

ROLE OF ICT IN EFFECTIVE LEARNING PROCESS: A PERCEPTION STUDY OF JAIPUR BASED COLLEGE STUDENTS

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ABSTRACT

Information Communication Technology is playing a very vital role in higher education in the current era. Information means modified data which we can share with each other to increase our knowledge & awareness among people. Whatever we want to share or communicate to students, our friends in the positive sense is called information. Communication means conveying our messages by establishing a two-way channel. Whatever we are planning to communicate or exchange knowledge between two people or more is called communication. Communication technology is a process of sending, receiving and exchanging information. Technology means techniques/mechanism which we use for the entire process of communication with the help of new technology and various tools & medium such as Radio, Television, computer, hardware, internet, satellite, application software, DVD, Telephone, Video-conferencing and multimedia. In current scenario ICT is enhancing effective teaching-learning process day by day.

This study will also focus on effective teaching-learning process of the higher education institutes & their effectiveness of on the student's growth.

KEYWORDS: Video Conferencing, Teaching-Learning Process, Information Communication Technologies, Modern Classroom, New Technologies in Class Room, Effective Teaching

INTRODUCTION

Information Communication Technology is playing a very vital role in higher education in the current era. Information means modified data which we can share with each other to increase our knowledge & awareness among people. Whatever we want to share or communicate to students, people or our friends in the positive sense is called information. Communication means conveying our messages by establishing a two-way channel. Whatever we are planning to communicate or exchange knowledge between two people or more is called communication. Communication technology is process of sending receiving and exchanging information. Technology means techniques/mechanism which we use for the entire process of communication with the help of new technology and various tools & medium such as Radio, Television, computer, hardware, internet, satellite, application software, DVD, Telephone, Video-conferencing and multimedia. In current scenario ICT is enhancing teaching-learning process day by day.

A BRIEF HISTORY OF ICT

In Indian history- In India, the use of ICT in education began in the British era. India aired its first radio broadcast in June 1923 and it was followed by the Radio Club of Mumbai in the 1930s. The British Broadcasting Corporation (BBC) aired educational and cultural programs in India through radio broadcasts. In 1937, All India Radio (AIR) began broadcasting educational programs for school children. Since 2002, India's first educational radio station, which name is Gyan Vani (Voice of Knowledge) has been on the air.

That was the full-fledged educational radio station which provides programs for different types of learners, including adult learners.

India acquired its first television set for an experimental TV service in Delhi in 1959. Television was soon welcomed by the urban richly. In 1961 Educational Television (ETV) was introduced in the secondary schools in Delhi. This was a pilot project by UNESCO and the Ford Foundation. As part of the project, lessons in physics, chemistry, and English were televised to secondary school students (Mohanty, 1984). To develop the rural community through education, in 1975 an experimental project was implemented called Satellite Instructional Television Experiment (SITE) with the help of the USA (Agrawal & Sinha, 1981). In 2000, a 24-hour educational channel was launched known as DD-Gyan Darshan. In 2003, in collaboration with Indira Gandhi National Open University (IGNOU) and Indian Institute of Technology (IIT), a technology education channel was launched targeted to 1.5 million engineering and technology students (Agrawal, 2005).

In India, using computers related to education first started in 1984. The project was called Computer Literacy and Studies in School (CLASS). As part of the project, computers were introduced to 250 higher secondary schools. An evaluation study of the CLASS project finds that students had a positive attitude towards computer learning regardless of the type of school (Agrawal, 1996, 2005). To facilitate computer-based education, the first degree in this field was offered in 1989 in Indore, India (Goel, 2000).

ICT IN HIGHER EDUCATION

The Indian government has prepared a forward-looking policy for ICT in higher education. Now students can participate creatively and actively. Its use in higher education is causing major changes in tackling such issues as investment, management, quality of education, a method of teaching and the student's ability to access information. So in other words, it is revolutionizing higher education.

