Preparation and Standardization of the Perception Tool for Online Examinations

***Prof. Dhananjai Yadav and **Ananya Singh**
* Department of Education, University of Allahabad, Allahabad, UP
**UGC-SRF, Department of Education, University of Allahabad, UP
E-Mail- sananya31@gmail.com,

Abstract

Earlier it was a very time consuming and tedious process where both students as well as university used to perform all tasks manually be it Student Registration, Setting Question Papers, Setting Schedules to finally declaring the result. It was cumbersome since these details were now generated, managed and kept in computers. It was still not that much simpler Later the process became a lot easier when computer system were introduced and all for students because they were still expected to come in person to register, appear for exam at exam center and for all those formalities. Now we are expected to develop a web application which converts all of these tasks atomized as well as web enabled. The examination department is responsible for the marinating of question paper and it would be completely secure. This is the era of computer and we are adopting fast mechanism to solve any problem. In this direction, the researchers made an attempt to study the Student"s perception on online examinations of conducted by the university.

For many reasons the use of computer in assessmentis increasing. Although computer-based examinations increase in use, research is lacking about students' perceptions of online assessment in general and of categorized fields of online assessment systems.The aim of this study is to prepare and standardize a perceptions tool for the utilization and awareness about online examination for teachers and students.

This study will help to anyone, who wants to know the perception and view about the online examination in their study thus it help them to find out about the advantages and disadvantages of the using an online exam in the university campus and also for any other examination. To do so a questionnaire was delivered to students taking the course and then it can be analyzed using the SPSS. The results will show the perception and interest of teachers and students that whether this exam system is feasible for them or not.

Key words- Assessment, online exam, perception tool

Introduction:

Perception Tools:

Perception can be defined as our recognition and interpretation of sensory information. Perception also includes how we respond to the information. We can think of perception as a process where we take in sensory information from our environment and use that information in order to interact with our environment. Perception allows us to take the sensory information in and make it into something meaningful.

For example, let's look at our perception of words. Each letter of the alphabet is in itself a singular letter. When we perceive words, we think of them as one singular unit that is made up of smaller parts called letters. It is through this organization of letters into words that we are able to make something meaningful. That is, we perceive an entire word, and this word has a specific meaning that can be found in the dictionary.Perception is also necessary for us to survive in our environment.

Online Examination:

With the new wave of using technology in higher education, online exams have become a part of the institution's course evaluation methods. Online exams offers a variety of educational opportunities such as: allowing students to become more active, helping students with different learning styles and needs, and offering them more access to online database for exam preparations. The Educational Testing Service (ETS) offered different kind of general tests that is required in higher education institutions such as: Graduate Record Exam (GRE) and a computerized SAT. Much of the learning in technological educational courses are best assessed via instruments and online techniques and is preferred to be used to enhance the traditional tests. Although traditional assessment required time and more administration efforts for grading and administer the exam it is still important for learning in the cognitive domain by helping students during their learning process. So it is not argued in this paper to replace the traditional way of giving exams, but enhancing it by integrating the online exams if needed and if it is of any value to help in improving the educational process. Online assessment plays an important part in the learningprocess. This way of assessment needs to be valid, reliable, fair, and flexible. There are differentforms for online exam that support students learning suchas:

Written assignments, online discussions, Essays, presentations, online quizzes and questions, Collaborative assignment work, and Online Exams. There are a various types of software that hasbeen used to deliver online tests such as: WebCT, Responds, Perception, and Question Mark (Strategiesfor Success). Technology expertise work hard to adoptnew technologies for online exams preparation thatshould make the assessment process more secure,accessible, affordable, and more accurate for all students(distance education organizations).Students in an online learning environment students areactively involved in the learning process while teacherswork hard to establish trusting relationships with their students, and provide a structured assessment tools thathelp theirstudents to enhance their performances andhelp themselves to have more time that is usually spent inmarking the exams. Helping students to beready for online exam could be achieved by differentways like: providing online materials for students to study for the exam which cover theneeds of each student. Online assessment could serve amultiple purposes: assessing students learning for course

To examine somebody or something is to inspect closely; hence, an examination is a detailed inspection or analysis of an object or person. In an academic or professional context, examinations (or exams in short) are tests which aim at determining the ability of a student or a prospective practitioner. Exams are usually written tests, although some may be practical or have practical components, and vary greatly in structure, content and difficulty depending on the subject, the age group of the tested persons and the profession. A person who passes an examination receives a diploma, a driving or professional license, depending on the examination's objectives. A competitive examination is an examination where applicants compete for a limited number of positions, as opposed to merely having to reach a certain level to pass. A comprehensive examination is a specific type of exam taken by graduate students, which may determine their eligibility to continue their studies. An examination is usually supervised by an invigilator. Theinvigilator is responsible for the smooth running of the examination, and for ensuring that there is no cheating.

