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Credibility of the Assessment Practices used during Virtual Sessions in Private Higher Education Institutes of Karachi

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Article Details

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ABSTRACT

The demand and increase in virtual courses have brought the need to research on online course assessment methods. As the success of course delivery and the quality of education can only be measured by proper assessment, best practices in online assessment requires specific strategies in course design and assessment activities. Due to the unique nature of online delivery that lacks prompt feedback and face-to-face interaction, the challenge in assessing online student learning is apparent. This study focuses on the credibility of the assessment practices used during virtual sessions in private higher education institutes in Karachi, while using the most out of the readily available tools such as Black board as the learning management system (LMS). The discussion will help readers to decide on how they can successfully assess their credibility of the assessment practice through virtual sessions

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Introduction

COVID-19 is a new dangerous infectious disease that causes illness in animals or humans. History provides a record of epidemics such as plague, smallpox, measles, cholera, influenza, Ebola, AIDS, severe acute respiratory syndrome (SARS) and now COVID-19 (David, 2020).

In the beginning of March-April 2020, the world has gone through a catastrophe and pandemic by the name Coronavirus also called Covid-19, where almost 190 countries were affected and had to come a severe lock down situation. Many people lost their jobs due to complete shutdown of companies, few people were asked to come to their offices due to social distancing while others had to manage their daily routine of work through online from their home.

Even the schools, colleges and universities adapt the innovative type of learning through online interaction. Only few schools, colleges and universities could manage to introduce the new format of virtual learning due to numerous reasons like less competency on IT skills and connectivity computers.

In the existing context examination could not be conducted in most of the schools and colleges due to lack of online resources. The authorities of respective boards had to pass the students with 3% increase in their previous result. The private sector universities managed to find a way to conduct their classes through online resources due to fully equipped IT System available within the institutions.

The students continued their semester through online classes but face difficulties due to connectivity and electricity issues in the different areas of Karachi. It created severe problems but eventually successful on to complete the session with few discrepancies. The students learnt through virtual learning which was a useful experience and they got opportunity to practically use innovative technology. In online courses, instructors need to design their courses to line up interactive learning and assessment activities with the learning outcomes (Sewell, Frith, & Colvin, 2010).

During the examination process the students attempted quizzes, tests and submitted assignments in a reasonable time. Most of the students had issues like their typing speed is slow, connectivity issues and electricity problem. All shortcomings were overcome due to the cooperation and support of the IT departments and resource persons. Generally, it was observed that students reflect non-serious attitudes and indulge in unethical practice of browsing the responses from Google search. Online assessment is less credible if there is no check and balance. Soft wares to check plagiarism are used by the educational institutes. Several studies mentioned the ways of promoting honesty, while simultaneously using other sources to control the test security (Sewell, Frith, & Colvin, Online Assessment Strategies: A Primer, 2010).

Hence if the students used unfair means during the online assessment, how could the examiner justify the credibility of assessment by taking online examination at University level.

To assess whether students learned comprehensively and to verify the effectiveness of teaching learning process conducted through virtual sessions. There are various studies on matching assessment techniques with learning outcomes. Bloom's Taxonomy of Instructional Objectives has been the base of learning and educational objectives since 1956. It describes a hierarchical level of learning from knowledge to evaluation by enhancing the difficulty level of the tasks involved (Cannon & Feinstein, 2005).

Researcher has chosen the topic to find out the credibility of online assessment practices taking place in private institutes of Karachi. Since it raises curiosity around us to see how students feel

when they give their exam online or how they respond appropriately in the examination room which process was convenient for them.

The study was planned to analyze the processes through which diverse range of students responded to online quizzes, tests and assignments and final examinations.
The general objective of the study was to analyze the credibility of the assessment practices used during virtual sessions in private higher education institutes of Karachi.

The study specifically focused on the following,

i) The purpose of online assessment was to provide students a better opportunity so that better learning outcomes could be achieved.

ii) The students also learnt the skills related to online assessment by responding quizzes, assignments, presentations and questions answers practices that were being widely used during the online assessment.

Two hypotheses were formulated:

- *There is a no significant difference in the mean scores of online assessment opportunities provided to male and female students to improve the learning outcome.*

- *There is a significant difference in the mean scores of online assessment opportunities provided to male and female students to improve the learning outcome.*

The particular research question raised in the study was,

- *Is there a significant difference in the mean scores of online assessment opportunities provided to male and female students to improve the learning outcome?*

The study will yield the following benefits:
(i)The study will help in the advancement of knowledge in the area of the study.
(ii)The findings will help the private universities administration to take useful decision making for ensuring proper practices of online assessment from students.
(iii)It will help other researchers in the area of study.
The scope of the study was limited to all private higher education institutes of Karachi.
The study revolved around private sector higher education institutes due to,
i) The study had some limitations in terms of resources like time, money and human resources.
ii) All the students of Bachelor's degree program were part of the study.
iii) Only private sector institutes were part of the study be taken into consideration.
iv) During virtual sessions the students used Zoom Cloud Meeting, MS Teams Meeting, Google classroom and Google Meet.
The keys words specifically used in the research study are,
Credibility: The quality of being believable or trustworthy

Assessment: The action of assessing individual's performance or any particular area under consideration.