ICT provides a student-based learning method that has the capacity to promote and encourage excellence in the education system.

Designing, publishing, and multimedia software are playing a very advanced role in higher education in the effective teaching-learning process.

ICT Tools

- Multimedia PC, Laptop, Notebook
- CDs and DVDs, Still Camera

- Internet and its Tools-e-mail, Browser Apps, Search Engines
- Video/Audio Conferencing
- Digital Libraries, e-Books & Electronic Publication
- Application Software, Newsletter, Poster, Brochure

Software Roles and Techniques in ICT

- Word Processing: To prepare documents, notes, projects & assignments.
- Spread Sheet Programming: To prepare records, exam scores.
- Data Bases: Information Storage.
- Graphics Software: To prepare teaching-learning resources.
- Developer, Multimedia Kits: To make the process interesting.
- Internet & e-mail Facilities: To gain knowledge and easy accessing.
- Games and Simulations: To improve quality of learning.

ICT Careers

- Computer Programmers
- Web Designers
- Database Analysts
- Project Managers
- Social Media Managers
- Social Community Managers
- Security/Networking Analysts
- Technology Support
- Mobile Application Developers
- Technical Trainers/Managers
- e-Marketing Specialists
- Digital Specialists
- Public Relations/Content Marketing
- Web Development Specialists
- Social Media & Marketing Coordinators

- Integrated Marketing Strategists
- Corporate Communications Coordinators
- Online Engagement Specialists

ICT facilitates a technological method that promotes massive changes in education such that students are encouraged to access information on their own and are not merely dependent on teachers in the classroom. The model now is student-focused and the students are expected to use effectively information sources and cognitive tools use of computer and internet to solve problems and further their studies.

- ICT encourages students to learn from practical experience using computer resources in a step-by-step manner.
- Distance learning is a special advantage that ICT offers. This is a great boon to students in terms of mobility and economic. ICT makes it easy to evaluate, examine online papers and conduct quiz easily and economically.
- ICT provides "anytime learning" as students can schedule their lessons at their convenience. This facility allows more students to take part in the education process and some of them even can work while obtaining their education.
- ICT has boosted information literacy. Encouragement to computer skills has already improved familiarity with the internet and applications and raised general awareness of the advantages of ICT.

BENEFITS AND CHALLENGES OF ICT

Information Communication Technology provides student support services like in course structure, video recorded classroom material, group Discussion, Laboratory manuals & lab assignments, computer lab assignments & lecture, notes, live lectures for later viewing and re-viewing, links to course-specific websites, online tutorials, CBT, WBT, supplementary readings, virtual office hours, for teacher-student consultations etc.

ICT is a great privilege for the students who want to study in the modern era because in this method no need to carry those books. They can access content/materials through the online.

Online content easier to access from anywhere. Application tools are available on the Internet to assist users, teachers, and students to manage writing content to detect and avoid the plagiarism and copyright violations. Online software are gives the ability to stop plagiarism with a very easy step.

OBJECTIVE OF THE STUDY

Following are the objectives of the study:

To make a deeper study analyzing the difference in the degree of effectiveness of learning and retaining capacity between the traditional teaching methods and ICT based teaching.

- To develop an understanding and analyze the college student's perception regarding the effectiveness of ICT tools and their usage in regular academic delivery in a more interesting and engaging manner in privately owned higher education institutions.

- To develop a deeper knowledge of how effective is Information and Communication Technology in performing its prominent role as a change agent in higher education.

RESEARCH METHODOLOGY

Taking into consideration the fact that ICT has emerged as one of the most contemporary and effective teaching and learning tool in the direction of imparting education for college going students, it becomes very necessary to study to the point of view of such students, It becomes very necessary to study the perception of such students who are the actual recipients of such education.

As a part of Research Methodology, the study employs a Primary Data Collection Research Method by making a field-based study of the respondents. The research employs quantitative research method and conducts an extensive survey under which questionnaires were administered to 100 college going students who are exposed to the application of ICT tools in their day -to- day life.