Online Assessment: Principles and Practices Learner assessment has a foundation of good practice whether it takes place online or face-to-face. Assessment is usually intended to provide both instructors and learners with information on progress and to measure achievement of learning goals. Principles of good assessment include validity (does it measure what is intended?), reliability (does it consistently produce the same information?), flexibility (are various methods and approaches used to

accommodate diverse needs?), and fairness (is it free from biases?), the quality of test construction matters because assessment has multiple purposes and multiple methods are needed.

Advantages of online examination:

Online assessment offers a number of advantages. They are:

Ease of distribution, Timeliness (when the assessment is available and how long it is available), Provision of feedback scores and explanations may be given immediately; e- mail allows for both individual and group feedback; learner feedback to the instructor can be incorporated immediately into the course. The online environment enables learners to regulate and monitor their own learning. Informal quizzes can give learners instant feedback to gauge their understanding of a topic; hyperlinks can lead learners to sources that explain incorrect answers. With its flexible participation structures, the Internet allows learners to pace their own activities, share information atopportunetimes, receive feedback and interact with Information access/management (database development, bibliography, problem solving) Demonstrating knowledge (written exam with local proctors, quick feedback through multiple choice, true/false, matching, short answer test) Communicating (debate, role play, PowerPoint presentation, report journal.

Studies related to the perception of teachers and students for computer based examination:

Stevens (1982) revealed that attitudes towards the use of computer need to be evaluated to successfully implement technological advancement in the classroom.

Hawkins (1984) indicated that negative reaction to computer experience came mainly from females.

Bychowski, Debroah, Van and Ralp (1984) studied the computer related attitude in relation on current classroom computer usage and computer knowledge. It showed that most of the teachers surveyed did not feel that they possessed adequate knowledge on the aspects of computer technology, very necessary to effectively use the computer in the classroom.Some researchers investigated the study related to the computer attitudes and use of computer in different manner.

Becker (1985) reported that attitudes towards computers were not related to sex, age or job level relationship among co-operative extension workers, but these attitudes were related to perception of mathematics ability.

Mevarech, A.R. and Rich, Y. (1985) compared the effects of CAI and traditional instruction on the Mathematics achievement and attitudes of disadvantaged Israeli students in grades III, IV and V. The achievement of CAI participants was higher and their attitudes toward school and toward themselves as Math learners were more positive.

Vermette, Orr and Hall (1986) found in their study that there is no significant difference between male and female teachers who responded to an attitude inventory.

Dickey and Kherlopian (1987) reported that most teacher believe that the amount of computer experience has a positive effect on attitude towards computer.

Sheingold (1990) found that knowledgeable and experienced teacher who had used computer for more than three years tend to use more application programs and less instructional or content specific programs. As teacher gained experience in the use of computer and developed more practice, they tended to use less software that is related to specific content, teacher feel more comfortable in making other choices of practice and use different approaches to the use of computer in their teaching. Personal factor such as teacher‟s knowledge of the computer and external factor such as student grade level and their ability levels influenced teacher‟s computing choices.

Choo and Cheung (1990-91) found that attitude towards technology affect implementation success not only makes intuitive sense but appears repeatedly in the literature. A positive attitude has been shown in several studies to correlate to successful implementation of computer usage.

Gerald and Keiko (1991) revealed that American thought computer used in comparison to USA students strongly agree that computer provide opportunities to teach new thing. Both USA and Japanese in USA students enjoyed lesson more than the Japanese in Japan.

Muller, Husband, Christou and Sun (1991) indicated that general teacher attitude towards computer plays an important role in educational process.