Practices: The actual application or use of an idea or method.

Virtual Sessions: A virtual event is an online event that involves people interacting in a virtual environment on the web, rather than meeting in a physically. Virtual events are typically multi-session online events that often feature webinars and webcasts.

Private: Belonging to or for the use of one particular person or group of people only.

Higher Education Institutes of Karachi

All the **e**ducational institutes operating and functioning in the administration limits of Karachi and offering formal education programs to undergraduate and post graduate students run and controlled by private individuals

The basic assumptions of the study were,

i) Range of private higher education institutes have been functioning in Karachi consists of 5 districts and there are lots of network issues along with electricity as well.
ii) Some of the students cannot afford internet connection and also do not have smart phone and laptops.
iii) The online examination can also lead to unfair means which will create a problem for the credibility of Assessment Practices used during Virtual Sessions in Private Higher Education Universities of Karachi

The ethical considerations were ensured throughout the conduction of the research study,

i) There should be check and balance of students during online assessment.
ii) Students do not have the concept of Plagiarism and hence copy paste during the online exams.
iii) The universities should introduce standardized form of assessment in order to reduce malpractices.

Literature Review

Electronic assessment (e-assessment) methods are at an early stage of development at various levels of education in South East Asian region. Until the primary resource requirements of the various educational institutions have been met in terms of providing an effective and efficient e-assessment system, a range of problems will arise for the individuals and organizations seeking to implement e-assessment. Key e-assessment issues are related to academic, economic, technological, ethical and social factors, and play an important role in determining the types of e-assessment needed at a given institution. In order to identify the status and scope of e-assessment activities in South East Asia, a survey was conducted in Pakistani educational institutions of higher learning highlighting current e-assessment practices and activities.

As we see the history of Online-Learning, or educational technology, in Pakistan (with its I.C.T Infrastructure) has developed mostly in the 21st century. Online universities and e-learning platforms in the country have also opened in recent years. The introduction of 3G/4G technology has contributed to the growth in online learning (mobile learning), allowing the incorporation of e-learning in classrooms as well as in informal education. Education in Pakistan is under the administration of Federal and Provincial governments, allowing multiple e-learning opportunities for individuals in Pakistan.

E-learning in Pakistan has become more popularized in 2020, due to the onset of the COVID-19 pandemic, which resulted in the closure of public and private educational institutes and the transition to online modes of learning. Efforts are being taken to train faculty members to improve the quality of their lectures and methods of virtual teaching. At the same time, the HEC is in contact with telecommunication companies to ensure internet connectivity through subsidized internet packages for students.

Despite the recent interest in online distance education in the secondary education setting, there is scant literature concerning how to assess student performance in the online distance education environment. Since assessment is an important lens through which education is viewed (Bransford, Brown, & Cocking, 2000), and a driver of student performance.

1.Definition of Assessment

Before investigating which assessment strategies and methods are appropriate for online distance education, and the degree to which these methods are being applied at a secondary school, we should first established definitions of notions. Since evaluation, assessment, knowledge domains, online, and distance education are terms whose meanings can vary depending on one's point of view, the definitions or frameworks served as boundaries to make their analysis more manageable and their discussion more precise.

Kirkpatrick defined assessment as "the extent to which participants change attitudes, improve knowledge, and/or increase skill as a result of attending the program" (Kirkpatrick, 1998).

2. TRANSITIONING ASSESSMENTS FROM FACE-TO FACE TO ONLINE

Online assessments do not have to be radically different to those used in face-to-face courses. Many assessments can be transferred to the online space. A few considerations should be made during this transition process.

a) Time Management: Online courses tend to be front-heavy, requiring a lot of preparation before the start of the course. Assessment descriptions, rubrics, and supporting resources all need to be ready for students from the first day of the semester. However, the amount of work does not diminish afterwards. Although there is no physical classroom, it is the instructors' role to be present and accessible for students and to monitor their progress (Beebe et al., 2010).

b) Course and Material Organization: Without face-to-face opportunities to communicate with students, it becomes essential that course materials are clear, accessible and easy to find. Instructions also may need to be re-worded to ensure they are not misinterpreted (Page & Cherry, 2018)

c) Informal Assessment Opportunities: In online courses, instructors cannot monitor students' progress by assessing their body language or by checking in with them during class. This makes structured formative assessment even more important. Plan more formal opportunities to check in with students, such as question and answer discussion boards, feedback requests, or news bulletins (Beebe et al., 2010).

d) Communication with Students: Instructors who are used to making comments, suggestions, or clarifications about assessments in class will need to find new ways to share these thoughts with students, whether through news bulletins, emails, or discussion board comments (Beebe et al., 2010).

e) Adjustment Time: Students who are unfamiliar with the LMS and other technologies used may benefit from an opportunity to practice navigating it, such as through a practice assignment. Ensure students know where to find help with navigating the LMS if needed (Duesbery et al., 2015).

