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Perception of Students About the Use of Future Gadgets in Education

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Abstract **– *In* this today's fast challenging world, new innovation, teaching techniques and programs are developing at a very fast rate. To meet the global challenges especially in the field of education, futurology plays an important role in nurturing ways and paths of innovativeness. In western countries like USA, UK and Canada, the educational teaching-learning techniques is enhancing at a very credential rate. Students incorporate latest gadgets, tools and devices in their educational curriculum. On the other side, teachers make use the latest strategies and teaching tech-up programs such as PAD, I-Pod, 3D-Mobile Phone devices, 3D-projectors and many more to make their teaching/instruction effective and an enthusiastic one. But in the country like India, which is still at the developing stage, needs to be curious about the latest inventions in the field of education. We are today not up-to-date regarding the use of future gadgets in the present educational scenario. The reason may be one or many, like related to infrastructures, untrained teaching staff and faculty, lack of physical resources, less contribution from government agencies, incentives not according to the work, family educational background etc. Thus, this research paper highlights the perceptions, barriers and preparatory-needs of the students regarding the use of future gadgets in educational scenario.**

Keywords **– Educational Revolution, Educational Technology, Future Gadgets, Futurology.**

I. INTRODUCTION

The technology is going to continue to evolve and reinvent itself everyday. The 21 century is century of the new technologies, with the humanity creation, we are capable of creating a lot of new things which changed our life. It was our perception that made us to think 10 years ago, we hardly could believe we would have mobile phones, modern personal computers, notebooks, international net without which we cannot image our life. Now, they have become a part of life. If we are looking back in time, we realize how much our lives have changed due to the fruits of technology. It has provided us tremendous facilitates, freedom, and less consumption of time and resources. Also, the nation's economic growth can be measured only according to the level of technology and innovations in every sphere (included individual's life style), whether it is social, economical, political, medical, military, commercial, transport, telecommunications, banking, education etc."[1]

Incorporating the new technologies and innovations in present educational system, required, for global challenges and competitiveness, furnish manifold educational and technological opportunities. Thus, from the conceptual point of view, the adoption of new technologies such as IT, ICT and educational technology constitute the pillar of process innovations for the actual utilization of the new system.[2]

II. EDUCATIONAL REVOLUTION

Tapscott (1998), rightly said, "We are entering a new era of digital learning in which we are in the process of transition from broadcasting learning to interactive learning". The current revolution in technology is considered to be the automatisation of the processes of production-from automated production lines to automated factories, automated control of industrial sectors and associations, due to the leading role played by the introduction of electronic technology and computers. As the technological revolution has a particularly profound impact on the main elements in the forces of production-the worker. The technological revolution also encompasses the development of nuclear engineering, space exploration and the creation and widespread application of new synthetic materials with special properties.

However, the present educational system is suffering from various problems like improper content, improper methods of teaching and learning, lack of efficient and skilled teachers, lack of communication, and an uncontrolled mass of students. So, it is necessary for our society to change the current scenario of educational system.

Assuming that, anyone can obtain education anywhere, at anytime. Latest information and content is available at low cost. And new technological terms have replaced old terms such as banking into e-banking, money into e-money, commerce into e-commerce, governance into e-governance, learning into e-learning, education into e-education etc. Therefore, we should decide how to encourage the use of latest technology in the present educational system and how to provide the skills necessary for their use, which would enhance in the world of tomorrow.

III. OBJECTIVES OF THE STUDY

1. To identify and categorize the list of future gadgets to be used in education.

[1]Retrieved on August 10, 2014 from Internet Source http://www.slideshare.net.

[2]Koellinger, Philipp. (2008). The Relationship between technology, innovation, and Firm Performance: Empirical Evidence on E-Business in Europe. *Research Policy, ELSEVIER, 37(2008),* 1317-1328, 6, doi: 10.1016/j.respoL2008.04.0.24.

2. To study the utilization of future gadgets among students in various domains of usage.
2. To study the significance of differences in the perception among students about utilizing future gadgets in various domains of education with respect to gender, age, streams and educational qualifications.
3. To study the significance of differences in the perception among students about the barriers related to the utilization of future gadgets in education with respect to background variables.
4. To study the significance of differences in the perception among students regarding preparatory-needs about the usage of future gadgets in education with respect to background variables.
5. To compare the significance of differences among students regarding the barriers and preparatory-needs about the use of future gadgets in education.

