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**INTRODUCTION**

**REVIEW OF LITERATURE**

**NEED/IMPORTANCE OF THE STUDY**

**STATEMENT OF THE PROBLEM**

**OBJECTIVES**

**HYPOTHESIS (ES)**

**RESEARCH METHODOLOGY**

**RESULTS & DISCUSSION**

**FINDINGS**

**RECOMMENDATIONS/SUGGESTIONS**

**CONCLUSIONS**

**LIMITATIONS**

**SCOPE FOR FURTHER RESEARCH**

**REFERENCES**

**APPENDIX/ANNEXURE**

The manuscript should preferably range from *2000 to 5000 WORDS*.

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**BOOKS**

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.

- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

**CONTRIBUTIONS TO BOOKS**

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

**JOURNAL AND OTHER ARTICLES**

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

**CONFERENCE PAPERS**

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–23

**UNPUBLISHED DISSERTATIONS**

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

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**WEBSITES**

- Garg, Bhavet (2011): Towards a New Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

# PERCEPTION OF STUDENTS ABOUT THE EFFECTIVENESS OF VIRTUAL CLASSROOMS: A STUDY CONDUCTED AT DISTANCE LEARNING CENTRES OF PUBLIC & PRIVATE UNIVERSITIES OF PUNJAB, INDIA

TEJBIR KAUR
ASST. PROFESSOR
SCHOOL OF COMMERCE & MANAGEMENT
SRI GURU GRANTH SAHIB WORLD UNIVERSITY
FATEHGARH SAHIB


DR. RUBEENA BAJWA
ASST. PROFESSOR
SCHOOL OF COMMERCE & MANAGEMENT
SRI GURU GRANTH SAHIB WORLD UNIVERSITY
FATEHGARH SAHIB


DR. JASKARAN SINGH DHILLON
ASSOCIATE PROFESSOR
SCHOOL OF COMMERCE & MANAGEMENT
SRI GURU GRANTH SAHIB WORLD UNIVERSITY
FATEHGARH SAHIB

## ABSTRACT
*Virtual Classroom is a scheduled, online, teacher-led training session where teachers and learners interact together using computers linked to a network such as the Internet. This study has been focused on studying the perception of students about the effectiveness of virtual classrooms. The study analyzed the extent to which virtual classrooms are considered worthwhile by the students. Exploratory research design has been used and Braun and Clarke's (2006) inductive Thematic Analysis; Percentage analysis and factor analysis in SPSS has been applied to analyse the various responses. It have been concluded that there are five factors that shows the effectiveness of virtual classrooms. They are; Virtual classrooms as a worthwhile experience, Effect on other course members, Perception about course tutor, Perception of being part of community of learners, Virtual classroom as learner isolation. Further, suggestions regarding the improvement of the virtual classrooms have been made therewith.*

## KEYWORDS
virtual classrooms, perception, teaching & learning.

## 1. INTRODUCTION TO VIRTUAL CLASSROOMS
Just as the term virtual means a simulation of the real thing, Virtual Classroom is a simulated classroom via Internet, which provides a convenient communication environment for distance learners just like traditional face-to-face classroom. A virtual classroom allows learners to attend a class from anywhere in the world and aims to provides a learning experience that is similar to a real classroom. When we go to college we have a schedule of lectures, which we must attend. Student must arrive on time, and when he enters the classroom, he finds a teacher, fellow learners, a blackboard or whiteboard, LCD projector, optionally a television screen with videos. Likewise, a Virtual Classroom is a scheduled, online, teacher-led training session where teachers and learners interact together using computers linked to a network such as the Internet. A virtual classroom enables to bring learners from around the world together online in highly interactive virtual classes while greatly reducing the travel, time, and expense of on-site teaching/training programs. It can be used as a solution for live delivery and interaction that addresses the entire process of creating and managing our teaching-learning process. It facilitates instructor and student in teaching-learning events, such as a seminar, online discussion or a live training for employees in company. As in traditional classroom, there are professor and fellow learners present with the student; we have many participants present in virtual classroom. They can talk with each other as in the traditional classroom via chat. Similarly presenter uses whiteboard, gives notes/resources, and gives presentation as given in traditional one. Thus, virtual classroom can be visualized as a classroom where a lecture or session is conducted using Internet.