3. Definition of Online/ Virtual Session (Distance Education)

The definition of "online distance education." For "distance education," Keegan's (1990, p.44), which includes "quasi-permanent separation of teacher and learner throughout the length of the learning process", "influence of an educational organization, use of technical media", "provision of two-way communication", and "quasi-permanent absence of the learning group throughout the learning process, so that people are usually taught as individuals and not in groups."

"Online" as the use of the Internet (World Wide Web) as the "technical media" used to provide the

"two-way communication" required by Keegan's definition. The degree to which a course enabled an instructor to use the internet to accomplish an organized body of learning outcomes for students working remotely (separated from the instructor as well as each other) was the degree to which it was an online, distance education course. Therefore, courses can be considered "online distance education courses" by this definition, despite the fact that they might have a small "face to face" or "residential" component.

4.Principles of Assessment in Online Distance Education

New technology has made frequent and varied assessments possible in the online distance education environment, compared to the traditional learning environment (Meyen, Aust, Bui, & Isaacson, 2002).

However, it should be remembered that the most important thing for assessment in the new online learning environment is to still focus on learners' achievement in terms of instructional goals and objectives. Therefore, even though technology can facilitate the process of assessment in effective and efficient ways, the authors must choose appropriate assessment opportunities only when assessments are essential during instruction.

Over the last few decades, many researchers have been convinced that assessment of learner achievement in online distance environments should be integral to instruction, be continuous, and maximize feedback (Meyen et al., 2002). Based on these shared believes about online assessment, the authors will discuss several principles of assessment in the following paragraphs.

First of all, Pennsylvania State University (1998) developed a set of principles to guide assessment in online distance education. These principles of assessment might be an initial guide for designing "big picture" evaluation of learner achievement. Based on their assumption that assessment and measurement should serve valuable purposes for both instructors and students, the principles emphasized importance of integrating assessment with instruction as follows:

- Assessment instruments and activities should be congruent with the learning goals and skills required of the learner throughout a distance education program or course.

- Assessment and management strategies should be integral parts of the learning experience, enabling learners to assess their progress, to identify areas of review, and to re-establish immediate learning or lesson goals.

- Assessment and measurement strategies should accommodate the special needs, characteristics, and situations of the distance learner.

- Distance learners should be given ample opportunities and accessible methods for providing feedback regarding the instructional design of the distance education program.

On the other hand, in a design plan for online assessment, Kibby (2003) explained that online learning and assessment should be considered not only in a student-centered approach but also in a teacher-center approach (e.g., management system). She emphasized that web-based assessment might assist students in taking ownership of their learning because the assessment could provide integration of learning and assessment, and also immediate and effective feedback to students. Thus, web-based assessment systems might have more potential than paper-based assessment systems in terms of access and flexibility for both students and teachers in effective and efficient management. In order to develop web-based assessment, she suggested several key decisions to be made as follows (Kibby, 2003):

- Which perspectives for learning are going to be assessed, cognitive (acquisition of knowledge), behavioral (skill development), or humanistic (values and attitudes)?
- Who is going to make the assessment, the student, their peers, or the instructor?
- Will assessment strategies be learning experiences in themselves?
- Is the assessment to be formative (providing feedback during learning) or summative (measuring learning at the end of the process)?
- Are judgments of performance made against peer standards (norm referenced) or established criteria (criterion referenced)?
- How can assessment provide a balance between structure and freedom?
- Will the assessment be authentic, related to real life situations?
- Will the assessment be integrated, testing a range of knowledge and skills?
- How can reliability and validity of assessment be assured?

5. **Features of Assessment in Online Distance Education**

Based on several educational philosophies such as behaviorism and constructivism, there are various features of assessment in online distance education emphasized from different points of view. They should not discriminate between these different educational philosophies in order to search for assessment features in the online environment. Instead of dividing these educational approaches into opposite sides, figure out the most important features of assessment that could be used as appropriate assessment strategies in an online distance education environment. Therefore, based on the traditional assessment strategies suggested for the face-to-face instructional environment, several assessment features crucial to success in web-based assessment.

6. **Ongoing Assessment: Formative Assessment**

According to the Concord Consortium (2002), the use of one "traditional high-stakes test" to measure learner achievement may be effective and efficient in a monitored classroom. However, online assessment should be a "continuous, ongoing process". For instance, the Concord Consortium recommended that instructors should find evidence of achievement in individual participant's daily contributions to their online learning group such as online discussion. Also, the instructors should try to find out "each student's unique activity or approach to solve learning problems" through their posted ideas on the discussion board.