The questionnaire consisted of fourteen items to analyze the perception of such students in all possible ways related to the area of study.

Besides the primary data collection method, the study also makes an exhaustive analysis of secondary data analysis of relevant literature related to the topic of the study.

The Survey Questionnaire was constructed based on survey items developed by Simin Ghavifekr, Wan Athirah Wan Rosdy in the paper titled, "Teaching and Learning with Technology: Effectiveness of ICT Integration in Schools published in International Journal of Research in Education and Science (IJRES)

FINDINGS & ANALYSIS

Part 1- Personal Information

Gender of Respondents

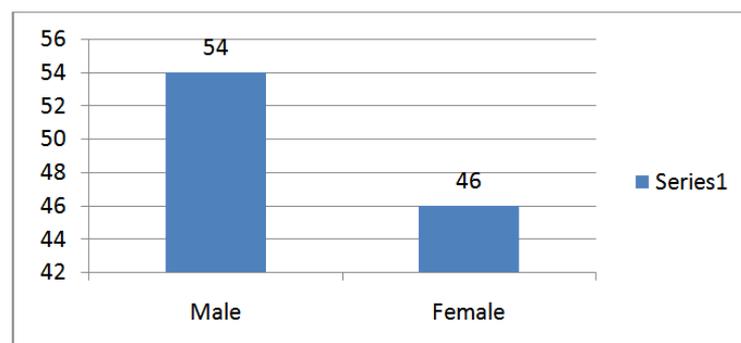


Figure 1

Findings

The first most important aspect of every analysis is to develop an idea about the gender of the respondents in order to draw a clear interpretation about the opinion expressed by the male and female gender. Male respondents outnumbered their female counterparts in the study. Although the study was not done with a preset criteria regarding the selection of respondents on the basis of gender but however male respondents turned out to be more in number which

played a major role in understanding above the perception of male college students regarding the effectiveness and popularity of ICT in effective Learning Process and does it make the entire learning process more interesting and interactive.

Age of Respondents

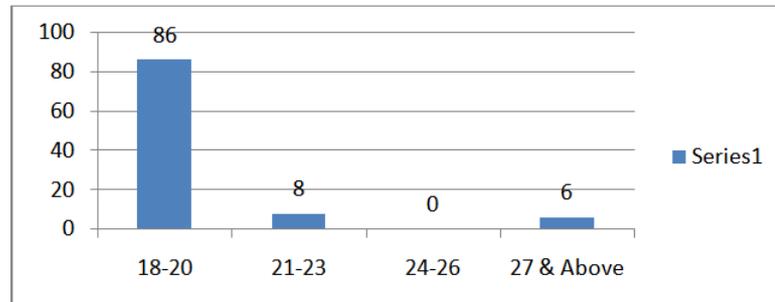


Figure 2

Findings

The results of the study were important in the direction of finding out the age of the respondents and on its basis derive a conclusion as to what was their opinion regarding the various parameters of the topic. The paper was chiefly a study of the perception of the young college students regarding the effectiveness of ICT in imparting education, hence most of the respondents, i.e 86% of them were very young belonging to the age group of 18-20 years. Hence the findings of the study were related to identifying chiefly the opinion of young respondents who are mostly exposed to ICT a lot in the field of education.

