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SUSTAINING AND ENHANCING THE QUALITY OF ODL

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Symbiosis International Research Journal on Online & Distance Learning

Symbiosis Centre for Distance Learning (SCDL), Pune, is one of India's largest autonomous distance learning educational institutions. In this day and age, distance learning looks beyond traditional reference books and course-end assessments. Online and Distance Learning (ODL) is the need of the hour in a young country such as India, as it makes higher education available to aspiring youth as well as mature learners, and reaches out to the unreached in the remotest corners of this vast nation. It is one of the best modes of increasing the GER in higher education at almost one-fifth the cost. ODL institutions are in a sense great contributors to the national cause of making available higher education to the physically, socially, and financially challenged youth of our country.

Technology is a game-changer as it has brought about a paradigm shift in the teaching-learning and evaluation pedagogies and facilitated this process. However, publications by Indian researchers on online and distance learning are almost non-existent. Therefore, Symbiosis Centre for Distance Learning, Pune, plans to provide a platform to researchers and academicians in the form of a research journal on ODL.

Although distance education is considered one of the most crucial options available to us to improve the status of higher education, there are some critical quality-related issues that need to be addressed. To contribute towards this, SCDL launched Symbiosis International Research Journal on Online & Distance Learning (SIRJODL) in 2016. The SIRJODL has continuously provided opportunities for researchers and academicians to publish their research work and we at SCDL provide access to our larger audience.

SIRJODL is a peer-reviewed, international, bi-annual e-journal. This scholarly e-journal publishes refereed articles focusing on the issues and challenges of providing theory, research, and information services regarding all forms and methods of distance and online education or open learning applications. SIRJODL particularly attempts to meet the continuing education needs of practitioners, educators, teachers, and policymakers by providing a forum for the discussion of extended learning strategies, policies and practices, and trends in ODL learning strategies including learning technologies as they all impact the field of online and distance education.

SIRJODL encourages and invites articles that may be theoretical, philosophical, and/or empirical analyses of distance education/open learning/online education/blended learning/ and teaching issues, in the form of case studies, research studies, research articles/notes, and general interest reports. Book reviews and literature reviews are also welcome.

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Applying Facebook Group as a Learning Management System (LMS) in Finance Classes at Bangladesh Open University

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Abstract

Now-a-days, in the blended learning environment, Learning Management Systems (LMS) have been used rapidly as a popular means of university teaching and learning. In LMS, both the teachers and learners interact, share, view, monitor, and assess activities, tasks, and assignments. Due to the limitations of traditional LMSs, Facebook groups have been considered as supplementary/substitutes of LMS in the Open and Distance Learning (ODL) environment. Facebook group has been applied as an LMS in the finance classes of the MBA (Bangla) program which is operated by Open School of Bangladesh Open University. According to SMART goal setting theory of Locke and Latham (1990) and the ADDIE model, this has been formulated and implemented considering the learners' needs. Although Facebook groups as an LMS has several advantages, implementing Facebook in teaching and learning is challenging for learners and faculty members because continuous surveillance, prompt feedback, and regular updates is required. In developing Facebook groups as an LMS, several challenges such as formalization, privacy, safety issues may arise; however, proper policy guidelines, online surveillance, and teachers' facilitation role may overcome these challenges.

KEYWORDS
Blended Learning, LMS, SMART Goal, ADDIE Model

Introduction

21st-century learners frequently used mobile technologies, virtual realities, and software applications in their daily life and education (Chen, 2014). Social networking sites (SNSs) as web 2.0 technologies are used for maintaining a social relationship where someone can view, post, and share something with others (Boyd & Ellison, 2007). In the academic arena, SNSs such as Facebook, Twitter, YouTube, MySpace, Instagram, Pinterest, Blogs, and LinkedIn become popular around the world (Siddike et al., 2015; Dickson & Holley, 2010). In a quality learning environment, SNS such as Facebook creates a positive attitude among the teachers (Pasek & Hargittai, 2009) which supports communication and improves learners' social, cognitive, and critical thinking skills (Christofides et al., 2009; Lampe et al., 2008).