On the other hand, when the authors consider ongoing assessment as measuring the process of learning, this type of assessment can be called formative assessment. According to Bransford, Vye, and Bateman (2002), formative assessment serves students as well as instructors in many concrete ways. For example, "students can use feedback from formative assessments to help them know what they have not yet mastered and what they need to study on further" (p. 174). Through this formative assessment, students can have more opportunities to consider their learning task from a different perspective based on the instructor's feedback. Also, with information from the formative assessment, instructors can change their instruction to be more effective and efficient and to target students who need further help (Bransford et al., 2002).

Therefore, ongoing assessment or formative assessment can be a very integral part of instruction in an online distance learning environment, which can track individual learning activities easily compared to a traditional classroom environment. However, in order to maximize these ongoing assessments' advantages in web-based instruction, an online management system should be able to provide instructors with accumulated data of student learning activity and scores in effective and visual ways.

7. **Feedback in Assessment**

If assessment is to be integral to instruction as explained above, feedback must play a central role in the assessment process (Meyen et al., 2002). Compared to the traditional instruction environment, the online learning environment made this central role of feedback achievable in terms of time and access to information. In continuous assessment of the web-based environment, Kerka and Wonacott (2000) explained that the significance of instructional feedback could directly affect what students learn and how effectively they would do so. The especially easy use of electronic communications can support the central role of feedback in web-based assessment. Indeed, proper and immediate feedback can transform an assessment experience into an instructional experience for learners (Meyen et al., 2002).

Collis, De Boar, and Slot man emphasized the importance of instructor supports for facilitating feedback in online learning environments. Also, they referred to "the practical implications of feedback in the context of time expenditures, clarity of expectations for students, and efficiency of managing the overall submission and feedback process (Meyen et al., 2002, p. 191)." As an example of feedback, Collis et al. presented "personal feedback by the instructor to an individual assignment, model-answer provided by the instructor, peer evaluation provided by the student(s), and automatic direct feedback provided by the computer (Meyen et al., 2002, p. 191)." In discussion about effectiveness of feedback in online distance education, Meyen et al. (2002) confessed that, in a face-to face course (traditional learning environment), they could not deliver feedback strategically and provide the same level of feedback that they could in an online course situation, even though synchronous feedback was possible in a classroom. Such findings indicate that electronic feedback in an online distance course might be more effective than that of a traditional course.

8. **Self-Assessment**

Self-assessment should be a major component of online distance education (Robles & Braathen, 2002). Some instructors might want to assess student learning only by themselves. However, Robles et al. believed that it would be very important for students to participate in assessment of their own learning because students could measure their own learning process and achievement. They also emphasized that students could have the ability to determine "if they have arrived at the required instructional objectives, and that if not, they could repeat the coursework "by themselves in order to attain their own goals (p.45). For example, online pre-tests could be considered for this self-assessment because students would be able to receive immediate feedback after taking their pre-tests in order to determine their existing knowledge level (Robles & Braathen, 2002). Through the pre-tests, students can know their current levels of knowledge before starting online courses, choose the proper levels of courses, and take the test again to measure their achievement after finishing the courses. These pre-tests can also allow students to feel more comfortable with the material itself or its instructional objectives.

9. **Team Assessment and Peer Assessment**

Because of the remarkable effects of collaborative learning in a classroom, "many online courses also aim to develop students' ability to work as part of a team and include team assessment task

such as presentation, projects, case studies, reports, debates and so on" (Freeman & McKenzie, 2002, p. 552).

Gokhale (2003) explains that collaborative learning can be a good "instruction method in which students at various performance levels work together in small groups toward a common goal. The students are responsible for one an other's learning as well as their own. Thus, the success of one student helps others to be successful." According to Freeman and McKenzie (2002), however, although many students feel the value of learning in teams and developing teamwork skills, they do not consider their team assessment to be "a fair assessment method if team members are equally rewarded for unequal contributions (p.552)." Thus, improving fairness of team assessment is essential to enhancing students' learning from team tasks. Aggregate data in peer assessment can encourage the students to rate confidentially their own and their peers' contributions to team tasks and team maintenance. Also, they believed that benefits of improving student learning from teamwork tasks, and saving time by automating the process of calculating self and peer adjustments of assessment grades can be especially attractive for large enrollments in university level courses.

10. **Credible/Authentic Assessment**

Grant (1990) insisted that assessment should be authentic when the authors would want to directly measure learner achievement on worthy intellectual tasks, instead of the type of indirect test items that traditional assessments rely on for their advantages as efficient and simplistic substitutes. In discussion of the features of authentic assessment, he explained that authentic assessment could provide students with the full range of tasks. These tasks could require students to reflect priorities and challenges presented in good instructional activities (e.g. collaborating with others on a debate) while conventional tests would be relatively limited to the paper-and-pencil or one-answer questions. Also, he suggested that authentic assessment could provide validity and reliability by standardizing appropriate criteria for scoring student products in contrast to traditional testing, which standardizes objective items and the one right answer for each item. However, beyond these technical considerations, he assumed that this new approach to assessment would be based on the premise that assessment should primarily support the needs of learners. Grant believed that the best assessment should teach students and teachers alike the kind of work that most matters.