Educational Qualification of Respondents

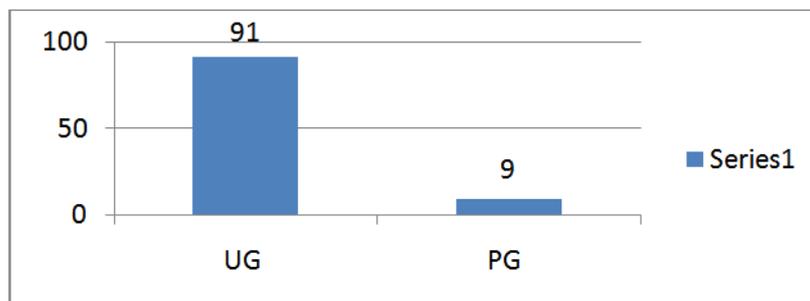


Figure 3

Findings

The questionnaire was administered randomly to all the students studying various specialized Undergraduate or Post Graduate Programmes with no preset criteria. The findings revealed that almost three fourth of the respondents, i.e 91% of them were students of various Undergraduate Programmes. The results are therefore clearly indicative of the fact that the responses of the respondents on the various items of the questionnaire are chiefly the perception of young undergraduate students regarding the topic of the study.

Part-II

Ease of Learning When Being Taught by ICT

Response to the Question, “I Find it Easier To Learn my Subjects When Being Taught by Using ICT

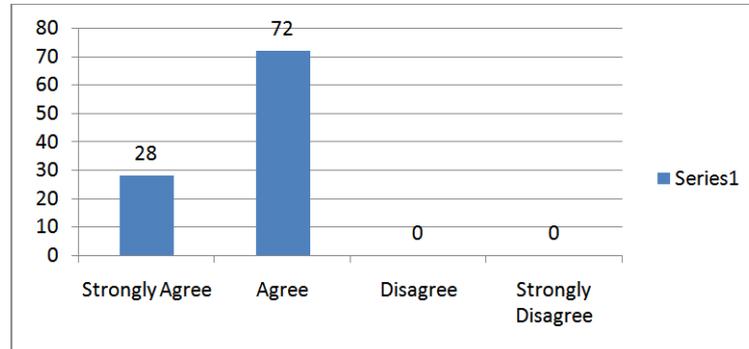


Figure 4

Findings

The findings were a sort of eye opener for the researchers as it revealed a major fact regarding whether the students considered ICT as the very effective teaching tool in education. All the students either strongly agreed or agreed to the statement that they find it easier to learn their subjects in a more visually appealing manner when being taught by using ICT. Out of 100 respondents 28 of them, i.e 28% of them strongly agreed to the fact that ICT has brought about a revolution in the field of modern teaching and learning process making the education system more advanced yet interesting. 72% of the respondents agreed to the statement which again was a clear indication of the amount of significance attached to ICT in the field of education by the college students.

Being aware of the Opportunities ICT Offers in the Field of Effective Teaching and Learning Experiences

Response to the Question, “I am Aware of the Great Opportunities that ICT offers for in the Field of Effective Teaching and Learning Experience

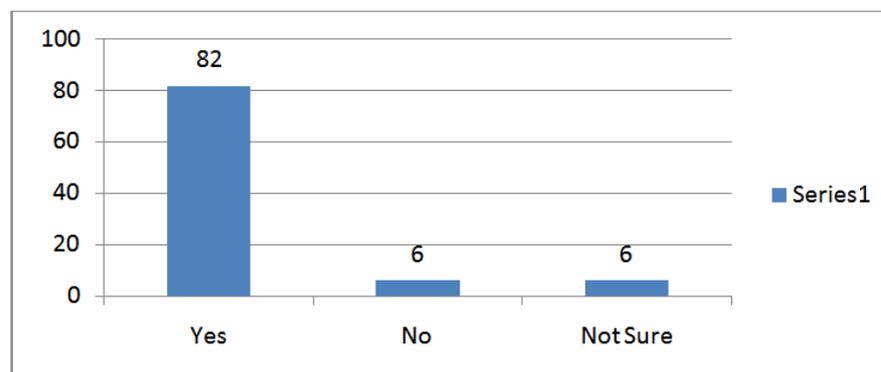


Figure 5

Findings

The findings were highly explicit of the fact that ICT in the field of imparting education to the young students has become a well-accepted teaching and learning method. More than three fourth of the respondents, i.e 82% of them were aware of the various benefits of ICT in the field of modern education and how it is influencing the pattern of delivery of knowledge to the students. Very nominal number of students, i.e just 6% each were either not aware or not sure of the opportunities provided by ICT in the field of the effective and interesting learning experience of students.

