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Abstract: This study sought to determine how higher education students are being assessed in relation to learning in a virtual classroom setting. A virtual classroom can be described as an online learning approach which uses the internet to connect in a similar way to a physical class meeting. The goals were to evaluate students' perceptions regarding online and distance learning and to determine instructors' perceptions of online assessment. This study was primarily descriptive, employing a quantitative approach to describe the data. It was confined to Government Viqar-un-Nisa Graduate College for Women Rawalpindi. The sample frame comprised 444 students along with 30 teaching faculty from the BS Education, BS English, and BS Psychology programs. A simple random sampling technique was utilized to collect data from 75 students and 28 teachers. For the study, two closed-end questionnaires were designed and their validity and reliability for interdisciplinary assessments were corroborated by expert judgment and through Cronbach's alpha (0.751 and 0.856 for teachers and students, respectively). The researcher personally gathered the data, which was analyzed and summarized descriptively through frequencies and percentages. The study concluded that learning through a virtual classroom considerably impacts a student's assessment and overall academic performance. The study recommended that both students and teachers enhance their learning and relationship by improving their communication, behavior, feedback and attitudes.

Introduction

Education ranks among the most important drivers of the economy and social change. This field of education is being revolutionized with the increasing adoption of technology especially in the 21st century, which also includes virtual learning. Virtual Learning is a method of education which takes place in an online environment, with the use of digital tools and devices and the internet to deliver instruction and facilitate communication. The advancement in adoption of technology is the expanding sector of virtual learning. Distance education is becoming popular because of the ease and flexibility of access it

provides. As more higher education curricula are digitally formatted, instructors have no option but to develop online versions of their course materials. Virtual education is gaining popularity because of geographical and flexibility reasons, allowing to choose the subject and the learning environment (time and place) (Singh, 2011).

Virtual learning systems (VLE) are freeing students from the shackles of a physical classroom. A virtual classroom is a simulated classroom environment over the internet for learners who are not physically present. A classroom, which is physical in nature, can be overcome by technology to deliver learning to students who are not present through devices such as laptops, desktops, and mobile phones. This has become a necessary convenience for both the students and the teachers, removing geographical barriers and saving time. One of the most prominent uses of these environments is virtual assessments, which use information technology to evaluate the abilities and skills of students. I examine the issues related to virtual assessments in online learning environments and provide recommendations aimed at helping decision makers address the gap in policy and strategy that governs the transition to remote learning.

Statement of the Problem

In the context of rapidly changing educational paradigms, the use of technology in the learning environment is both a privilege and a challenge. The rapid shift to virtual class systems that was a reaction to global events that discontinued in-person lessons is improving dramatically. The flexibility electronic learning systems offer is matched by their limitations in engaging students and driving academic performance critical areas of concern on the effectiveness of online learning. As a longitudinal study, this research is directed toward understanding how students are learning to accept this shift in virtual learning and considering how it can best be supported as a sustained model in the future. The primary challenge remains identifying how the change in the learning environment affects the students in a virtual setting at the higher level of learning because it can facilitate or impede educational motivation.

Objectives of the Study

Following are the objectives of the study:

- To analyse the views of students regarding online and distant learning.
- To find out the perception of teachers regarding virtual assessment

Research Questions

Following are the questions of the study:

- How does virtual classroom learning impact students' academic performance in online and distant learning?
- What are the key challenges influencing students' virtual assessment?

Significance of the Study

A virtual classroom system creates an environment that helps teachers organize educational activities for their students in an organized manner, especially for remote learning. It has been described as “just as vivid, meaningful and dynamic as face-to-face interactions in a traditional classroom or even more so”. The benefits of virtual classrooms reach out to students, teachers, and even educational institutions. This research is important because it sheds light on the effect that this contemporary educational system has on student evaluation in an effort to determine the best way to leverage virtual learning to improve students' performance. The results can assist educators and institutions in developing more stimulating and effective virtual learning spaces.

Delimitations of the Study

- This research study was delimited to the Government Viqar-un-Nisa Graduate College for Women Rawalpindi.

Literature Review

The COVID-19 pandemic heavily emphasized the shift across the globe to online learning, Burgess and Sievertsen (2020) state that universities all over the globe responded to the crisis by going fully online. Online learning, web-based training, and technology delivered instructions all serve online training's virtual classroom aspect. Virtual Learning Environments (VLEs) are more than just online classes; they are interactive, resource-rich, computer-based learning systems that allow learner training through web systems (Pelet & Lecarte, 2013). Turoff (2007) refers to a virtual classroom as an online space that enables participants to "attend" lectures and training sessions. Virtual learning encompasses more than just lectures; it includes the use of satellites, the internet, and other systems, to access and exchange knowledge (Lokie, 2011). Virtual learning is digitally based learning that utilizes content and network inputs (Schutt & Linegar, 2013).