In this way, electronic portfolios have been suggested as the best type of authentic assessment in an online distance learning environment (Meyen et al., 2002). For the above features described as authentic assessment, electronic portfolios could evolve as a management tool for both instructors and students with the emergence of online distance education. These electronic portfolios can monitor student processes and facilitate not only formative assessment but also summative assessment. Especially, through these electronic portfolios, formative assessment can serve to identify strengths and weakness of a student's learning process with the proper feedback.

11. **Methods of Assessment in Online Distance Education**

According to Rovai (2000), however, general assessment principles are not different in online environment; only the manner in which the principles are applied is changed. In light of this, Rovai (2000) suggested some assessment methods for online courses. Among them, he emphasized proctored testing and online discussion. There are three kinds of proctored testing for distance courses: a delayed telephone conversation, online chat, or e-mail; proctored testing at decentralized locations and at centralized on-campus residencies. He presented that proctored testing promotes identity security and academic honesty, two difficult issues for distance education. Proctored testing is recommended for high-stakes, summative assessment.

Rovai (2000) also recommended online discussion as a good assessment method. The ability of

online discussion to promote text-based communication can support the construction of knowledge. It would also promote reflection through asynchronous online interactions better than in traditional classroom settings. Instructors can use these online interactions for summative assessment as well as formative assessment. For authentic performance assessment, Rovai (2000) proposed projects and case studies that are unique and relevant to the individual learner, with the added benefit that they can help solve the identity security and academic honesty problems.

Robles and Braathen (2002) said that the assessment techniques used in traditional classroom settings could be modified to reflect the nature and pedagogy of distance settings. As they suggested several online assessment techniques, they argued that a variety of assessment tools could be used to determine whether the student had achieved the pre-established learning objects. The suggested assessment methods in the article are: self-test, assignments, electronic portfolio, online discussion, asynchronous threaded discussion group, one-minute paper, synchronous chatting, and e-mail content of questions.

Meyen and his colleagues (2002) said that e-learning assessment options are little different from those routinely employed in face-to-face instruction. They suggested several methods for online course assessment: literature review activity, collaborative projects, exams, student reports in real time, journal entries, and electronic portfolio. Those were implemented in an online course taught by Meyen in1997.

He included a mid-term, final exam, a literature review exercise, a collaborative project, and approximately 30 activities. Among these methods, Meyen et al. (2002) emphasized the electronic portfolio. They stated that the electronic portfolio method can evaluate students' achievement both informatively and summatively. They also believe that portfolio assessment provides a more accurate means of measuring academic and professional skills. "Through the use of technology, the electronic portfolio in hypermedia format can become a personal/professional information management system that contributes significantly to the pedagogy of e-learning in higher education in addition to professional development and as a tool for K-12 teachers." (Meyen et al., 2002, p. 194)

The preference for electronic portfolio can be seen in Dewald, Scholz-Crane, Booth, and Levine's article (2000). They argued that electronic portfolio assessment works well both for document and develop meta-cognitive skills. The students work more and more electronically, electronic portfolios are becoming more common, especially in the distance learning environment. "At the end of a course, the portfolio serves as a representation of not only a student's progress toward mastery of course content, but also of a student's increasing awareness of his or her own skills. Finally, portfolios encourage students to develop meta-cognitive skills and allow the instructor to monitor the development of those skills (Dewald et al., 2000, p. 41)."

Despite the recent interest in online distance education in the higher education setting, there is scant literature concerning how to assess student performance in the online distance education environment.

Since assessment is an important lens through which education is viewed (Bransford, Brown, & Cocking, 2000), and a driver of student performance.

According to Bransford (2002), feedback is most valuable when students have the chance to use it to modify their thinking while they are on a unit or a project. In terms of this, formative assessments that are given during the process of learning are important in a distance setting, too.

Through formative assessment, instructors can have an idea of how much the students have achieved their objectives, and can revise their instructions according to the results of the formative assessment.

Second, to categorized them as team assessment and individual assessment. Team assessment means that the grade is evenly given to the group of people worked together. Individual assessment is that an individual gets his or her own grade for individual work. This category was made because of the importance of collaborative work. One of the disadvantages of the distance education setting is the difficulty of interaction or collaborative learning. Through the interaction among students or collaborative learning process, they can learn from and give feedback to each other, as well as learn interpersonal skills. Team assessment is also relevant to the authenticity of the assessment. In business setting, most of the projects are completed as a team-base. Therefore, even in a distance setting, collaborative learning should be done for the sake of authenticity, and how it is done in real courses.