ICT Enabling the Students to Be More Active, Engaging and Interactive In the Topics Being Taught

Response to the question, “The use of ICT Enables the Students’ To Be More Active, Engaging and Interactive in the Topic being taught.

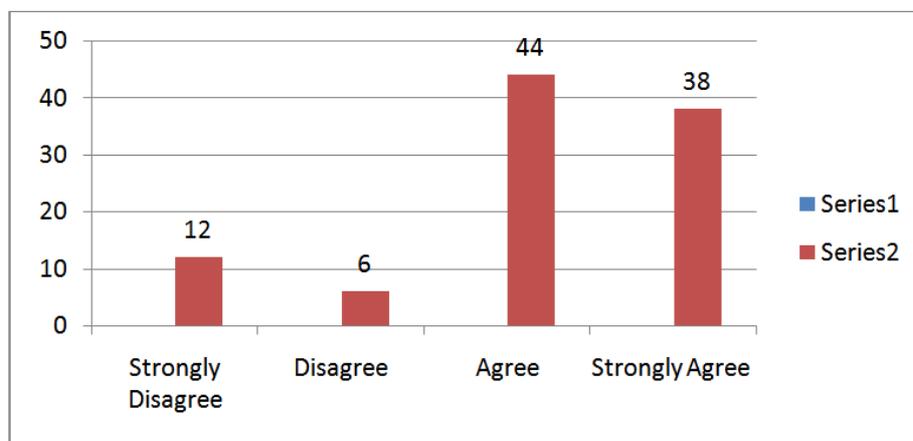


Figure 6

Findings

The above question was highly important as it would reveal the perception of college students regarding the various ways in which ICT has influenced the class environment. The responses of the respondents clearly highlighted the fact that young college going students greatly value the employment of ICT in the teaching and learning process as the responses of the respondents were very much inclined in favor of it. Highest number of respondents, i.e 44% of the entire sample agreed and 38% strongly agreed to the statement that the use of ICT enables the students to be more active, engaging and interactive in the topic being taught and thus the findings were highly satisfactory as they furthermore upheld the relevance and significance of the topic of the study.

Learning in the Best Manner When Teacher Uses ICT in Their Teaching Method

Response to the Question, “Do you Think You Learn In the Best Manner When the Teachers Use ICT in their teaching method?”

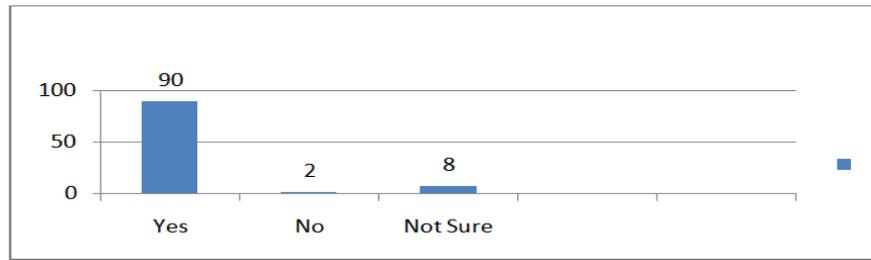


Figure 7

Findings

The main objective of the study was also to know the opinion of young students regarding the impact and effectiveness of ICT on the quality of learning of the students in order to draw a clear picture regarding their perception about this technique of teaching. Almost the entire sample, i.e 90% of the entire sample population strongly agreed that ICT has highly influenced their learning experience as they all accepted that the entire learning process becomes very easy to understand when ICT is used by teachers in their teaching method. Only 8% of the respondents were not sure about their response as to whether they considered it to be a part of effective learning process and just 2% were of the opinion that ICT doesn't influence the learning process and they considered that ICT cannot be the tool through which the students gain a lot and learn in a more better manner.