Novak and Knowles (1991) in their review of the study of teacher's computing influences found that there were external and internal factors influencing teacher's use of computers. External factor included the student's characteristics such as grade level and ability levels. For example where there are students with low ability levels, teachers may choose to use drill and practice computer programs to reinforce basic academic skills. Internal factors include teacher's knowledge and understanding of

computer software. For example, teacher who are familiar with the instructional software are more likely to include it in their instruction.

Glissow, P. (1993) showed that girls have significantly less experience and enthusiasm for computer in comparison with boys, student were found to grow less keen on computer as they grow older particularly girls than mixed sex school.

Bannert and Arbinger (1996) focused the study on gender related differences frequently and duration of computer use, computer experience, computer interests, attitude towards computer emotional responses while working with computers and locus of control were examined. Overall results supported the assumption of gender related differences in exposure to and use of computers. However, finding also indicated that this assumption may not hold true in general sense and that future studies must examine gender related differences with more sophisticated manner.

Lynn Karen Lore, (1996) finding of their study showed that there was not any significant statistical positive relationship between the overall attitude of the teacher towards computers and their use of CAI in their classroom instruction. Integration of technology will be widespread in classrooms throughout the United States by the year 2000. How much the student benefits from a technology rich classroom will depend on the role of the teacher in helping students utilized all the information available. The depth and scope of the utilization of technology in the classroom will begin with the attitude and belief of that classroom teacher towards the computer.

Selvin N.(1997) suggested in his study that there is a strong need for both educators and researchers to be aware of students attitudes using and interacting with computers. In 16-19 education (i.e. year level 12-14) but as yet little work has been carried out in this area. This article therefore describes the development of an instrument for measuring the attitudes towards computers of students aged 10-19years. Frantom, Green and Hoffman (2000) described the development of the children's attitude towards technologies scale (ATS). Significant differences were found on interest scores when comparing elementary and middle school students and on items reflecting alternative performances. In addition attitudes varied according to gender on subscales, initial analysis suggest this new measure of effectively access children‟s interest attitudes towards technologies.

Kadijevich (2000) examined the effect of gender and computer experience on high school students attitude towards computers. Result show that male reported a positive attitude towards computers

than did the females even after the control of computer experience. No gender differences in computer experience were found after control of computer attitude. No gender difference was found in perception of the importance of Computer Science. Males were more interested in Computer Science than were females, but this did not explain gender differences in computer attitudes.

Narayan Samy, M. and Thanga Samy, S. (2001) revealed that in general teacher has more favourable computer attitude. The professional educational qualification of the teacher had no significant influence on computer attitude. Age of the teacher has little influence on computer attitude. The gender of the teacher had significant influence on effective computer attitude, male teacher had more favourable computer attitude. The following points were also revealed in the study:-

1) Nearly 35% of the teacher in (District Institute of Education and Training) DIET's reported that computer had been used in all the six tasks where as in (Teacher Training Institute) TTI's it was only 20%.

2) In both type of institution nearly 65-80% of teacher admitted that they were not able to perform a variety of computer tasks.

3) About 52% of DIET teachers agreed that computer could be used in pre-service training in their institution and 53.7% teachers reported that computer could be used in in-service training.

4) In TTI's 45.7% of teacher favoured the use of computer in pre-service training where as only 5.5% teacher reported that computer could be used in in-service training.

5) Nearly 50% of the teachers in DIET's reported utilization of computer for resource support and action research prefers, but only 7.7% of teachers of TTI's reported the use of computer in action research.

6) Over 80% of teachers were DIET's, considered lack of adequate training, lack of external incentives, lack of equipments and software as the most important barrier in the learning more about computer only small percentage of teachers reported lack of interest in computer as barrier and the same was the cause with teachers with TTI's.

7) In TTI's about 17% teacher were using computer frequently, 21.3% occasionally and 61.4% never used computer.

New House, C.P. (2001) reported in the finding of a 1999 study that set-out to investigate the current perception of students and teachers towards the use of portable computer at secondary school. The result indicated that for the year twelve students the computer had been of limited value while the year eight students appeared to be divided with about a quarter indicating negative attitudes for the younger students the computer appeared to be used more often and for a greater range of tasks.