The categorize assessment schemes of the selected courses by the various methods of assessment that were used:

i. ***Paper / Essay:*** Academic written works other than a written "exam. "Would entail more preparation, revision, etc. than simply answering a direct question (as on an exam).

ii. ***Exam / Quiz / Problem Set:*** Focused, short-term event used to measure specific learning Includes written answers to questions, calculations, short answer, multiple choice, fill in blank etc.

iii. ***Discussion / Chat:*** Any activity where the student's ability to discuss or debate class-related topics. Also includes "participation," or the extent that students share their opinions or ideas about class-related topics.

iv. ***Project / Simulation / Case Study:*** Activities that are more "authentic," or task-oriented than an exam or purely academic paper. Can be multimedia production, participation in a simulation, written analysis etc.

v. ***Reflection:*** Activity designed to get students to relate material to their experience, or journals of how the class learning relates to them specifically (lessons learned, etc.)

vi. ***Portfolio (collection of individual production):*** An integrated collection of a student's work, designed to be taken as a whole. A synthesis of the student's performance over a period of time vice an event.

vii. ***Peer evaluations:*** Assessment done by a person's peers, usually to measure a student's performance in group activities.

Using these seven categories, we determine how much these online courses consider authenticity, variety, and if they do not just evaluate students' memory of simple fact and procedures, but higher level thinking and deep understanding or meta-cognition.

Regardless of the context, effective and rigorous assessment is essential in higher education. It is a means of fostering students' learning, motivating their engagement, and evaluating their achievement. Designing and implementing good assessments requires thoughtful consideration of the students, the discipline, the course content, and the learning outcomes. In online courses, instructors also must consider how technology will interact with each of these factors. Research has highlighted some of the benefits, challenges, strategies and good practices of online assessments. These should be utilized within a specific context when developing new assessments or when transitioning assessments from face-to-face to online. This guide has outlined these practices, and provided pragmatic suggestions for the design process in the hopes of encouraging thought and reflection for instructors. However, it is just the start of the process. Assessment design is an iterative process and should be continually evaluated for effectiveness.

Research Methodology

The overall Research Design was quantitative research method where the researcher used questionnaire to find out the students view of the credibility of the Assessment Practices used during Virtual Sessions in Private Higher Education Institutes of Karachi.

Population

The population of the study was comprised of 80 students from different universities of Karachi from 5 districts.

Sampling

Stratified Random sampling was used to draw from 80 students of different universities of Karachi from 5 districts.

Data was collected through a questionnaire using online google form and was analyzed through statistically using SPSS.

Research Question

The particular research question raised in the study was,

- *Is there a significant difference in the mean scores of online assessment opportunities provided to male and female students to improve the learning outcome?*

A questionnaire was used to identify participants' opinions regarding credibility of online assessment at the university level. This questionnaire was developed by Alexander. A.R. D'Souza and consisted of five-point Likert scale (strongly agree = 5 to strongly disagree = 1).

It had five parts: the first part consisted of demographic variables of the respondents, the second part consisted of statements about different methods of credibility of assessment practices, the third part had the statements about different types of virtual assessment, fourth part consisted of the challenges in virtual assessment and last part of the questionnaire consisted of private higher education students' approaches while taking online assessment.

The pilot testing was conducted to check the validity and consistency of the scale. Validity was ensured by the opinion of experts. Cronbach's Alpha value was calculated to ascertain the reliability of the questionnaire. The detail of the reliability test has been given below:

Table 1: Reliability Test:

Reliability Statistics

Cronbach's Alpha	No. of Items
.818	20

There were 20 items in the questionnaire about credibility of online assessment. The value of the reliability index was 0.818, which is statistically significant. The return rate of the questionnaires was 99 percent. After data collection, the data were entered into SPSS for analysis.

In descriptive statistics, frequencies, percentages, means, and standard deviations were obtained. In inferential statistics, independent sample t-test was used to see the difference between male and female students, and one-way ANOVA was used to find the difference among Gender and Group of the demographic variables.

Data Analysis

A detailed description of data analysis is as under:

Demographic Information of Students

Table 2

Variables	Demographic	Percent	Mean	Standard Deviation
Gender	Male	23.8		
	Female	76.2	1.76	0.428
Control	Private	90		
	Public	10	1.1	0.302
Age	18-22 Years	7.5		
	23-27	20		
	28-32	26.3		
	33-37	22.5		
	38-42	12.5		
	43 and Above	11.3	3.48	1.423
Group	Science	17.5		
	Commerce	22.5		
	Arts	53.7		
	Others	6.3	2.81	0.982
Degree	Bachelor	53.8		
	Master	23.7		
	M.Phil.	13.8		
	Ph.D.	1.2		
	Others	7.5	1.84	1.152
Districts	South	26.3		
	East	22.5		
	Central	27.5		
	Korangi	13.7		
	Malir	10	2.59	1.29

Table 2 shows the demographic information of selected students.
The sample of the study had different demographic characteristics (Gender, Control, Age, Group, Degree and Districts). Total sample of the study was 80 students from universities of 5 different districts i.e. (South, East, Central, Korangi and Malir).