Usage of ICT in Providing the Students with More Updated Material

Response to the question, “Do you Think the Use of ICT in Teaching Method Helps in Providing the Students with More Updated Materials?”

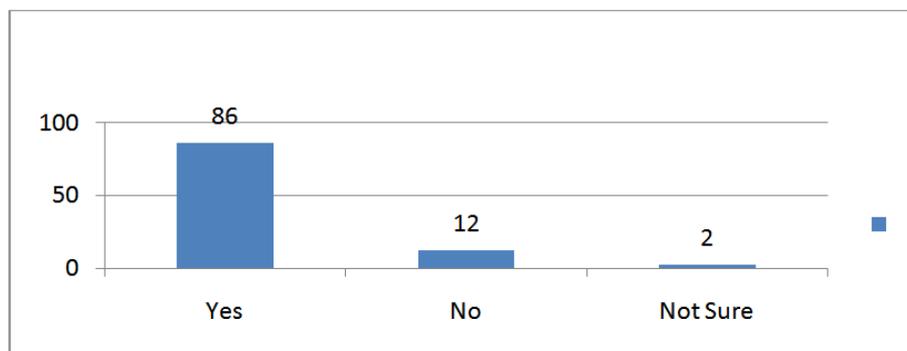


Figure 8

Findings

The final objective of every student behind pursuing a particular course is to expand their mental horizons of knowledge on the course, to develop a theoretical as well as practical command over the course and providing updated materials to the students is one of the most important means towards achieving their objective. The study tried to find out the opinion of the students regarding whether they considered ICT as a very important teaching tool which helps the students to be benefitted by all updated materials. The findings were very positive strongly in favor of ICT in teaching learning-process. 86% of the sample strongly believed that ICT doesn't only influence the learning experience making it more engaging and interactive but it also helps in providing the students with various updated materials providing them

with an ocean of knowledge. Only 12% thought that ICT doesn't help in providing students with updated materials and a very nominal, i.e 2% were not sure about their response.

Use of ICT Making Lectures More Qualitative

Response to the question, "The use of ICT makes the lectures more qualitative".

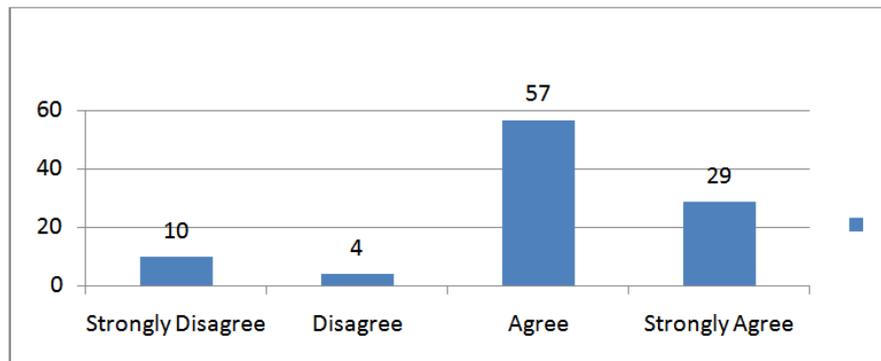


Figure 9

Findings

The findings were very interesting as they established a clear fact that young students, especially the ones undergoing specialized courses as the sample population chiefly comprised of them, prefer that teaching method which makes use of ICT as majority of them were of the firm opinion that employment of ICT in the teaching style of the faculties makes the lectures more rich in quality as well as interesting. Majority of the respondents, i.e 86% either strongly agree or agreed to the statement that use of ICT during lectures makes them more qualitative as knowledge is delivered to students by various engaging, highly informative and interesting means which greatly influences the students.