Facebook has become one of the fastest and largest SNSs that play an essential role in academia by using it in different scholastic disciplines and applying it as an LMS (Siddike et al., 2015). The unique built-in functions of Facebook i.e. newsfeed, timeline, notifications, messages and inbox, live, groups, and comments offer pedagogical, social, and technological affordances (Wang et al., 2012). In Bangladesh, 33 million people use Facebook (Internet World Stats, 2020) and Dhaka ranked 2nd according to the active Facebook users in the world (Murad, 2017) which indicates the popularity of Facebook in Bangladesh. Bangladesh Open University (BOU) is much more concerned about inclusive education. Application of Facebook group as an LMS in classroom teaching and learning will ensure active as well as student-centered learning.

The aim of this study is to present the overview of the usage of LMS at the Open School of Bangladesh Open University. Besides this, the study has specific objectives which are:

1. To apply Facebook group as an LMS in the finance classes.
2. To find out the effectiveness of Facebook group in active learning.

Context and Current Practices

Considering technological aspects of teaching, Bangladesh is still in the embryonic stage of adopting e-learning even though it has been accepted as an effective mode of delivering quality education (Sarkar et al., 2019). LMS as an e-learning platform provides personalized instruction, e-resources sharing, grading, and uploading yearly events, discussions, group collaboration, web conferencing, and peer review which most of the public and private universities required nowadays (Shoma, 2016). Established private universities along with several public universities in Bangladesh are now using LMS as an e-learning platform (HEQEP, 2017) which facilitates outside the classroom learning and teaching (Vassilakis et al., 2017). In tertiary education of Bangladesh, online discussion forums along with Facebook groups become a part of education (Rahman & Rahman, 2013). The use of Facebook groups as an LMS during Covid-19 helps educational institutions of Bangladesh to conduct regular classes as well as improve existing teaching practices (Munni & Hasan, 2020) by ensuring interactive teaching and learning activities on Facebook groups.

BOU operates under a blended learning approach where day-long face-to-face tutorial services are provided only on Friday and Saturday in its own campuses and affiliated institutions. With a view to achieving the government's Digital Bangladesh agenda and SDG-4, BOU commenced a paradigm shift from traditional ODL to technology-enabled ODL through LMS and web 2.0 technologies (Mannan, 2016). This transformation creates lifelong learning opportunities for ODL learners in the digital environment. But most of the learners fail to enjoy the benefits provided by the e-learning platforms e.g. LMS because most of the learners of BOU do not have sufficient digital literacy. Moreover, adult learners are not comfortable with technology-enabled learning like young learners.

The adoption and usage of BOU's e-learning platform i.e. LMS is very minimal. In LMS the interaction between learners and students is limited and in case of vast scale and countrywide programs e.g. BBA, M.B.A, and BA/BSS it is very difficult to maintain communication with the students. In Bangladesh, Facebook becomes a popular and user-friendly social networking site that can be used for educational purposes. Most of the faculty members and learners are acquainted with the usage of Facebook groups. BOU has a verified official Facebook group along with pages

by which different important news; information is circulated among the students. In addition to that several Facebook groups and pages are available which are not managed and controlled by the administrative staff and faculty members. If different faculty members and administrative staff manage and control the Facebook groups for academic purposes this will be a supplement/substitute of the existing LMS where the interaction of the learners and teachers will be maximum.

Literature Review

Learning Management Systems (LMS) as an integrated computer system has been evolving rapidly which affects university teaching and learning (Coates et al., 2005). Teachers can assess students' performance in LMS by viewing their activities, tasks, and assignments. Moodle for example as an LMS enables a virtual platform of online learning for both learners and teachers where through different instructive tasks, forums, and chats they can share their knowledge (Martin-Blas & Serrano-Fernandez, 2009). LMS integrates collaborative as well as interactive learning activities in a blended learning environment where the strong commitment of all stakeholders is required (Dias et al., 2014).

In the academic arena, it is believed that LMS enables independent learning of the students (Vrasidas, 2004) and provides a platform for interaction between the learners for constructive learning (Dillenbourg et al., 2002) but it is found that the use of LMSs in tertiary education has limited scale usefulness (Meishar et al., 2012). Moreover, LMSs need expert technical teams for adoption and maintenance which makes LMSs costly and burdensome for the educational institutions (Sanchez-Franco, 2010).