NULL HYPOTHESES

1. There is no significant difference in the perception among students about utilizing future gadgets in various domains of education with respect to gender, age, streams and educational qualifications.
3. To study the significance of difference in the perception among students about the barriers related to the utilization of future gadgets in education with respect to background variables.
4. To study the significance of difference in the perception among students regarding preparatory-needs about the usage of future gadgets in education with respect to background variables.
5. To compare the significance of difference in the perception among students regarding barriers and preparatory-needs about the use of future gadgets among students in education.

IV. Delimitations

The study is limited to the use of future gadgets in education, in educational, technical and professional institutions of Chandigarh region. Further the study is limited to students enrolled in various educational, technical and professional institutions under the colleges, institutes and universities of Chandigarh region.

V. Tools Used

In the present study, content-analysis has been done using formulation of analysis tables. In the present study about the use of future gadgets in education, the researcher has developed a self-made tool in order to know the perceptions of students. For the present research work the following tools for data collection will be used: -

1) Content Analysis Tables: - Collect data for future gadgets (Through newspapers, internet, magazines, journals, etc.).
2) Perception scale for students about the use of future gadgets
3) Perception scale for barriers about the use of future gadgets
4) Perception scale for preparatory-needs about the use of future gadgets

VI. Method

The investigator has used descriptive method to study the problem. The investigator has constructed various self-developed Opinionniare scales for the opinion of students, barriers faced and preparatory-needs about the use of future gadgets in education for formulating the tool for the research study.

VII. Sample

The stratified random sampling technique has been employed to draw the sample of 200 students from the population (Various universities, colleges, educational/ professional/vocational/ITI's institutions, Chandigarh, U.T. Region).

VIII. Collection of Data and Scoring

In order to know the perceptions of students regarding the "Perception of students about the use of future gadgets in education", the researcher prepared a self-developed tool consisting of 234 future gadgets on the basis of the results of the educational components of the content-analysis tables. The available future gadgets were categorized on the basis of the types of gadgets with various categories and sub-categories. For the Opinnionaire scale against each item there were five alternative such as Most Relevant, More Relevant, Relevant, Less Relevant and Least Relevant and they were score as 5,4,3,2,1 respectively.

IX. Statistics Used

The investigator had used 'Chi-Square' test and frequency distribution for analyzing the data. The online Chi-Square calculator was used as a statistical tool for calculating the Chi-Square values.

X. Analysis of Data

1. There is no significant difference in the perception among students about the utilization of future gadgets in learning with respect to gender. Hence the perceptions of the students about the use of future gadgets in learning domain are independent of gender. (See Table No.:-1)
2. There is no significant difference in the gender-wise perception among students in education about the utilization of future gadgets regarding Self-Study domain of education. Hence the perceptions of students about the use of future gadgets in self-study domain are independent on gender. (See Table No.:-2)
3. There is no significant difference in the gender-wise perception among students in education about the utilization of future gadgets regarding resource-provider domain of education. Hence the perceptions of students

about the use of future gadgets in resource-provider domain are independent on gender. (See Table No.:-3)

4. There is a significant difference in the age-wise perception among students in education about the utilization of future gadgets regarding learning domain of education. Hence the perceptions of students about the use of future gadgets in learning domain are dependent of age. (See Table No.:-4)

5. There is a significant difference in the age-wise perception among students in self-study domain about the utilization of future gadgets. Hence the perceptions of students about the use of future gadgets in self-study domain are dependent of age. (See Table No.:-5)

6. There is a significant difference in the age-wise perception among students in education about the utilization of future gadgets regarding resource-provider domain of education. Hence the perceptions of students about the use of future gadgets in resource-provider domain are dependent of age. (See Table No.:-6)

7. There is a significant difference in the qualification-wise perception among students in education about the utilization of future gadgets regarding learning domain of education. Hence the perceptions of students about the use of future gadgets in learning domain are dependent on qualification. (See Table No.:-7)

8. There is a significant difference in the qualification-wise perception among students in education about the utilization of future gadgets regarding self-study domain of education. Hence the perceptions of students about the use of future gadgets in self-study domain are dependent of qualifications. (See Table No.:-8)

9. There is no significant difference in the qualification-wise perception among students in resource-provider domain about the utilization of future gadgets. Hence the perceptions of students about the use of future gadgets in resource-provider domain are independent of streams. (See Table No.:-9)