ICT Enabling the Students' To Express Their Ideas and Thoughts Better

Response to the question, "The use of ICT Enables Students' To Express Their Ideas and Thoughts Better

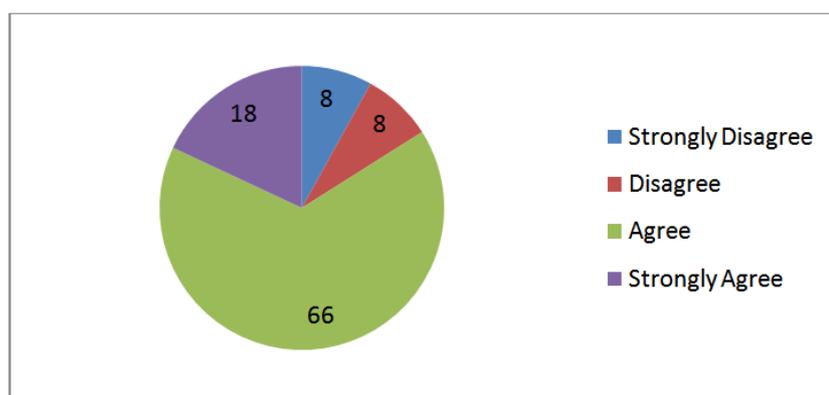


Figure 10

Findings

ICT has created a tremendous impact on the quality and pattern of delivery of lectures thus changing the entire learning experience of students. Almost all the students, i.e 84% of the entire sample strength were of the opinion that

employment of ICT in education has brought about revolutionary changes towards betterment in the field of dissemination of knowledge. The students strongly opined that ICT offers various advantages to the students giving those more avenues of personal approach and a lot of scope of independence in learning, thus acting as the most effective learning tool which is nowadays greatly liked by the students. A very nominal number of respondents, i.e 16% either disagreed or strongly disagreed with the statement that ICT enables the students to express their ideas and thoughts in a better manner.

Use of ICT in Broadening Students' Knowledge Paradigm by Making the Class More Rich, Engaging and Informative

Response to the Question, "Do you think the use of ICT helps to Broaden Students' Knowledge Paradigm by Making the Class More Rich, Engaging and Informative?"

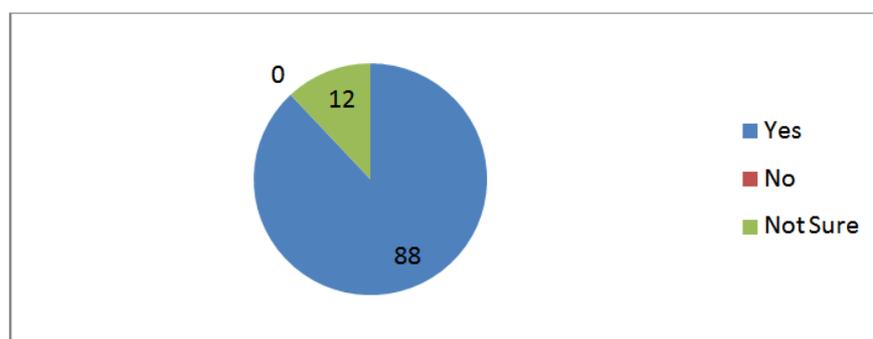


Figure 11

Findings

The responses of the respondents were self-explanatory and very clear. Almost all the college going students were strong of the opinion that ICT helps to broaden their knowledge paradigm by making the class more rich, engaging and informative. ICT employs various tools like CD/ DVD, computers, blogs, multimedia, search engine, audio/ video conferencing and social media, graphs, charts, youtube, websites, worksheets of other faculties and all the tools enable the teachers to deliver a qualitative lecture. In return, the students are the recipients to be benefitted the most from this new approach as they are exposed to various highly interesting and innovative teaching aids which make the class more rich, engaging and informative and their learning experience a wonderful moment.

Most popular and Effective Medium in ICT Which Helps in Teaching and Learning Process

Response to the Question, "In ICT Which Medium is more popular and Effective In the Teaching-Learning Process?"

