But teachers do not try new tools for teaching - learning and they are not aware of new tools available. Some students do not show interest due to network usage and restrictions on mobile usage which annoys the teachers more. Also, they expect support from educational institutions to use paid versions of ICT tools. It has further scope to research reasons for using ICT tools in teaching learning separately.

***Keywords*:** ICT, teaching-learning process,teaching, learning, evaluation, college professors, impact of ICT

Introduction

Usage of ICT tools and methods in education is really a boon for teachers and students. It made the process of teaching and learning simple and interesting. It also helps in sorting out the issues and challenges involved in teaching, learning and evaluation. The aim of the current study is to understand the experiences and impact of ICT in teaching, learning and evaluation process. Also, it attempts to explore the teachers' experiences in case of students' reaction and interaction on using ICT tools in classroom. The study covers the population of College professors from Pollachi and Udumalpet Taluk. The sample size of 75 respondents is drawn for collecting data. For drawing sample size, convenient sampling method was adopted.

Review of Literature

Simin Ghavifekr et al. (2016) attempted to explore teachers' perceptions of the challenges faced in using ICT tools in the classrooms. A quantitative research design was devised to collect the data randomly from a sample of 100 secondary school teachers, drawn in the state of Melaka, Malaysia, collected through distribution of a modified-adopted survey questionnaire. The key findings to be significant in using ICT tools by teachers were: limited accessibility and poor network connection, limited technical support, lack of effective training, limited time and lack of teachers' competence.

Debarun Chakraborty et al. (2018) studied the Effectiveness of ICT in Strengthening the Process of Higher Education System in India. The study was conducted in colleges and universities in West Bengal, India. 386 examples have been gathered with the assistance of an organized poll and 5-point Likert scale was utilized to lead the overview. Convenience sampling technique was adopted to gather the examples from different universities and colleges. To test the hypothesis and find out the results, Exploratory Factor Analysis and Multiple Regression Analysis were used. The findings of the survey showed that cost of ICT is one of the most influencing factors on effectiveness of ICT.

Snehal Deshmukh et al. (2019) made an attempt to research ICT Tools – A Current Trend in Education. Rapid scientific and technological advancement, information revolution caused by technology have offered education a new role and shape, thus the

role of the teacheris also transformed. Information and Communication Technology (ICT) currently being usedin education is to assist students to learn more effectively by providing teachers with access toa wide range of new teaching methods. This article focused on how technology will be successfully utilized in classroom to make lectures interesting and interactive for the studentsby using different (ICT) tools in the classroom during lectures.

Juan-Ignacio Pozo et al. (2022) undertook research on Teaching and Learning in Times of COVID-19: Uses of Digital Technologies during School Lockdowns. It was responded by 1,403 teachers from Spain (734 primary and 669 secondary education teachers). The proposed activities varied depending on the learning promoted (reproductive or constructive), the learning outcomes (verbal, procedural, or attitudinal), the type of assessment to which the activities were focused, and the presence of cooperative activities in teaching. The major result of this study was that teachers used reproductive activities more frequently than constructive and traditional ones.

Khadija Rafeeq et al. (2022) undertook a research opportunities and challenges in the use of ICT at tertiary level: teachers' perceptions. The study sample consisted of 250 teachers and questionnaire was pilot tested for reliability and validity. The study resulted that university-based professors use digital libraries to expand their expertise. The quantity of PCs in computer labs is lacking normally. Teachers are hesitant to employ advanced ICT devices. The study revealed that while teachers have positive opportunities to use ICT resources and technologies in universities but there are 34% obstacles also. The usage of ICT tools by teacherscan increase their confidence level and productivity.

Research Gap

The previous research tried attempts to demonstrate the attitude, awareness, perception and satisfaction of the teacher's using ICT in teaching and learning. But the present study focuses on the impact of ICT tools in teaching, learning and evaluation process. Thestudy also has further scope to find selected ICT tools to analyse and conclude the specific purposes. The study is naturally subject to the time constraint and small quantum of statistical errors. But the due care was applied to analyse the data.

Objectives of the Study

Following are the objectives of the present study.

- To know the socio-academic profile of the respondents (college professors)
- To explore the applications of ICT used by the respondents.
- To analyse the impact of ICT tools used for teaching, learning and evaluation process.
- To exhibit the overall experience of college professors in using ICT methods.

Information and Communication Technology

ICT (or) information and communications technology refers to the infrastructure and components which enable modern computing. Though there is no single and universal definition of ICT, the term is generally accepted to understand all devices, networking components, applications and systems which combined allow people and organizations (for instance, businesses, non-profit organizations, governments and criminal entities) to interact in the digitalized world.