Chi-Square-First Test

Table 3(a)
Gender * Group Cross tabulation
Count

		Group				Total
		Science	Commerce	Arts	Others	
Gender	Male	6	4	8	1	19
	Female	8	1	35	17	61
Total		14	5	43	18	80

Table 3(b)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	**15.477[a]**	**3**	**.001**
Likelihood Ratio	14.542	3	.002
Linear-by-Linear Association	9.363	1	.002
N of Valid Cases	80		

a. 4 cells (50.0%) have expected count less than 5. The minimum expected count is 1.19.

Table 4(a)

Gender * Age Cross tabulation

Count

		Age						Total
		18-22 Years	23-27 Years	28-32 Years	33-37 Years	38-42 Years	43 Years and Above	
Gender	Male	1	3	6	5	2	2	19
	Female	5	12	16	13	8	7	61
Total		6	15	22	18	10	9	80

Table 4(b)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	**.684[a]**	**5**	**.984**
Likelihood Ratio	.695	5	.983
Linear-by-Linear Association	.032	1	.857
N of Valid Cases	80		

a. 6 cells (50.0%) have expected count less than 5. The minimum expected count is 1.43.

In **Table 3 (a & b)** the Chi-Square first test between Gender and Groups where the (Asymp. Sig (2-sided = 0.001) signifies that Null hypothesis is accepted and there is a significant difference between Gender and Groups while taking online assessment practices used in virtual sessions.

But in **Table 4 (a & b)** between Gender and Age it was found that (Asymp. Sig (2-sided = 0.984) which tells us that Null Hypothesis is rejected and there is no significant difference between Gender and Age while taking online assessment practices used in virtual sessions.

Table 5(a)
Chi-Square-(Goodness of Fit)-Second Test:
Gender

	Observed N	Expected N	Residual
Male	19	40.0	-21.0
Female	61	40.0	21.0
Total	80		

Table 5(b)
Test Statistics

	Gender
Chi-Square	22.050[a]
df	1
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 40.0.

Table 6(a)
Group

	Observed N	Expected N	Residual
Science	14	20.0	-6.0
Commerce	5	20.0	-15.0
Arts	43	20.0	23.0
Others	18	20.0	-2.0
Total	80		

Table 6(b)
Test Statistics

	Group
Chi-Square	39.700[a]
df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 20.0.

In Chi-Square (Goodness to fit) for Gender and Groups in **Table 5(a&b) & 6(a&b)** shows that Null hypothesis has been rejected (Asymp. Sig. = 0.000) and hence there is no significant difference between Gender and Groups and they are not consistent which emphasizes that the students does not give preference to both.

An Independent Sample t-test for Difference of credibility of online assessment practices used during virtual sessions of university students of Karachi based on Gender and Group.

Table 7

Group Statistics-Independent Samples Test

	Gender	N	Mean	Std. Deviation	t-value	Sig. (2-tailed)
Service	Male	16	3.7063	.52373	-.638	0.526
	Female	60	3.7908	.45701	-.589	0.562

Table 8

Group Statistics-Independent Samples Test

	Group	N	Mean	Std. Deviation	t-value	Sig. (2-tailed)
Service	Science	13	3.7692	.46795	-0.558	0.579
	Arts	41	3.8488	.44152	-0.541	0.595

Overall, in **Table 7 & 8**, there is no significant difference related to credibility of online assessment practices used during virtual sessions, Gender based (male and female) students. This implies that both males and females have no problems and have similar tendencies of giving online assessment during virtual sessions. Similarly, there may be no difference in the Groups as well.

One Way ANOVA for the Difference in the Mean Scores of Students based on their Groups and Ages.

Table 9 (Service by Q6. Groups) POSTHOC=TUKEY ALPHA (0.05).

ANOVA

Service

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.090	3	.363	1.695	0.176
Within Groups	15.437	72	.214		
Total	16.527	75			

Table 10 (Service by Q5. Ages) POSTHOC=TUKEY ALPHA(0.05).

ANOVA
Service

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.010	5	.202	.911	0.479
Within Groups	15.517	70	.222		
Total	16.527	75			

In **Table 9 and 10** shows that one-way ANOVA was used to explore the difference among the mean scores of different Groups and Ages by Service quality of the university students.

Perceptions were collected in two areas i.e. Groups and Ages to find a significant difference in the mean scores of online assessment opportunities provided to male and female students to improve their learning outcomes.

It was found out from **Table 9 & 10** the Sig. value of different Groups, (Sig. = 0.176) and Ages (Sig. = 0.479), that Null Hypothesis is rejected and hence there is no significant difference between the Groups, Ages and Service Quality. It means that students of different groups and ages have different perceptions about the credibility of online assessment in private universities of Karachi.

Findings, Recommendations and Conclusion

Discussion/Findings

The current study proves that students have a great liking for online courses and that due process the credibility of online assessment practices used during virtual sessions should follow certain norms which could enhance teaching learning process during online assessments.