## 2. REVIEW OF LITERATURE
**Vygotsky (1978)** states that the learning is a social process, the role of the professor is to create a dynamic learning environment which encompasses several outlets for learning to take place. If the professor provides the appropriate environment students should have several opportunities to interact and communicate with other students. By integrating an effective technological infrastructure both instructor and student will be able to create a social space in which communication is abundant to ensure that both instructor and student have a social presence. The AVR system and/or Immersive Education provide students with the sense of being connected even when they are not present on a college campus. The system provides educators with the ability to present course content (demonstrations) in an interactive environment which allows communication (both question and answer) to take place real time. A VR system shows and exploits pedagogical principles **Bricken (1990).** Passive learning is transformed into active with the experiential education provided from virtual environments. In a virtual environment the scale, information density, interaction and response, the time and the degree of user participation, can be defined and altered. **Stuart and Thomas (1991)** reported the following possibilities provided by virtual classrooms are explores existing places and things that students would not otherwise have access to; explores real things that, without alterations of scale in size and time, could not otherwise be examined effectively; and interacts with real people in imaginary spaces to support interactive design. Stuart and Thomas believe that VR not only contributes to the realization of the learning processes as introduced by constructivism, but also gives opportunities to the students to get out of the limited school environment in space and time domains, experientially and physically in an indirect way. They have the opportunity to make creative leaps in the space of imagination and mental models that contribute to the modification of learning processes and intervention in the real world. **Winn (1993)** suggests that immersive virtual classroom technology allows three kind of knowledge building experiences that are not available in real world but are important for learning. These pertain to size, transduction and reification. A virtual classroom leads to the changes in the size of the students and virtual objects.. According to **Coleman (2012),** students enrol in online courses for a variety of reasons, which include anywhere/anytime learning, increased student interaction, acquiring skills in using technology, and instructors being more approachable. Asynchronous online courses offer anytime/anywhere learning to the students; whereas, in synchronous online courses, students have the freedom of place but have to login at a specific time.

## 3. RESEARCH METHODOLOGY

### 3.1 OBJECTIVES

1. To study the perception of the students about the effectiveness of virtual classrooms.
2. To study the major factors that contributes towards the effectiveness of virtual classrooms.

### 3.2 NEED OF THE STUDY

No such study has been yet conducted in the state of Punjab. So, the aim of this project is to know the perception of the students about the virtual classrooms that how much it is relevant to them and what will be the effect of the same on them.

### 3.3 RESEARCH DESIGN

**TYPE OF RESEARCH**

exploratory research

**DATA COLLECTION**

Primary data has been collected through questionnaire from the students studying in distance learning centres of One Public University & one Private University in Punjab, Sate , India.

**SAMPLE SIZE**

The data has been collected through questionnaire from the 100 students, about 20 respondents from each 4 distance learning centre that is from, Ludhiana, Chandigarh, Fatehgarh Sahib and Patiala.

**TOOLS AND TECHNIQUES**

Braun and Clarke's (2006) inductive Thematic Analysis; Percentage analysis and factor analysis in SPSS is used. Primary data has been collected through questionnaire by Likert scaling and technique of convenience sampling has been opted.

## 4. DATA ANALYSIS & DISCUSSION

### 4.1. LEARNING COMMUNITY CONSOLIDATION, COMMUNICATION AND SHARING KNOWLEDGE

Questionnaire data in Table 1 indicates that the students viewed using the Virtual classrooms as enhancing their perception of membership of a learning community and as a supporting relationship development between group members. Student responses to statement 4 that what effect did the use of virtual classroom have on your perception of being part of a community of learners as positive as this factor is rated as 26 out of 100. On the other hand, statement 5 that what effect did the use of virtual classroom have on your sense of learner isolation is rated as strongly positive by 30 out of 100 students along with the statement 9 which deals with the perception of virtual classroom as a tool for student collaboration as positive by 32 out of 100 students, indicating that they viewed the classrooms as valuable for relationship development and fostering cooperation, and that they helped in lessening their sense of isolation. In statement 9 (25/100) were neutral to the fact that virtual classrooms acts as a only tool for student collaboration despite of this there are some other factors like some past existing relationships which leads to the responsibility and commitment towards others in their group. Some students saw virtual classrooms more as a bonus than as essential tool for establishing relationships only. The responses to statement 10 about the ease of communication indicated that number of students who experienced difficulty in adequately communicating their findings during the seminars are more in number than the students who didn't feel any problem regarding communication. Out of total number of students 30 were indifferent towards their view regarding communication problems which means 30 were neutral to the statement. These results were linked to the issues with how the video is operated, in that it did not provide the students with feedback opportunities too and regarding the size of the images shown to the students.