In LMSs, simplistic models of auto-evaluation have been used and it is very difficult to incorporate alternative assessment elements (Coats et al., 2005). Students have no or limited control over the use of LMSs which obstruct their self-paced learning (Meishar et al., 2012). According to usage patterns, LMSs are best suited for administrative efficiency than substantive learning and teaching activities (Mott, 2010). Besides that, LMSs are the obstacles for students' centred learning as teachers generate courses, upload the academic contents, commence discussions, and form groups.

As only a few teachers use LMSs in an innovative way, it does not produce new forms of learning and teaching (Nachmias & Ram, 2009).

Facebook groups contain social, pedagogical, and technological elements of LMS which makes the Facebook groups an alternative to LMS (Wang et al., 2012). Due to the limitations of traditional LMSs, Facebook groups have been considered as supplementary/substitutes of LMS. The participants of a Facebook group academically outperformed LMS e.g. Moodle and iCas (Chen, 2014). Moreover, participants demonstrated a more positive attitude towards Facebook groups learning than traditional LMS learning. It is found that students are satisfied in using Facebook groups as an LMS because in Facebook groups, announcements, resources sharing, conducting the tutorial session, and organizing online discussion is possible as like as LMS (Wang et al., 2012). Despite having some major disadvantages for both learners and teachers Facebook groups have numerous discrete advantages over traditional LMS (Meishar et al., 2012).

Action Plan

The current practices of LMS in my Finance classes have several drawbacks as it fails to accommodate student-centered method. Due to this limitation, I want to apply Facebook groups as an LMS in my classes. I had formulated an action plan which were consistent with the SMART goal setting theory of Locke and Latham (1990) and the ADDIE model. Here SMART stands for Specific, Measurable, Attainable, Realistic, and Time-Bound and ADDIE stands for Analyze, Design, Development, Implementation, and Evaluation. The action plan of my proposed practices has been given below:

Analyze:

Based on the literature, first of all I had analysed the instructional goals, audience characteristics, and required resources. After consulting with the Business Studies discipline Chairman, Program Co-ordinator, and Dean, I set the goal which was to make Facebook groups as an LMS. Afterward, I had analysed the audience characteristics. Target audiences are the students of the MBA program's 2nd, 3rd and 4th batch along with their respective course tutors. In the required resources section I focused on the internet connection, content download, upload, and a supervisor to monitor the group activities. Here I made a SMART goal setting which is given below:

Table 1. Action Plan according to SMART goal setting

Target	**Time**	**Result**
All students (100%) joined in the Facebook groups among which 70% **(Specific and Attainable)** of the students regularly involved in the group activities and 90 % **(Specific and Attainable)** of the faculty members posted, responded to the students' queries.	This has been implemented from January 2022 to June 2022 **(Time-Bound)**	At the end of the semester, students' grades are higher than in the previous semester **(Measurable)**. After joining this group, students are able to discuss different topics, download several organized materials, and get updated about the examination **(Reliable).**

Design:

In January 2022, I created Facebook groups according to the Finance courses in the MBA program. In the Uttara study centre of MBA program several Facebook groups have been opened with a view to applying Facebook groups as an LMS. Total three batches are running, so total three Facebook groups have been created as each batch has different Finance courses. The Facebook groups are designed like this:

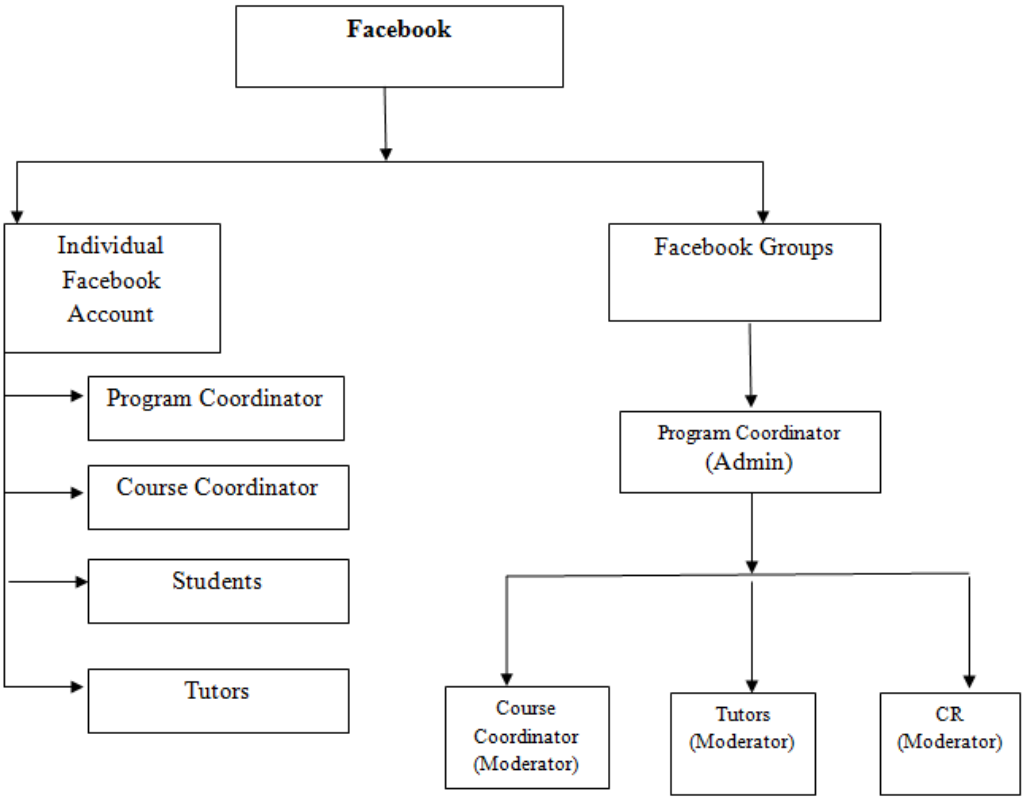

Figure 1. Facebook Group Structure

Development:

From the first day of my face-to-face tutorial session, I opened Facebook groups. Then I requested all the students to join and add the Program Coordinator, and Tutors in these groups. The Program coordinator of the MBA Program are admin of these groups, Course Coordinator (Me), Tutors and Class Representatives were the moderators of these groups. The duration of those groups will be 6 months. During this time, I shared different important content, materials; and students discussed and download this. I along with Program coordinator announced important events and news (Wang et al., 2012; Siddike et al., 2015). Students posted problems and queries in the Groups wall section. A sample of Facebook groups' formation has been given below:

Table 2. Formation of Facebook Study Groups

No.	Batch	Semester	Course Code	Course Name	Duration of Groups	No. of participants
01.	2nd	4th	FIN-2202	Financial Institutions and Markets	January 2022-June 2022	45
02.	3rd	2nd	OSMBA-1203	Corporate Finance	January 2022-June 2022	45

Implementation:

As almost all of the programs including MBA are conducted in the blended learning approach, it is important to maintain communication and interaction on a frequent basis. During the face-to-face tutorial sessions (i.e., Friday and Saturday), I encouraged learners to participate in Facebook group activities. Both the teachers and students could post and share different complex course-related issues in these Facebook groups from January 2022 to June 2022. The materials and content that had been shared by the group members can be viewed, replied to, and downloaded by the rest of the group members. Several assessment tasks i.e. quizzes and class tests of the students would be taken by posting the link of Google Docs in the Facebook groups.

Evaluation:

The active participation of every learner in the Facebook groups from January 2022 to June 2022 had been observed very closely through the reactions, posts, comments, replies, shares they had done in groups. Admin and moderators of these groups regularly checked the updated status and notifications of these groups. At the end of the semester, the effectiveness of Facebook groups as an LMS had been evaluated. A survey questionnaire had been provided to the learners and teachers about the application of Facebook groups as an LMS. In addition to that, an in-depth interview had been conducted with the students and teachers about the effectiveness of Facebook groups.