10. There is no significant difference in the stream-perception among students in education about the utilization of future gadgets regarding learning domain of education. Hence the perceptions of students about the use of future gadgets in learning domain are independent on streams. (See Table No.:-10)

11. There is no significant difference in the stream-wise perception among students in education about the utilization of future gadgets regarding self-study domain of education. Hence the perceptions of students about the use of future gadgets in self-study domain are independent of streams.(See Table No.:-11)

12. There is no significant difference in the stream-wise perception among students in resource-provider domain about the utilization of future gadgets. Hence the perceptions of students about the use of future gadgets in resource-provider domain are independent of streams. (See Table No.:-12)

Table No. 1: Differences in perception of students about the use of future gadgets in learning domain of education with respect to the gender.

Domain	Background Variable	Chi - Square Value (χ^2) (Calculated)
Learning	Gender	5.646

**At 0.05 level of Significance, df=2.*

Table No. 2: Differences in perception of students about the use of future gadgets in Self-Study domain of education with respect to the gender.

Domain	Background Variable	Chi - Square Value (χ^2) (Calculated)
Self-Study	Gender	1.888

*At 0.05 level of Significance, , df=2.

Table No. 3: Differences in perception of students about the use of future gadgets in Resource-Provider domain of education with respect to the gender.

Domain	Background Variable	Chi - Square Value(χ^2) (Calculated)
Resource-Provider	Gender	4.144

*At 0.05 level of Significance, , df=2.

Table n No. 4: Differences in perception of students about the use of future gadgets in Learning domain of education with respect to the age

Domain	Background Variable	Chi - Square Value(χ^2) (Calculated)
Learning	Age	26.915

*At 0.05 level of Significance, df=4.

Table No. 5: Differences in perception of students about the use of future gadgets in Self-Study domain of education with respect to the age.

Domain	Background Variable	Chi - Square Value(χ^2) (Calculated)
Self-Study	Age	16.774

*At 0.05 level of Significance, df=4

Table No. 6: Differences in perception of students about the use of future gadgets in Resource-Provider domain of education with respect to the age.

Domain	Background Variable	Chi - Square Value(χ^2) (Calculated)
Resource-Provider	Age	18.388

*At 0.05 level of Significance, df=4

Table No. 7: Differences in perception of students about the use of future gadgets in Learning domain of education with respect to the Qualifications.

Domain	Background Variable	Chi - Square Value (χ^2) (Calculated)
Learning	Qualification	14.226

*At 0.05 level of Significance, df=4

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Table No. 8: Differences in perception of students about the use of future gadgets in Self-Study domain of education with respect to the Qualifications.

Domain	Background Variable	Chi - Square Value(χ^2) (Calculated)
Self-Study	Qualification	12.090

*At 0.05 level of Significance, df=4

Table No. 9: Differences in perception of students about the use of future gadgets in Resource-Provider domain of education with respect to the Qualifications.

Domain	Background Variable	Chi - Square Value(χ^2) (Calculated)
Resource-Provider	Qualification	8.752

*At 0.05 level of Significance, df=4

Table No. 10: Differences in perception of students about the use of future gadgets in Learning domain of education with respect to the streams.

Domain	Background Variable	Chi - Square Value (χ^2) (Calculated)
Learning	Stream-Wise	5.720

*At 0.05 level of Significance, df=4

Table No. 11: Differences in perception of students about the use of future gadgets in Self-Study domain of education with respect to the Streams.

Domain	Background Variable	Chi - Square value(χ^2) (Calculated)
Self-Study	Stream-Wise	2.167

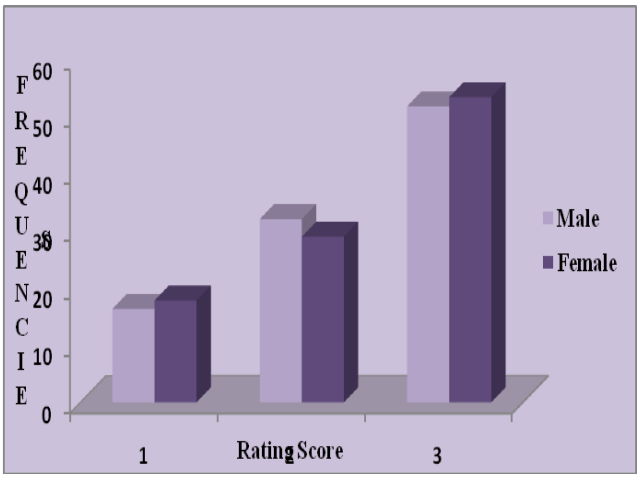
*At 0.05 level of Significance, df=4

Table No. 12: Differences in perception of students about the use of future gadgets in Resource-provider domain of education with respect to the Streams.