In statement 11(31/100), students indicated that the effect of virtual classrooms is somehow the same as to traditional classrooms that is they were neutral to the fact that there is much effect of the virtual classrooms on their studies. Moreover, 27 out of 100 students were positive to the statement showing that it depends upon the interest created in the virtual classrooms to divert the attention of the students towards the studies by showing some moving clips or interesting videos. The adequacy of the performance of virtual classrooms depends on the quality of audio, video, speed of content delivery etc. as in statement 16 shown in table 1. 41 out of 100 students were positive about the adequate performance of the virtual classrooms as they were able to use the diagrams, voice and videos by storing in their laptops for further studies in future and were able to understand them properly. The one thing that lacked is the answers of the questions that can't be given by the tutor in the recorded lectures. 29 out of 100 students were neutral to the statement as they sometimes faces the problems regarding audio and video due to the speed of the internet connection as shown in table 2.Due to the adequate performance of the virtual classrooms, there is a strongly positive impact on the studies of the students. 35 out of 100 is major response that showed the students in favour of virtual classrooms than traditional classrooms. The use of audio, videos increases their power to remember the text along with images to secure good marks in exams. In statement 3(36/100) students responded positively that the effect of tutor on them is very positive and remarkable to understand the lecture with ease and to secure good marks. The communication skills and knowledge of the lectures gives a positive impact about the tutor. The inability of the students to ask frequent questions to the tutor sometimes makes it difficult for the student to learn about all the facts. As tutor have a great impact on the perception of the students regarding virtual classroom; it should be positive otherwise it will lead to more absenteeism. Due to adequate performance of virtual classrooms and good tutor the level of support of the students to use virtual classrooms more frequently in the professional courses in statement 7(35/100) is positive. According to them, virtual classroom helps to pass on more knowledge to professional students by teaching online with updated facts and figures than relying on traditional facts. It also leads to the proper utilization of time too rather than drawing things on whiteboards. While the number of students strongly in favour(21/100) of this statement and neutral(21/100) to it were same as virtual classrooms also have some serious drawbacks like internet speed, huge installation cost, lack of two way communication etc which are yet to be removed.

Response to statement 18(37/100) were positive regarding the timings of the virtual classrooms in distance learning centres as students are given with the facility rather to join morning or evening classes. 28 out of 100 students are indifferent to the fact, as for them the timings to attend the class is not a serious issue. In spite of the fact that in distance learning centres attendance is awarded to students without imposing any serious restrictions. The prior distribution of presentation outlines have a positive impact on the ability of the students to ask questions or to engage them in understanding the presentation as in statement 20(29/100) shown in table 1 students indicated positive response to it. The presentation outlines makes the student familiar of the content of the presentation or the online lecture to be delivered in a particular time period. 27 out of 100 students are neutral to the statement that they don't pay any attention towards the content to be delivered and sit inattentive in the class. The concept of virtual classroom is still in its introduction phase. It is not introduced in the courses meant for annual terms like B.sc, MA etc. In statement 2(29/100) students were positive about the introduction of virtual classrooms in courses other than professional courses while 27 were neutral to the statements as some concepts related to sciences cannot be made clear through virtual classrooms.

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**TABLE 1: LIKERT QUESTIONNAIRE SUMMARY**

| Statement | Likert rating | | | | | Av. | Total |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | | |
| 1. Please indicate the extent to which you consider using the Virtual Classroom is a worthwhile experience in this paper | 14 | 13 | 21 | 29 | 23 | 3.31 | 100 |
| 2. What effect did the use of the virtual classroom have on your perception of other course members ? | 6 | 17 | 27 | 29 | 21 | 3.42 | 100 |
| 3. What effect did the use of the virtual classroom have on your perception of the course tutor? | 11 | 6 | 22 | 36 | 25 | 3.58 | 100 |
| 4. What effect did the use of the virtual classroom have on your perception of being part of a community of learners (belonging)? | 19 | 20 | 12 | 26 | 23 | 3.14 | 100 |
| 5. What effect did the use of the virtual classroom have on your sense of learner isolation? | 13 | 12 | 21 | 24 | 30 | 3.44 | 100 |
| 6. What effect did the use of virtual classroom have on your studies? | 7 | 17 | 14 | 27 | 35 | 3.65 | 100 |
| 7. Please indicate your level of support for using the virtual classroom more frequently in courses such as this. | 9 | 14 | 21 | 35 | 21 | 3.44 | 100 |
| 9. What is your perception of the virtual classroom as a tool for student collaboration? | 8 | 15 | 25 | 32 | 20 | 3.41 | 100 |
| 10. How easy is it for you to communicate your thoughts and knowledge using the Virtual Classroom? | 11 | 17 | 30 | 26 | 16 | 3.19 | 100 |
| 11. What affect did using the virtual classroom have on your learning? | 14 | 15 | 31 | 27 | 13 | 3.1 | 100 |
| 16. What is your perception of the adequacy of the performance of the virtual classroom (e.g.: Quality of audio, video, speed of content delivery etc.?) | 5 | 8 | 29 | 41 | 17 | 3.57 | 100 |
| 18. How convenient for you is the timing of the virtual classroom presentations? | 12 | 16 | 28 | 37 | 7 | 3.08 | 100 |
| 20. What affect did the prior distribution of presentation outlines have on your ability to ask questions or otherwise engage with and understand the presentations? | 4 | 12 | 27 | 29 | 28 | 3.65 | 100 |