The Evolution and Pedagogy of Virtual Learning

The evolution of a virtual classroom can be tied to the widespread and more affordable access to the internet and internet technologies. The initial consideration of virtual learning was its flexibility compared to traditional learning and its relative ease compared to physical boarding for adult learners (Turoff, 2007). In more recent years, the focus has transformed to encompass learning strategies caused by this shift in learning. There has been deliberation on how to structure virtual learning spaces to enhance learning, often utilizing constructivist and social learning theories. For instance, Bandura's (1985) social learning theory which focuses on learning from observation would strongly support the collaborative aspects of virtual classrooms—group work and class discussions.

Challenges in Virtual Assessment

The need for a virtual assessment is becoming prominent alongside the continuous shift to online teaching. Assessment, like learning, is a vital part of any educational program, and virtual learning comes with its own unique difficulties. Davis and Neitzel (2011) states that the mobile and virtual assessment of learners should encourage feedback, cognitive-skill promotion, and support teamwork alongside individual work among learners. Assessment, in many circumstances, falls short of this target. Most problems seem to fall under three overarching categories:

- **Information Technology-Related Challenges:** Difficulty with hardware and software infrastructure relates to difficulties that belong to the "Information Technology" (IT) categories: as for many learners, not all students own the hardware, software, or a dependable internet connection; these problems remain unresolved (Rahim, 2020).
- **Motivation and Engagement:** Students enrolled in virtual environments often report feeling a sense of isolation (Alruwais, Wills, & Wald, 2018). Lack of physical interactions with educators makes it hard for both instructors and students to give and receive feedback on performance. Moreover, some students may be lacking in the essential skills of digital literacy or self-control to succeed in the virtual learning environment.
- **Academic Staff:** Due to heightened concerns of academic dishonesty and remote monitoring, educators face a barrage of new challenges when it comes to designing and implementing virtual assessments (Rahim, 2020). This is further complicated by the increased demands on instructors' time, increased virtual prep time and technical demands, and time-consuming grading processes.

As the literature indicates, the use of technology in student assessment remains a multifaceted and

volatile issue. While it provides flexibility and increased access, the use of technology remains highly dependent on overcoming pedagogical, technological, and social challenges to ensure validity and reliability in measuring students' learning.

Conceptual Framework of the Study

The conceptual framework for this study is a simple model that relates the independent variable of the study virtual classroom learning to the dependent variable of the study student assessment. According to the framework, the configuration and features of the classroom environment and its components, including the tools, teaching techniques, and student-teacher engagement, determine the level of student assessment, which includes academic achievement, grades, and retention of knowledge.

Methodology

Research Design

The nature of the study is descriptive in nature with a digital approach applied to the data interpretation. The responses of the participants and the data were collected through a survey method via two closed-end questionnaires.

Population and Sample of the Study

The population for this research comprised 444 students along with 30 teachers of the BS Education, BS English, and BS Psychology programs at the Government Viqar-un-Nisa Graduate College for Women Rawalpindi. A sample size of 75 students along with 28 teachers was selected using simple random sampling.

Research Tool

Data was collected through two closed-end questionnaires which served as the main research instruments for students and teachers.

Data Collection

The researcher went to the sampled college to gather data from the respondents, distributing as well as collecting data in person.

Data Analysis

As a result, the data collected were processed using descriptive statistics calculating the frequencies and the percentage distributions, which were essential in interpreting the results and making conclusions.

Results

The results of the study are integrated from the questionnaires answered by both students and teachers. The outcome indicates a considerable correlation between the learning of students in the virtual classroom and the students' assessment. Most participants agreed with most of the important aspects of online learning.

Table 1: Students' Perceptions on Learning and Communication in a Virtual Environment

Statement	Agree (%)	Disagree (%)	Neutral (%)
I feel comfortable composing text on a computer in an online learning environment.	51.3	30.2	18.5
I can discuss with other students during Internet activities outside of class.	57.9	15.8	26.3
Learning is the same in class and at home on the Internet.	26.3	52.6	21.1
I believe a complete course can be given by the Internet without difficulty.	52.6	31.6	15.8
I could pass a course on the Internet without any teacher assistance.	18.4	69.8	11.8
Information sharing in environments as wiki, blog should be considered in assessment.	59.2	22.4	18.4