Components of an ICT System

ICT consists of both the internet-enabled sphere as well as the mobile-one powered by wireless networks. It also includes outdated technologies, such as landline telephones, radio and television broadcast - all of which are still widely used by the people, alongside cutting- edge ICT pieces such as AI and robotics in modern world. ICT is often used synonymously with IT; But, ICT is generally used to represent a broader and more comprehensive list of all components related to computer and digital technologies rather than IT.

ICT in Teaching – Learning

The COVID-19 pandemic significantly changed the way in which students are taught. The physical classrooms in the schools have been replaced by online, virtual and live/recorded sessions at home. Smart/mobile phones have occupied the place of books. However, this sudden change has made it difficult for teachers to teach the students community. Hosting classes and managing homework become quite a hassle on video

calls. Fortunately, some of the ICT tools for teaching and learning make the teaching experience funny for both the students and teachers. Following are the best ICT tools which one can use to engage and teach students interactively. Also, one will find a complete interactive system capable of revolutionizing the entire teaching system, in the end. ICT tools for teaching and learning shall cover everything from digital infrastructures such as printers, computers, laptops, and tablets to software tools such as Google Meet, Google Spreadsheets, and like.

1. Blackboard

Black Board is one of the popular teaching tools that comes with numerous functionalities. Teachers will easily administer tests, monitor performance of students, manage syllabus and even upload grades of assessments. It can save teachers from the hassle of writing everything on paper and from an aching hand. Students also can equally get benefitted from this tool because they can access all the information, including grades, assignments, attendance, that teachers upload on the platform. The best part is that all this comes with one platform. So, teacher won't need multiple applications to manage it all.

2. Google Classroom

Google Classroom is a virtual and digital classroom that makes learning comfortable and interesting. Teachers can integrate educational apps or websites and create dynamic assignments. It can include a slideshow, a small game, or an entertaining YouTube video full of information. This way, students learn better and enhance their learning experience. Also, Google Classroom allows to go paperless so that paperless assignments can be created and graded students within short span of time. This way, teacher can save time and focus more on improving the learning experiences.

3. Microsoft Teams

Microsoft Teams is another familiar tool for IT and MNC professionals. Like Trello (an ICT tool), it has applications for teachers and learners. It is a product of Microsoft Office 365. It simply tells that teacher can host meetings, chat, share files, and use every Microsoft Office app using Teams. One of the best features Teams is the Class Notebooks from One Note application. Class Notebook resembles individual student

notebook (physical) but come with additional features and ease of use.

4. Online Coding Websites

If students/kids want to learn how to code, it should be practical. Practicing code on paper is always a waste of time and it also kills the creative talents of the programmers. It is where the websites such as DataCamp, HackerRank, and Coderbyte take place into play. Using such websites, students can implement what they've learned instantly.

5. Subject Specific Tools

All of the above ICT tools for teaching and learning help in generalized teaching andlearning. However, when it is about specific subjects, special tools are needed.

- ICT Tools for Teaching Geography include Google Maps, Google Earth and so on.
- ICT Tools for Teaching Mathematics include CanFigureIt Geometry, CueThink, and so on.
- ICT Tools for Teaching Biology include Microsoft PowerPoint, Slidesgo, YouTube, and so on.
- ICT Tools for Teaching History include YouTube, Microsoft PowerPoint, and so on.
- ICT Tools for Teaching Accounting include Digital board, Excel, Tally, and so on.

Hypotheses

Following are the hypotheses that were developed for the current study.

H1: There is no relationship between subject domain and impact of ICT tools.

H2: There is no relationship between type of institution and satisfaction in using ICT tools.

Analysis of Data

Socio-Academic Profile

Factor	Components	No. of Respondents	Percentage (%)
Gender	Male	26	35
	Female	49	65
Age Group	23-35	41	54
	36-50	29	39
	51-60	5	7
Area of Residence	Rural	33	44
	Urban	42	56
Annual Income	Below ₹150000	15	20
	₹150001 to ₹300000	34	45
	₹300001 to ₹400000	21	28
	Above ₹400000	5	7
Level of Education	PG	19	25
	M.Phil	33	44
	Ph.D	20	27
	B.Ed and Professional Degree	3	4
Domain	Commerce	21	28
	Computing	20	27
	Science	14	19
	Humanities	8	11
	Management	12	15
Type of Institution	Government	8	11
	Government Aided	10	13
	Self-financing	57	76
Teaching level	UG only	46	61
	PG only	11	15
	UG and PG	18	24

Handling lab Courses	Yes	34	45
	No	41	55
Device used for ICT	Mobile	30	40
	Tablet	4	5
	Laptop	20	27
	Mobile and Laptop	21	28

Source: Primary Data

The above table depicts the socio-academic profile of the respondents. 65% of the respondents is female. 54% of the respondents are belonging to the age category of 23-35. 56% of the respondents belongs to urban area. Annual income is ₹1.5 lakh to ₹3 lakhs for 45%of respondents. 44% of the respondents is holders of M.Phil degree and 28% of the respondents are from commerce domain. 76% of the respondents works in self-financing colleges. The portion of UG only handling professors is 61% of the total respondents. 55% of the respondentsdoes not handle lab courses.