**4.2 INFLUENCE ON STUDENTS' ABILITY TO INTERACT AND COMMUNICATE IN THE VIRTUAL CLASSROOMS**
Data in this theme has been divided into three interrelated sub-themes. These are: task influences, multimedia-usability influences and technical/logistics influences.
**1.      TASK INFLUENCES**
Data coded under this theme refers to the student's view that how well the virtual classrooms supported the purpose to which they were put and the limitations to this. According to statement 1(29/100) indicated that the classrooms are appropriate and worthwhile.

**TABLE 2: QUESTIONNAIRE SUMMARY: TECHNICAL, LOGISTICS AND COMMUNICATION TOOLS**

**TECHNICAL AND LOGISTICAL**

| | |
|---|---|
| 8. Please indicate how frequently you would be prepared to participate in virtual classroom use over a typical 12-14 week course. | Sessions    <2    2    3    4    5    6    >6<br><br>13   41  15  13  10<br><br>5    3 |
| 12. I had to purchase additional computer equipment to enable me to participate in the virtual classroom? | No           Yes<br>31             69 |
| 13. I needed to make special logistical arrangements to enable me to attend the virtual classroom sessions (e.g.: childcare, travel to access a landline, borrow a computer, and upgrade my Internet etc.) | No           Yes<br>32             68 |
| 14. I had technical issues connecting to the virtual classroom. | No           Yes<br>31             69 |
| 17. Please indicate your Internet connection speed if known. | Broadband          Broadband<br>Don't know<br>(122k up & down)    (max up & down)<br>43                      49<br>8 |
| 19. I consider the maximum duration for a virtual classroom session should be… | <2 hr   2 hr   4 hr   6 hr   7 hr    >7 hr<br>0     42    28    20    10<br>0 |
| **RANKING OF VIRTUAL CLASSROOM TOOLS** | |
| 15. Please rank your opinion of the technical features of the virtual classroom in order from 1 to 4 (least to most valuable). | Feature                         Total<br>score       Rank<br><br>Asking   real   time   questions<br>36           1<br>Sharing documents                28<br>2<br>Group activities                  19<br>3<br>Application sharing               17<br>4 |

**4.3. MULTIMEDIA-USABILITY INFLUENCES**
Data coded under this theme refers to the range of multimedia that can be used in the classrooms to communicate knowledge, the benefits and the extent to which students required to purchase their personal equipments. This data shows that how some additional diagrams or chats are used so that the students may not feel low by the lack of technical knowledge that how the classrooms worked. As in statement 12(69/100) students indicated that they had to purchase an additional computers to participate in virtual classrooms as their technical skills are low to understand the things quickly. So, they need to practise them.
In statement 17, 512 kbps speed is indicated as best speed to connect to virtual classrooms and minimum of 122kbps which sometimes causes problem in connection. The maximum duration of the class should be 2 hours as indicated by the students. Otherwise, they feel distracted or bored. 42 out of 100 students feel positive about the duration of classrooms up to 2 hours.
**4.4. TECHNICAL/LOGISTICS INFLUENCES**
Questionnaire data indicated that 69 out of 100 students experienced technical issues using the virtual classrooms related to laptops or wireless connections to connect to internet. Data transferred rates appeared insufficient to support to the required level of activity. Students also require making special arrangements to participate in virtual classrooms as indicated in statement 13(68/100) that is special arrangements for internet or to participate easily in morning or evening sessions.