Chang, Yaw – Dir, (2005) investigated the influence of gender, age, computer experience, computer competency, computer usage, computer ownership, computer anxiety, learning style (collaboration) and personality traits on students computer attitudes and their perception of the use fullness of computers. The results indicated that gender; computer usage, computer ownership, computer anxiety, computer competency, learning style (collaboration), openness to experience and conscientiousness were each found to have significant contributions in predicting computer attitudes. Computer anxiety contributed most to the prediction and computer attitude. The results also showed that only computer anxiety, computer competency and learning style (collaboration) were even found to make significant contributions to prediction of perceived usefulness of computers.

Hunnicutt, Robert Lane, (2005) sought to determine if the dominant learning styles of high school teachers is related to the amount of time computers used in the classroom by students. An ANOVA showed no statistical significance between teachers with different dominant learning styles in the numbers of minutes per week that computers were utilized in their classroom with students.

Steps followed in preparation and standardization of perception tool:

Planning:

A perception and awareness tool was planned to construct after a detail review of the related literature in the concerning issue and also the expert advises were added accordingly to improve the perception tool for computer based examination.

Reliability and Validity:

The split half reliability of the perception tool for computer based examination is found to be 0.71, since the value is fairly high so the test is reliable.

For determining the validity of the given test, it was given to the subject experts as There was a close

agreement of the expert on all the items in the final draft of the test. Thus the test is said to possess content and face validity. The construct validity was also determined by carefully analyzing the items of the test.

Perception tool was constructed by the investigator employed on the teachers and students to consider the effectiveness of the online test method. The effectiveness of the online methods was compared on the following points:

1. Lesser clerical mistakes
2. Valid result
3. Immediate feedback
4. Cost effective
5. Time consumer
6. Necessity of trained teachers
7. Fast administration
8. Lack of cheating
9. Paper free environment
10. Duplicate copy
11. Increased in frequency
12. Fast construction
13. Accuracy in result
14. Reduces teachers work load
15. Objectivity in test & evaluation
16. Audio & video can be included in items
17. Good for distance education system

Further the effectiveness of these online modes of test was also be considered after the perception taken from the teachers and students then their percent analysis and chi-square test will be calculated to know the variation at gender level, subject level and computer efficiency levels.

Perception for the computer based examination for students

Name ---_____
Gender --_____
Subject --_____
Efficiency in computer ----
Very good _____
Good _____
Medium _____
Poor _____
Very poor _____

Kindly read the items below and decide to what extent they correspond to the characteristics of the computer based examination at the senior secondary level as per your own perception and mark them accordingly. Your details will be use only for the purpose of research work.

S. N.	Statement	Agree	Undecided	Disagree
1.	Students can choose their day and timing of the computer based examination according to the slots available based on their convenience.			
2.	The correct answers marked can be changed before final submission with no error of double answering.			
3.	Students can practice mock test before final computer based examination.			
4.	Proper training is not provided for the computer based approach of exam.			
5.	For several question in Maths and Physics accompanying certain diagrams, students have to redraw in rough, this opportunity leading to a waste of 2 crucial minutes.			
6.	In computer based examination, unlimited number of question sets can be prepared.			
7.	Computer based papers are easily accessible for students and teachers also.			
8.	Computer based examination gives a complete feedback about students performance immediately.			
9.	Disabled students can access the computer based question paper easily.			
10.	Computer based examination reduces the chances of leakage of question paper with full security of the question paper.			
11.	Students with varying exposure towards technology perform differently in computer based examination.			
12.	Computer based examination is very economical.			
13.	Computer based examination require lesser number of support staff during examination time.			
14.	Once an computer based question paper is prepared, it can be saved in question bank for future concern.			

15.	Computer based examination always needs good internet connectivity and efficient power supply.			
16.	Computer based examination needs very efficient and competent teachers.			
17.	Students are prejudiced about computer based examination.			
18.	Computer based examination is not very useful for lower classes.			
19.	It is difficult to measure the creative writing skills through computer based examination.			
20.	In computer based examination, students can access question in a set order only.			
21.	Computer based examination allows more time to think on each question.			
22.	Computer based examination are time saver on the part of students as well as teachers.			
23.	In computer based examination computer screen resolution may create concentration problem.			
24.	In computer based examination, students psychological & biological monitoring and their each movement can also be checked.			
25.	Computer based examination needs extra trained staff as administrator prior to examination hours.			
26.	Only genuine students can appear in computer based examination without any fake identity.			

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