Domain	Background Variable	Chi - Square value(χ^2) (Calculated)
Resource-Provider	Stream-Wise	5.118

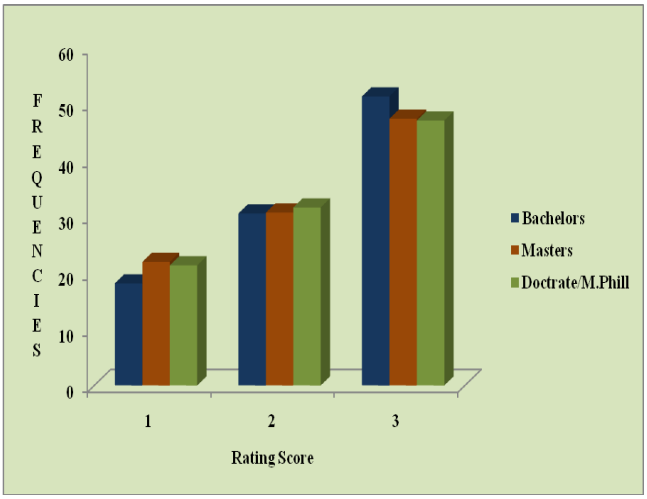
*At 0.05 level of Significance, df=4

The graphical representation as shown in the Graph no. 1 shows the gender-wise perceptions of students about the use of future gadgets in learning domain of education. The 16.3% of male students found that the use of future gadgets were least relevant, 32% of them stated as relevant and 51.69% of male students termed that the use of future gadgets will be most relevant in the learning domain of education. Similarly, 17.77% of female students found use of future gadgets in learning to be least relevant, 28.92% of them stated it to be of relevant use, while 53.305% of female student's percept the use of future gadgets to be the most relevant in learning domain of education. Thus, in overall, the more girls than the boys stated that the use of future gadgets will be least relevant, much male students than the female students percepts the use of future gadgets to be relevant one, while the maximum girls than the boys found that the use of future gadgets to be of most relevant for the learning domain of education.



Graph No. 1:- Graphical representation for the perception of students about the use of future gadgets with respect to Gender.

The graphical representation as shown in the graph no. 2 shows the gender-wise perceptions of students about the use of future gadgets in learning domain of education. The 18.13% of bachelor's students found that the use of future gadgets were least relevant, 30.54% of them stated as relevant and 51.33% of bachelor's students percepts that the use of future gadgets will be most relevant in the learning domain of education. Similarly, 21.93% of students studying in masters degree found use of future gadgets in learning to be least relevant, 30.7% of them stated it to be of relevant use, while 47.37% of female student's percept the use of future gadgets to be the most relevant in learning domain of education. The 21.32% of doctorate/M.Phill student's percepts least relevant about the use of future gadgets in self-study domain of education, 31.62% of them stated it to be of relevant use, while 47.06% of doctorate/M.Phill students found the utilization of future gadgets in self-study domain of education to be most relevant. Thus, in overall, the use of future gadgets will be of most relevant use in self-study domain of education for bachelor's students, than the master's and doctorate/M.Phill students.



Graph No. 2:- Graphical representation for the perception of students about the use of future gadgets in self-study domain with respect to educational qualifications.

Table No. 9:- Analysis of Student's perception pertaining about the barriers and preparatory-needs towards the use of future gadgets in education.

Domains	Background Variables	Chi-Square Value(χ^2) (Calculated)	df
Barriers	Gender	2.762	2
	Age	131.633	4
	Stream-Wise	32.170	4
	Qualification-Wise	103.944	4
Preparatory - Needs	Gender	9.665	2
	Age	30.058	4
	Stream-Wise	16.817	4
	Qualification-Wise	51.417	4