Virtual learning platforms offer sufficient tools for interactive learning.	65.8	21.1	13.1
My academic performance has improved due to virtual learning.	47.4	34.2	18.4
The virtual classroom helps me manage my time effectively.	71.0	14.5	14.5
I feel a sense of isolation in the virtual classroom environment.	38.2	47.4	14.4
The technical issues hinder my learning process.	44.7	39.5	15.8
Online assessment methods are fair and reliable.	50.0	35.5	14.5
I prefer a blended learning approach over a purely virtual one.	68.4	18.4	13.2

Table 2: Teachers' Perceptions on Virtual Assessment Challenges and Opportunities

Statement	Agree (%)	Disagree (%)	Neutral (%)
Virtual assessment is an effective way to measure student learning.	67.8	17.8	14.4
It is challenging to prevent cheating in a virtual assessment.	82.1	7.1	10.8
Providing timely feedback is easier in a virtual environment.	46.4	32.1	21.5
Virtual assessments require more time for preparation.	75.0	10.7	14.3
Students' lack of technical skills hinders the assessment process.	53.6	21.4	25.0
Virtual learning has a positive impact on student engagement.	50.0	25.0	25.0
I feel confident using the available technology for virtual assessments.	60.7	21.4	17.9
Communication with students outside of class hours has increased.	78.6	10.7	10.7

Findings

- The data suggests that students hold moderately favorable opinions regarding virtual classes.
- Most students appear to be comfortable with the technology and feel that it helps them manage their time better (71.0%).
- Students express strong sentiments around the idea that learning is somehow different from the in-person, physical classroom experience, with more than half of the students (52.6%) quite firmly disagreeing that it is.
- A high percentage of students (68.4%), in the results, indicated a strong preference for blended learning.
- The results reveal what seems to be a heavy dependence on the teacher in courses, as a large percentage of the respondents (69.8%) disagreed with the statement that they could pass a course without teacher support.
- Curriculum data suggests that, while virtual assessments are viewed as a valid method for measuring learning in 67.8% of cases, the overriding concerns, especially around the inability to control for cheating (82.1%) and the associated increase in preparation time (75.0%), are extremely problematic.
- The increase in communication with students beyond scheduled class times (78.6%) points to a shift in the nature of the student-teacher relationship.

Collectively, these findings suggest that while virtual learning remains a frequently useful option, it cannot replace in-person education entirely, and both students and teachers need to dedicate considerable effort for it to be effective.

Conclusions

The research concludes that learning in a virtual classroom setting significantly impacts higher-level learning, both in performance and assessment. It thoroughly examined the students' attitudes toward distance learning and teachers' virtual assessment strategies, validating this educational model's pivotal impact in contemporary teaching and learning. Students cherish the convenience and collaborative nature that virtual learning offers. However, they continue to appreciate the traditional teaching and in-person interaction with educators. The conclusions reached indicate that learning in a virtual classroom is a feasible and productive educational model, but it's not without its challenges

Discussion

The key focus of this research was to examine how virtual classroom learning affects student assessment at the tertiary level. The results, as per the students, suggest willingness alongside acceptance to the virtual learning elements, including remote interaction and text-based communication. Additionally, they appreciate the relevance of collaborative tools for assessment. Nevertheless, this study reveals an important observation of virtual learning as being beneficial, but not an exact substitute for the physical classroom experience. The equally strong conviction that instructor intervention, guidance, and support during class is non-negotiable, irrespective of the modality, reinforces the reason that educators need to be actively engaged and rethink how to foster interaction and support through the digital realm. This indicates a lack of effectiveness when employing a purely asynchronous, hands-off approach. The results also point toward the problem of the need to improve the virtual classroom rapport through attitude, behaviour, communication, feedback, and interaction from students as well as educators to optimize the outcomes of virtual learning.

Recommendations

The following recommendations are made to optimize and refine virtual classroom assessment and learning at the higher education level:

- Educators need to be motivated to design and facilitate stimulating and interactive virtual learning classrooms that foster communication and active collaboration.
- To foster a better virtual classroom ambiance, both teachers and students should improve their attitudes and skills concerning online interactions.
- Educational institutions need to provide better IT equipment and services to solve problems related to information technology infrastructure and virtual assessment.
- Assessment methods need to be expanded to capture students' perspectives on information sharing that utilizes online tools, such as wikis and blogs.
- Further investigations need to be carried out on what pedagogical strategies to apply in order to close the perceived void of in-class and remote learning.