The aim of applying Facebook groups as an LMS in Finance classes is to improve the teaching-learning strategy. Facebook groups as an LMS transform the focus of the faculty members from content-based-learning to process-based learning (Vogel & Klassen, 2001) and facilitates active

learning from passive learning (Herse & Lee, 2005). Although Facebook groups as an LMS has several advantages, implementing Facebook in teaching and learning is challenging for learners and faculty members (Gray et al., 2010). The SWOT analysis of using Facebook groups as LMS is given below:

Table 3. SWOT Analysis of Facebook Groups as an LMS

Strengths: 1. Both learners and teachers have Facebok account 2. User friendly 3. No need of vast digital literacy	**Opportunities:** 1. Strong interaction 2. Suitable for ODL environment 3. Ensures self learning
Weakness: 1. No established guidelines 2. Need to stay more in online 3. Not organized	**Threats:** 1. Not safe platform 2. Privacy issues 3.Difficult to monitor all the groups

SWOT Analysis

Implementing Facebook groups as LMS required continuous surveillance, prompt feedback, and regular updates. The admin and moderators of the Facebook groups need to stay online all the time, so it will be very difficult for them to monitor the whole teaching-learning activities.

Despite having three LMSs of BOU, it may seem confusing why it is required to apply Facebook groups as an LMS in BOU for distance learners. There remains a lack of interaction in LMS which motivates me to apply Facebook groups as an LMS in Finance classes. DeSchryver et al. (2009) stated that students were comfortable with the usage of Facebook groups for class purposes and satisfied with the affordances of Facebook groups as an LMS (Wang et al., 2012). Considering the challenges, privacy, and safety of Facebook should be strengthened. The authentic Facebook profile of the students will be added to the groups. Each and every post, comments, files, audios, and videos should be monitored by the moderators and admin. Open School and BOU authorities will develop specific guidelines about the usage of these Facebook groups. Every user will obey

the protocol of these groups. A virtual proctorial team should be formed to resolve disputes and complications. Awareness among the students and teachers should be raised about the effective use of Facebook groups. If these stern actions can be taken then Facebook groups will be working as an LMS which will improve existing teaching-learning strategies.

Recommendations and Conclusion

There is a dilemma about using Facebook groups as an LMS in the academic field among the academician and the education specialist. Although Facebook groups have some major disadvantages it provides several advantages over traditional LMS (Meishar et al., 2012). It becomes painstaking for faculty members to connect all the learners in existing LMSs of BOU and involve them in collaborative as well as student-centred learning. Applying Facebook groups as an LMS in Finance classes at BOU needs special attraction and precaution. The first obstacle that may arise is the formalization of the Facebook groups in BOU. Baran (2010) mentioned that Facebook groups can be used as a formal teaching and learning tool. Hamat et al(2012) concluded that Facebook groups can be used as a formal and informal learning tool in Malaysian higher educational institutions. So, formalizing Facebook groups as an LMS a discussion with the higher authority regarding the usage of Facebook groups can be arranged by the School.

In Facebook groups' privacy and security is one of the major concerns, so it is required to formulate policy guidelines, build online proctorial teams, and ensure assistance from technical experts (Wang et al., 2012). Surveillance and monitoring of the Facebook groups is a prerequisite. For this reason, groups' admin and moderator panel need to be vigilant enough to apply Facebook groups as an LMS but if they do not want to mix learning with social lives (Jones et al., 2010) it will be a challenge. As the role of teachers in Facebook groups is just like a facilitator (Yunus & Salehi, 2012), they need to play a proactive role in implementing Facebook groups as an LMS in their classes.

Learning Management Systems (LMS) is an integrated computer system used in teaching and learning (Coates et al., 2005). LMS as a virtual platform enables online learning for both learners and teachers (Martin-Blas & Serrano-Fernandez, 2009). In the study of Meishar et al (2012); Nachmias and Ram (2009); Lonn and Teasley (2009) several limitations of LMS have been found

which are: short duration of study materials, lack of innovation of the course teachers in LMS, lack of interaction between students and teachers. Facebook groups can be used as supplementary/substitutes of LMS in classroom teaching and learning (Wang et al., 2012; Siddike et al. 2015). Facebook groups as LMS facilitates students in communicating and collaborating with the faculty members in their learning process (Roblyer et al., 2010).