**4.5. FACTOR ANALYSIS & ROTATED COMPONENT MATRIX**

In Rotated Component Matrix the result has been founded for the factor which influences most because only 4 factors are above Eigen value 1. **So, these Factors can be grouped as** –

1. Use of teaching aids
2. Overall worthwhile experience
3. Enhanced sense of learning isolation
4. Ease of communication and knowledge sharing

So, finally result shows that effectiveness of virtual classrooms is mostly influenced by these four major factors and on the basis of these factors it can be known that which factor is better in terms of virtual classrooms.

## 5. FINDINGS

After conducting the study for the effectiveness of virtual classrooms the following findings can be inferred:

1. Virtual classrooms enhance the perception of the students regarding membership of a learning community.
2. Virtual classrooms act as a supporting relationship development between its group members. Visual and oral nature of interaction develops the sense of responsibility and commitment towards other members in the group.
3. Virtual classrooms are very helpful in sharing knowledge to a large extent. In spite of direct face to face interacts.
4. Virtual classrooms provide frequent interaction with each other to discuss the material thought in the classroom.
5. The virtual classroom effectiveness depends on the adequate performance of audio, video and content of the lecture. The students are also able to understand the diagrams and other content used in the lectures by storing in their laptops for future use also.
6. Virtual classroom is a challenging task than traditional classrooms as it entirely depends on the course tutor to make the student feel comfortable with the content delivered without any real time interaction.
7. Most of the students in virtual classrooms are neutral to the fact of the learning from the virtual classrooms. According to them, it depends on the interest created in the lectures by showing moving clips and videos which is missing in traditional classrooms.
8. The number of students who experienced difficulty in adequately communicating their findings during the seminars are more in number than the students who didn't feel any problem regarding communication. Reasons being the small size of the images shown to them which don't lead to the complete understanding of the lectures and various issues like how the video is operated or the absence of feedback opportunities.

## 6. SUGGESTIONS AND RECOMMENDATIONS

To improve the effectiveness of the virtual classrooms some suggestions are given as:

1. Tutor should tell subjective stories or use analogies to express a point.
2. The distance learning Institutions must follow "Keep it relevant and keep it brief" Principle.
3. Tutor should come up with analogies, diagrams and other visual ways to get his point across and have them ready whether to use them or not.
4. Tutor should not let the students know that he needs time to prepare something. He should announce what is about to occur and post the information on the screen.
5. Timely feedback must be taken from the students that whether they understand the contents or not.
6. Rather than throwing overhead questions. Tutor should make efforts to make the concepts clear to the class.
7. Timely activities should be given to students to stimulate their interest in studies.
8. Durations of the courses should be fixed to reduce waste of time.

## 7. CONCLUSION

The concept of virtual classrooms is in its introduction stage in the universities of Punjab. Many of the students are yet not aware about the concept of virtual classrooms. Virtual Classroom is a simulated classroom via Internet, which provides a convenient communication environment for distance learners just like traditional face-to-face classroom. A virtual classroom allows learners to attend a class from anywhere in the world and aims to provides a learning experience that is similar to a real classroom. While looking to the perception of the virtual classrooms in the distance learning centres of One Public & One Private University Operating in Punjab State of India through questionnaire it is Concluded that student's perception about the effectiveness of virtual classrooms in terms of studies; way to promote student interaction, communication and knowledge is positive in spite of various technical and logistics problems. There are certain factors like perception about course tutor, learner isolation, perception of being part of learner community etc which are contributing to the effectiveness of virtual classrooms the most.

## REFERENCES

1. Bricken(1990), "Educational Virtual Environment" , *The University of Loannia*
2. Stuart and Thomas(1991), "Students Attitudes Towards Educational Virtual Environments" , *Journal of Education and Information Technologies, Vol. 3, Issue 2, pp 137-148*
3. Vygotsky(1978), " The Education of Infants and Toddlers" , *University of South Florida*
4. Winn(1993), "Designing Virtual worlds For Use in Mathematics Education" , *Journal of American Educational Research*

**WEBSITES**

5. http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2006030 retrieved on 2/24/2013
6. http://orgs.usd.edu/gpctss/Submissions2009/Gosmire_etal2009.pdf retrieved on 3/13/2013
7. http://www.educause.edu/Resources/EnteringtheMainstreamTheQualit/153420 retrieved on 4/22/2013
8. http://www.thejournal.com/articles/15513 retrieved on 3/13/2013
9. http://en.wikipedia.org/wiki/Virtual classroom retrieved on 4/22/2013

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