References

- Adedoyin, O. B., & Soykan, E. (2020). COVID-19 Eigen and S4. CRAN R pack- age, 1(7), 15-23.
- Anan, A. H. M., Ahmad, M. K., Yusof, A. A., Mohd Kamal, M. A., & Mustafa Kamal, N. N. (2020). English Language Simulations Augmented with 360- degrees Spherical Videos (ELSA 360-Videos): 'Virtual Reality' Real Life Learning!. SSRN.
- Alfallaj, F. S. S., & Alfallaj, F. (2020). Technology in Saudi EFL undergraduate classrooms: Learning tool or weapon of distraction. *The Asian ESP Jour- nal*, 16(4), 97-115.

- Alghamdi, A. (2021). COVID-19 mandated self-directed distance learning: Experiences of Saudi female postgraduate students. *Journal of University Teaching & Learning Practice*, 18(3), 014.
- Alruwais, N., Wills, G., & Wald, M. (2018). Advantages and challenges of using e-assessment. *International Journal of Information and Education Technology*, 8(1), 34-37.
- Arsyad Arrafii, M. (2020). Grades and grade inflation: exploring teachers' grading practices in Indonesian EFL secondary school classrooms. *Pedagogy, Culture & Society*, 28(3), 477-499.
- Bakhov, I., Opolska, N., Bogus, M., Anishchenko, V., & Biryukova, Y. (2021). Emergency distance education in the conditions of COVID-19 pandemic: experience of Ukrainian universities. *Education Sciences*, 11(7), 364.
- Bensaid, B., & Brahimi, T. (2021). Coping with COVID-19: higher education in the GCC countries. In *Research and innovation forum 2020: Disruptive technologies in times of change* (pp. 137-153). Springer International Publishing.
- Bettinger, E., & Loeb, S. (2017). Promises and pitfalls of online education. *Evidence Speaks Reports*, 2(15), 1-4.
- Bouchard, P. (2011). Network promises and their implications. In *The Impact Of Social Networks on Teaching and Learning (on-line monograph)*. *Revistade Universidad y sociedad del conocimiento*, 8(1), 288 – 302.
- Bozkurt, A., & Sharma, R. C. (2020). Emergency remote teaching in a time of global crisis due to Coronavirus pandemic. *Asian journal of distance education*, 15(1), i-vi.
- Burgess, S., & Sievertsen, H. (2020). Schools, skills, and learning: The impact of COVID-19 on education.[online] VOXEU. Available at:[Accessed 8 July 2020].
- Castelli, F. R., & Sarvary, M. A. (2021). Why students do not turn on their video cameras during online classes and an equitable and inclusive plan to encourage them to do so. *Ecology and Evolution*, 11(8), 3565-3576.
- Crisp, G. (2011). Teacher's Handbook on e-Assessment. Transforming Assessment- An ALTC Fellowship Activity, 18.
- Debeş, G. (2021). Distance learning in higher education during the COVID-19 pandemic: advantages and disadvantages: Distance learning in higher education during the COVID-19 pandemic. *International Journal of Curriculum and Instruction*, 13(2), 1109-1118.
- Falloon, G. (2012). Inside the virtual classroom: Student perspectives on affordances and limitations. *Journal of Open, Flexible, and Distance Learning*, 16(1), 108-126.
- Gamage, S. H., Ayres, J. R., Behrend, M. B., & Smith, E. J. (2019). Optimizing Moodle quizzes for online assessments. *International journal of STEM education*, 6(1), 1-14.
- García-Morales, V. J., Garrido-Moreno, A., & Martín-Rojas, R. (2021). The transformation of higher education after the COVID disruption: Emerging challenges in an online learning scenario. *Frontiers in psychology*, 12, 616059.
- García-Peñalvo, F. J., & Corell, A. (2020). Arbella-García, & V. Grande, M, 1-26.
- Gay, L. R., Mills, G. E., & Airasian, P. W. (2011). Educational research: Competencies for analysis and applications: Pearson Higher Ed.
- Gedera, D. (2014). Students' experiences of learning in a virtual classroom: An Activity Theory perspective. *International Journal of Education and Development using ICT*, 10(4).
- Gikandi, J. W., Morrow, D., & Davis, N. E. (2011). Online formative assessment in higher education: A review of the literature. *Computers & education*, 57(4), 2333-2351.
- Gillett-Swan, J. (2017). The challenges of online learning: Supporting and engaging the isolated learner.