**At 0.05 level of Significance*

XI. FINDINGD BASED ON HYPOTHESES

From Tableno.-9, the following findings have been concluded, as below:-

- There is no significant difference in the perception among students about the utilization of future gadgets in learning with respect to gender. Hence the perceptions of the students about the use of future gadgets in learning domain are independent of gender.
- There is no significant difference in the gender-wise perception among students in education about the utilization of future gadgets regarding Self-Study domain of education. Hence the perceptions of students about the use of future gadgets in self-study domain are independent on gender.
- There is no significant difference in the gender-wise perception among students in education about the utilization of future gadgets regarding resource-provider domain of education. Hence the perceptions of students about the use of future gadgets in resource-provider domain are independent on gender.
- There is a significant difference in the age-wise perception among students in education about the utilization of future gadgets regarding learning domain of education. Hence the perceptions of students about the use of future gadgets in learning domain are dependent of age.
- There is a significant difference in the age-wise perception among students in self-study domain about the utilization of future gadgets. Hence the perceptions of students about the use of future gadgets in self-study domain are dependent of age
- There is a significant difference in the age-wise perception among students in education about the utilization of future gadgets regarding resource-provider domain of education. Hence the perceptions of students about the use of future gadgets in resource-provider domain are dependent of age.
- There is a significant difference in the qualification-wise perception among students in education about the utilization of future gadgets regarding learning domain of education. Hence the perceptions of students about the use of future gadgets in learning domain are dependent on qualification.
- There is a significant difference in the qualification-wise perception among students in education about the utilization of future gadgets regarding self-study domain of education. Hence the perceptions of students about the use of future gadgets in self-study domain are dependent of qualifications.
- There is no significant difference in the qualification-wise perception among students in resource-provider domain about the utilization of future gadgets. Hence the perceptions of students about the use of future gadgets in resource-provider domain are independent of streams.
- There is no significant difference in the stream-perception among students in education about the utilization of future gadgets regarding learning domain of education. Hence the perceptions of students about the use of future gadgets in learning domain are independent on streams.
- There is no significant difference in the stream-wise perception among students in education about the utilization of future gadgets regarding self-study domain of education. Hence the perceptions of students about the use of future gadgets in self-study domain are independent of streams.
- There is no significant difference in the stream-wise perception among students in resource-provider domain about the utilization of future gadgets. Hence the perceptions of students about the use of future gadgets in resource-provider domain are independent of streams.
- There is no significant difference in the student's perception pertaining to the barriers regarding the utilization of the available future gadgets in education with respect to gender. Hence the perceptions of students about the barriers regarding the use of future gadgets in education are independent of gender.
- There is a significant difference in the age-wise perception of student's regarding to the barriers about the utilization of future gadgets in education. Hence the perceptions of students about the barriers regarding the use of future gadgets in education are dependent of the age.
- There is a significant difference in the stream-wise perception of student's regarding to the barriers about the utilization of future gadgets in education. Hence the perceptions of students about the barriers regarding the use of future gadgets in education are dependent of the streams.
- There is a significant difference in the qualification-wise perception of student's regarding to the barriers about the utilization of future gadgets in education. Hence the perceptions of students about the barriers regarding the use of future gadgets in education are dependent of the qualifications.
- There is a significant difference in the student's perception pertaining to the preparatory-needs regarding the utilization of the available future gadgets in education with respect to gender. Hence the perceptions of students about the preparatory-needs regarding the use of future gadgets in education are dependent of gender.

- There is a significant difference in the age-wise perception of student's pertaining to the preparatory-needs regarding the utilization of the available future gadgets in education. Hence the perceptions of students about the preparatory-needs regarding the use of future gadgets in education are dependent of age.
- There is a significant difference in the stream-wise perception of student's pertaining to the preparatory-needs regarding the utilization of the available future gadgets in education. Hence the perceptions of students about the preparatory-needs regarding the use of future gadgets in education are dependent of streams.
- There is a significant difference in the qualification-wise perception of student's pertaining to the preparatory-needs regarding the utilization of the available future gadgets in education. Hence the perceptions of students about the preparatory-needs regarding the use of future gadgets in education are dependent of qualifications.

XII. CONCLUSION

Since today's time is to find out the innovative ways and rethinking on the strategies of implementation to face the challenges in the field of education. In this technotronic era this sort of research is very much helpful in directing students towards efficient use of future gadgets and technology in the present educational system. Such research can help in the development of new technologies, services, and new training programs to assist the students in their teaching-learning process. The results of this research and other studies point to the need for more research on the best way to teach students about the future technologies such as future gadgets, latest ICT skills and developments and strategies etc. that has to be inculcated into the present curriculum system.

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