The learners of BOU want to get connected all the time after classroom teaching and learning as they customize their way of learning due to the nature of the ODL environment. So the application of Facebook groups as an LMS in Finance classes at BOU has been discussed in this study. Based on the study of Wang et al., (2012); Siddike et al., (2015), SMART goal- setting theory of Locke and Latham (1990), ADDIE approach of Branch (2009) an action plan has been developed to apply Facebook groups as an LMS in Finance classes at BOU. In developing Facebook groups as an LMS several challenges e.g. formalization, privacy, safety issues may arise but proper policy guidelines, online surveillance, and teachers' facilitation role may overcome these challenges. As most of the learners have personalized Facebook account, the proposed study aims at applying Facebook groups as an LMS in Finance classes at BOU which will ensure collaborative, inquiry-based, and student-centred learning of the students.

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Addressing Challenges in Assessing and Evaluating Learning Outcomes in ODL Programs

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Abstract

This study examines the impact of implementing innovative assessment methods on the accuracy, authenticity, and validity of assessing and evaluating learning outcomes in Open and Distance Learning (ODL) programs. A sample of 50 participants, including educators and administrators, provided their perceptions on the effectiveness of these methods through a Likert-scale questionnaire. The data were analyzed using a t-test to determine the significance of the findings.

The results indicate that implementing innovative assessment methods tailored for ODL programs has a significant positive impact on the overall quality of ODL education. The participants rated the challenges in assessing and evaluating learning outcomes in ODL programs as significant, highlighting the need for innovative approaches to address these challenges. Furthermore, the

participants expressed agreement with the statements that innovative assessment methods can improve the accuracy, authenticity, and validity of assessing learning outcomes, and that incorporating technology-supported assessments can overcome technological limitations and support issues.

These findings suggest that ODL programs can benefit from the implementation of innovative assessment strategies to enhance the assessment of learning outcomes. By utilizing project-based assessments, authentic performance tasks, and technology-supported assessments, ODL programs can address the challenges faced in assessing and evaluating learning outcomes. Providing clear instructions and guidelines for assessments can also accommodate the diverse learner population in ODL programs.

However, it is important to acknowledge certain limitations of this study. The small sample size and the reliance on self-reported perceptions limit the generalizability of the findings. Future research should aim to replicate the study on a larger scale and incorporate objective measures of learning outcomes. Additionally, investigating the long-term effects of implementing these methods on student engagement and academic performance would provide valuable insights for ODL program improvement.

Thus, this study highlights the significance of implementing innovative assessment methods in ODL programs. The findings emphasize the potential for these methods to enhance the quality of education and improve the assessment of learning outcomes in ODL.

KEYWORDS

Open and Distance Learning (ODL), Innovative assessment methods, Learning outcomes, Quality enhancement, Authenticity.

Introduction

Open and Distance Learning (ODL) programs have gained significant popularity and recognition in recent years as a flexible and accessible mode of education. With advancements in technology and the increasing demand for lifelong learning, ODL has become an integral part of the education landscape. However, ensuring the quality of ODL programs remains a critical challenge for educators and institutions. Among the various aspects of quality assurance, assessing and evaluating learning outcomes in ODL programs stands out as a complex and multifaceted task.

Assessing and evaluating learning outcomes is an essential component of any educational system, serving as a means to measure students' knowledge, skills, and competencies. It provides valuable insights into the effectiveness of teaching and learning processes, helping educators identify areas of improvement and make informed decisions about instructional strategies. In traditional face-to-face education, assessment methods such as exams, projects, and presentations are commonly used. However, the unique characteristics of ODL pose distinct challenges when it comes to assessing and evaluating learning outcomes.

One of the primary challenges in assessing and evaluating learning outcomes in ODL programs is the lack of direct physical supervision. Unlike traditional classrooms, where instructors can directly observe students' participation and performance, ODL programs rely heavily on self-paced learning and remote communication. This lack of physical presence makes it challenging to monitor and assess students' progress accurately. Educators must find alternative methods and tools to evaluate learning outcomes effectively while maintaining academic integrity.