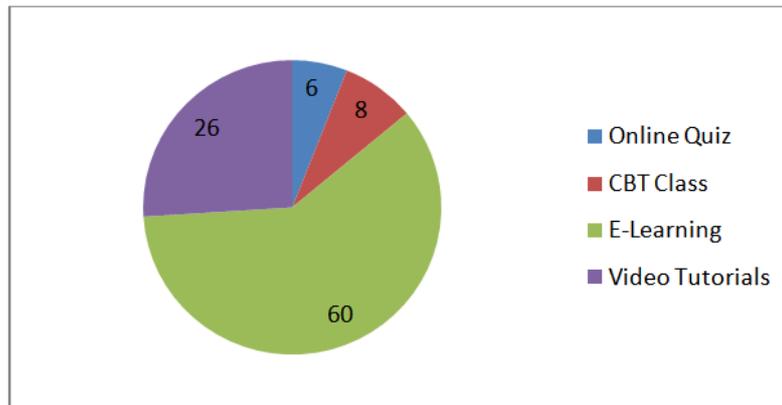


Figure 12

Findings

The results of the survey just did not focus on the relevance and utility of ICT in education, but it also explored the liking or the perception of the youth towards the various medium of ICT. More than half of the respondents, i.e 60% of them expressed that they considered e-learning as the most effective and popular in the direction of their learning experience and e-learning exposes them to a vast array of varied sources of information in a very visually appealing manner. Second highest number of respondents, i.e 26% favored video tutorials as the most interesting and popular ICT medium.

Reasons behind ICT Being More Effective than any Other Technique

Response to the Question, “Why ICT is More Effective than any Other Technique?”

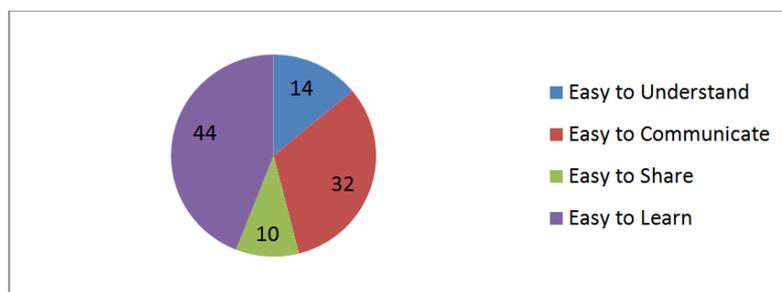


Figure 13

Findings

As a part of the study, it was very necessary to find out the reasons behind the growing popularity of ICT as a significant teaching tool amongst the students. The findings had somewhat mixed responses highlighting the varied perceptions of the students as to why they considered ICT technique to be more effective than any other technique. Almost half of the respondents, i.e 44% were of the opinion that they thought ICT techniques to be more easy to learn and grasp as the contents are delivered to them in a very interesting, engaging and yet informative manner which makes it easier for them to learn them. Second highest number of the sample population, i.e 32% expressed that they find ICT techniques more easy and effective in communicating information and through this medium information can be passed over with more ease and much faster. 14% of the respondents expressed that ICT techniques are easier to understand and

10% of them thought the medium to be very easy in terms of sharing various types of information.

CONCLUSIONS

No doubt change is always the law of nature and academics is no exception. However, this field gives more importance just not on the teaching skills and methods of the faculties but rather how are those teaching methods and tools aiding in providing a more richer, understandable and engaging learning experience for the students. The research through its exhaustive study as well as primary data collected from Jaipur based college students comes out with some major findings regarding the perception of youngsters about the significance of ICT as a major teaching and learning tool and the various dimensions of its utility and relevance in making the entire learning process more interactive, interesting and engaging. The study establishes a very important fact that students prefer that teaching method which is two-way and multimedia-based and which gives them an equal opportunity to express them in a more better manner and understand the concepts. ICT has emerged as one of the most popular and effective teaching tool highly liked by the students making enhancing their learning experience. Days are not far behind when ICT would become an indispensable teaching and learning tool for every academic institution.

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