By analyzing the statistical data i.e. (Chi-Square) in the demographics (Gender, Age, Control, Group, Degree and Districts), the researcher has found that except for Gender and Group relationship, where Null Hypothesis was accepted but the rest show that Null Hypothesis was Rejected which means that there is no significant difference between other demographics during online assessment practices used during virtual sessions.

While analyzing Chi-Square(Goodness to Fit Test) of the demographics it was found that only Age and District showed consistency i.e. Null Hypothesis was accepted where as the other demographics did not show consistency amongst the Gender, Control, Group and Degree which means that Null Hypothesis was Rejected and there is no significant difference amongst each demographics while taking online assessment practices during virtual sessions.

In the Independent Sample T-Test it was found in the demographics that Gender in relation with Service, Null Hypothesis was rejected and there is no Significant difference between Gender and Service while taking online assessment practices during virtual sessions.

Similarly, in One-Way Anova it was found except for Degree in relation with Service, Null hypothesis was accepted whereas Age, Groups and District in relation with Service, Null Hypothesis was rejected and there is no Significant difference between them while taking online assessment practices during virtual sessions.

Therefore, the study aims to reveal the fact that there is a no significant difference in the mean scores of online assessment opportunities provided to male and female students to improve the learning outcome.

Recommendations

Therefore, Online Assessment recommends these three best practices for its credibility in higher institutes of education which are:

1. Identify clear standards: Online assessment requires clear standards. The instructor should have the learning outcomes defined clearly and updated for online delivery. The topics of the class, as well as communication skills can be assessed in online classes. Assessing written communication skills will be easier, however if one of the learning outcomes requires assessing oral communication skills, the instructor should find alternative tools for students to record their presentations for evaluation. When the learning outcomes are decided, online assessment methods should be defined with a target level. On campus, target levels may not work for online courses, and the levels of achievement expectation should be updated accordingly.

2. Include a variety of assessment methods: When the assessment methods are in consideration, both formative and summative assessment activities should be included. Surveys and polls are great for formative assessment, but they allow collecting indirect data. If the surveys and polls are not mandatory, it will not be possible to evaluate the whole class and a small sample may not reflect the status of the whole. Discussion boards can also be used for formative assessment, if they are distributed evenly throughout the semester. Assignments and exams work as summative assessment methods, as they tie a considerable portion of students grade to the knowledge and application of several topics. Final Projects are also a summative in a sense that they allow students to create the output project based on their cumulative knowledge of topics. Using three or more methods will bring variety and will increase the reliability in the online assessment process.

3. Think of student's background and skills: Students background and skills play an even more important role in online courses compared to on campus courses. In on campus courses, the instructor has the ability to judge his/her audience with the help of the FTF contact. In online courses, the backgrounds of students are more diverse. This diversity may be based on student's technical knowledge or technological knowledge. Some students may be very successful in using online systems like BB and other tools, while some students may have serious technical issues. Learning cannot take place in online courses if the technology becomes a problem. The institutions Information Technology (IT) department, as well as the instructor should work hand in hand to solve technical emergencies. Additionally, students who have not been involved in online courses before may have misconceptions that should be clarified before the learning can take place. The most common misconception is to see the online course easier that an on campus course, which is not the case. Online courses require self – motivation and self – organization of students. Students should take the responsibility of learning in hand and be sure to communicate with the instructor immediately when in need. As instructors, we can see the need of a student in an FTF setting.

However, as we do not share a physical class room with them, we will not be able to see if the online student is in need unless they contact with us directly. Virtual attendance and formative assessment activities help in this process up to some point. Still, they do not allow us to track

student's understanding before they submit the activity. Therefore, online students should be reminded of their responsibilities, and even invited to take an online course preparedness questionnaire to see if they are ready to take a class online.

Conclusion

Hence, Online courses use the virtual session to set up and deliver all class material and activities. With the lack of physical attendance, it is very hard to track students' progress and learning of course topics. Assessment methods come into the picture at this stage, however, a general misconception includes creating exams on an LMS, and assuming it will perform the assessment on instructor's behalf. Traditional assessment activities of giving students assignments and midterm/final exams do not work in a fully online environment, as the course design and student's expectations are very different from a face-to-face (FTF) setting. Ideally, the online course should still have the same learning outcomes as an on campus version of the class with the enhanced assessment activities.

Successful assessment – online or on campus – still lies beneath matching learning outcomes with the most suitable assessment methods. Formative assessment helps instructors to assess in pieces, and summative assessment methods allow instructors to evaluate the whole class content and delivery. Constant interaction with online students via emails or other means of communication will surely increase learning. Online students need timely feedback, which can only occur when the instructor is responsive. Prompt feedback may be missing due to the lack of a physical setting, however continuous feedback on formative assessment activities are needed to achieve successful learning and assessment.

Therefore, credibility of Assessment practices has been created with generic wording so that instructors in various disciplines can adopt and use these suggestions. Future research opportunities can include specializing in certain types of online courses for best practices, as well as detailing the assessment process such as questioning data, data validation and the desired level of learning for online delivery.

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