- Journal of Learning Design*, 10(1), 20-30.
- Gillett-Swan, J. (2017). The challenges of online learning: Supporting and engaging the isolated learner. *Journal of Learning Design*, 10(1), 20-30.
- Glava, C. C., & Glava, A. E. (2011). On-line learning platforms as virtual classrooms. Case study of initial primary teachers training at Babes-Bolyai University of Cluj-Napoca, Romania. *Procedia Computer Science*, 3, 672-676.
- Govindarajan, V., & Srivastava, A. (2020). What the shift to virtual learning could mean for the future of higher ed. *Harvard business review*, 31(1), 3-8.
- Hall, C. (2012). Teaching and learning in a virtual environment. *Interface*, 12. Horton, W. (2011). *E-learning by Design* Willey. London. UK.
- Kemp, S. (2020). Digital trends 2019: every single stat you need to know about the internet. *The Next Web*. 2019.
- Khan, R. A., & Jawaid, M. (2020). Technology enhanced assessment (TEA) in COVID 19 pandemic. *Pakistan journal of medical sciences*, 36(COVID19- S4), S108.
- Khatib, T., & Karajeh, H. (2015). The Impact of Social Media Networks Websites Usage on Students' Academic Performance.
- Kruger-Ross, M. J., & Waters, R. D. (2013). Predicting online learning success: Applying the situational theory of publics to the virtual classroom. *Computers & Education*, 61, 176-184.
- Kultawanich, K., Koraneekij, P., & Na-Songkhla, J. (2015). Development and validation of the information literacy assessment in connectivism learning environment for undergraduate students. *Procedia-Social and Behavioral Sciences*, 174, 1386-1390.
- Lokie, J. M. (2011). Examining student achievement and motivation using internet-based inquiry in the classroom.
- Looney, A., Cumming, J., van Der Kleij, F., & Harris, K. (2018). Reconceptualising the role of teachers as assessors: teacher assessment identity. *Assessment in Education: Principles, Policy & Practice*, 25(5), 442-467
- Mallareddy, A. (2013). Advantages and limitations of virtual classroom in telugu language teaching. *Journal of Humanities and Social Science (IOSR- JHSS)*, 15(6), 54-56.
- McMillan, J. H. (2017). *Classroom assessment: Principles and practice that enhance student learning and motivation*. Pearson.
- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International journal of educational research open*, 1, 100012.
- Mohammed, A. O., Khidhir, B. A., Nazeer, A., & Vijayan, V. J. (2020). Emergency remote teaching during Coronavirus pandemic: the current trend and future directive at Middle East College Oman. *Innovative Infrastructure Solutions*, 5, 1-11
- Osman, M. E. (2020). Global impact of COVID-19 on education systems: the emergency remote teaching at Sultan Qaboos University. *Journal of Education for Teaching*, 46(4), 463-471.
- Patil, D. P. (2020). Trends and challenges in English language teaching. *Studies in Indian place names*, 40(39), 158-164.
- Rasooli, A., Zandi, H., & DeLuca, C. (2018). Re-conceptualizing classroom assessment fairness: A systematic meta-ethnography of assessment literature and beyond. *Studies in Educational Evaluation*, 56, 164-181.
- Scarino, A. (2013). Language assessment literacy as self-awareness: Understanding the role of interpretation in assessment and in teacher learning. *Language testing*, 30(3), 309-327.

- Schullo, S., Hilbelink, A., Venable, M., & Barron, A. E. (2007). Selecting a virtual classroom system: Elluminate live vs. Macromedia breeze (adobe acrobat connect professional). *MERLOT Journal of Online Learning and Teaching*, 3(4), 331-345.
- Schutt, S., & Linegar, D. (2013). We learn as we go: What five years playing with virtual worlds has taught us. *International Journal of Virtual and Personal Learning Environments (IJVPLE)*, 4(2), 124-136.
- Singh, S. (2011). Virtual learning environment: an overview. *Techno Learn: An International Journal of Educational Technology*, 1(1), 87-94.
- Slimi, Z. (2020). Online learning and teaching during COVID-19: A case study from Oman. *International Journal of Information Technology and Language Studies*, 4(2).
- Taner, A., Akyıldız, S., Gülay, A., & Özdemir, C. (2021). Investigating education faculty students' views about asynchronous distance education practices during Covid-19 isolation period. *Psychological Educational Research Reviews*, 10(1), 34-45.
- Tarhini, A., Elyas, T., Akour, M. A., & Al-Salti, Z. (2016). Technology, demographic characteristics and e-learning acceptance: A conceptual model based on extended technology acceptance model. *Higher Education Studies*, 6(3), 72-89.
- Tuah, N. A. A., & Naing, L. (2021). Is online assessment in higher education institutions during COVID-19 pandemic reliable?. *Siriraj Medical Journal*, 73(1), 61-68.
- Tynan, B., Ryan, Y., & Lamont-Mills, A. (2015). Examining workload models in online and blended teaching. *British Journal of Educational Technology*, 46(1), 5-15.
- Webber, K. L. (2012). The use of learner-centered assessment in US colleges and universities. *Research in Higher Education*, 53, 201-228.