Impact of ICT in Teaching, Learning and Evaluation

Factors	Impacting	Neutral	Not Impacting	Weighted Average	Rank
Interestingness	34	31	10	29.00	**I**
Skillset	31	29	15	28.00	**II**
Learning	29	34	12	27.83	**III**
Satisfaction	32	27	16	27.67	**IV**
Interaction	24	40	11	27.17	**V**

Source: Primary Data

The above table shows the weighted average of the factors impacting the use of ICT tools by the college professors in Teaching, Learning and Evaluation process. Interestingness is ranked I with weighted average of 29.00, Skillset is ranked II (28.00), Learning is ranked III with weighted average of 27.83, Satisfaction is ranked IV with weighted average of 27.67 and Interaction is ranked V with weighted average of 27.17.

Chi-Square Analysis

(i) There is no relationship between subject domain and impact of ICT tools. Subject domain and impact of ICT tools are compared. With the data collected, the calculated chi-square value is 7.59. Since the calculated Chi-square value (7.59) is lower than the table value (15.51) at five percent level, there is no significant relationship between subject domain and impact of ICT tools. Therefore, the null hypothesis is accepted.

(ii) There is no relationship between type of institution and satisfaction in using ICT tools. Type of institution and satisfaction in using ICT tools are compared. With the data collected, the calculated chi-square value is 11.24. Since the calculated Chi-square value (11.24) is higher than the table value (9.49) at five percent level, there is significant association between type of institution and satisfaction in using ICT tools. Therefore, the null hypothesis is rejected.

ICT Tools Used (Rank Analysis)

ICT Tools used	No. of Respondents	%	Rank
Google classrooms	18	24	**I**
Google forms	16	21	**II**
Kahoot	15	20	**III**
MS-Office	14	19	**IV**
YouTube	12	16	**V**
Total	75		

Source: Primary Data

With the help of the primary data, the ICT tools used by professors is ranked. G- classroom is ranked I, G-forms is ranked II, Kahoot is ranked III, MS-Office tools is ranked IV and YouTube is ranked V. It shows that the teachers tend to use G-classroom more and YouTube to the least.

Correlation Analysis

ICT Tools used	Domain
16	21
15	20
18	14
12	8
14	12

Source: Primary Data

The above table depicts the correlation between ICT tools used by the college professors and Domain subject. Since there is positive correlation of 0.5511, both the variables have direct relationship. So, it indicates that the Domain subject have a progressive relationship with ICT tools used.

Findings

Following are the major findings of the study. 52% of the total respondents conducts learning games weekly once for engaging students. 43% of the respondents often collects the feedback from students for using ICT tools. 24% of the respondents uses G-classroom regularly. 79% of the respondents uses Kahoot for conducting quizzes. 63% of the respondents uses G-forms conducting online exams in MCQ format. 81% of the respondent's states that the ICT tools help to engage the students effectively. Quarter of the total respondent's states thatthe timing and network constraints as a problem for using ICT tools.

Interestingness is the high impacting factor to use ICT tools in teaching and learning. 42% of the respondents claims that some of the topics cannot be covered using ICT tools especially Accounting, Mathematics and so on. Where workings are required. 67% of the respondents seeks the institutions to avail paid versions of ICT tools for better experience and full benefits. 11% of the respondents expresses that their students do not cooperate well with ICT tools.

Suggestions

Many schools, colleges and training institutes started accepting usage of ICT tools for teaching and learning. Many education institutions encourage their faculties to engage the students using ICT tools such as G-Workspace, Gamification, Assessments and so on. ICT tools help the institutions to reach next level and it earns reputation among the public. The colleges can also introduce and offer paid versions of ICT tools for the professors, since the same is required.

As a result, college teachers who used ICT tools in their classrooms to improve their teaching skills and knowledge found that the quality of their instruction increased due to the increased teachers' motivation and increased productivity of the classroom in the teaching –learning process. They also used information and communication technology (ICT) to manage tasks, including routine classroom assignments, activities, personal use, teacher professional development, and, finally, improved collaborations.

Colleges today align their academic faculty with cutting-edge technological gadgets to streamline their students' teaching, learning and evaluation process. As a result, they incorporate projectors and multimedia techniques into their classrooms. The institutions should also encourage the faculties to use new types of ICT tools to create good impression of students in learning process.

Conclusion

Now-a-days usage of technology and ICT is unavoidable, and the teachers also should go with the new technologies in teaching, learning and evaluation process. For better experience, one should try all the tools of ICT as and when required and professors should also understand the challenges involved in it. Professors adopt chalk-less and ICT classrooms for the interesting and engaged learning and at the same time they should ensure the protocols such as details, network connectivity, security and so on.

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