Another challenge arises from the diverse learner populations in ODL programs. ODL attracts students from various backgrounds, age groups, and educational experiences. These learners have different learning styles, motivations, and levels of prior knowledge. Designing assessments that accommodate such diversity and provide equitable opportunities for all students to demonstrate their learning outcomes is a complex task. It requires careful consideration of assessment formats, clear instructions, and accommodations for different learning needs.

Furthermore, the authenticity and validity of assessments in ODL programs must be ensured. With the proliferation of online resources and readily available information, there is an increased risk of plagiarism and academic dishonesty. Ensuring that assessments accurately reflect students' individual capabilities and prevent unauthorized collaboration becomes crucial. Educators must explore innovative assessment methods, including project-based assessments, simulations, and authentic performance tasks, that promote critical thinking, problem-solving, and application of knowledge.

Technological infrastructure and support also play a significant role in addressing challenges in assessing and evaluating learning outcomes in ODL programs. Institutions must invest in robust learning management systems (LMS) and assessment platforms that offer secure and reliable assessment environments. Additionally, providing adequate technical support and guidance to students is essential to minimize technological barriers that may hinder their ability to participate in assessments effectively.

In conclusion, assessing and evaluating learning outcomes in ODL programs presents unique challenges that require innovative solutions. The lack of direct physical supervision, diverse learner populations, maintaining authenticity and validity, and ensuring adequate technological infrastructure are among the key challenges faced by educators and institutions. Overcoming these challenges is crucial to sustain and enhance the quality of ODL programs. By exploring alternative assessment methods, leveraging technology, and considering the diverse needs of learners, educators can develop effective assessment strategies that accurately measure learning outcomes and support student success in ODL programs.

Literature Review

Ahern, T. C., & McInnerney, J. M. (2010) discusses the challenges and opportunities of assessing and evaluating online learning. The authors argue that online learning presents unique challenges for assessment, but also offers new opportunities for innovation. Bruff, D. (2009) discusses the need for a new approach to assessment in online learning. The author argues that traditional

assessment methods are not effective in online learning environments, and that a new approach is needed that is more flexible, learner-centered, and focused on authentic learning. Garrison, D. R., Anderson, T., & Archer, W. (2000) presents a model of cognitive presence in online learning. The authors argue that cognitive presence is essential for effective learning in online environments, and that it can be fostered through the use of computer conferencing. Orr, D., & Pinder, R. (2011) discusses the practices and challenges of assessment in online learning. The authors argue that assessment in online learning is complex and requires a flexible approach that takes into account the unique characteristics of online environments. Savin-Baden, M., & Major, C. H. (2013) provides an overview of problem-based learning (PBL). The authors argue that PBL is an effective approach to learning that can be used in both online and face-to-face environments.

Brooks, C., & Kember, D. (2014) discusses the use of rubrics to assess student learning in an online course. The authors argue that rubrics can help to improve the reliability and fairness of assessment and can also provide students with clear expectations for their work. Henderson, M., & Phillips, P. (2012) reviews the literature on authentic assessment in online learning environments. The authors argue that authentic assessment can be an effective way to assess student learning in online environments, and that it can help to promote deep learning. McInnerney, J. M., & Zemke, R. (2015) provides a practical guide to assessment in online learning. The authors discuss a variety of assessment methods and provide tips on how to select and use the methods that are most appropriate for your specific needs. Orr, D., & Bruff, D. (2016) provides an overview of assessment in online and blended learning environments. The authors discuss the challenges and opportunities of assessment in these environments and provide strategies for overcoming the challenges and maximizing the opportunities. Russell, T. L., & McPherson, T. (2018) discusses the challenges and opportunities of scaling up online learning. The authors argue that scaling up online learning requires a careful consideration of the pedagogical and technological challenges, and that it can be a successful way to provide high-quality education to a wider range of learners. Biswas, S., & Ghosh, D. (2016) discusses the challenges and strategies for assessment in open and distance learning (ODL) in India. The authors argue that assessment in ODL is complex and requires a flexible approach that considers the unique characteristics of ODL environments. Chawla, S. (2017) reviews the literature on assessment in ODL in India. The author argues that assessment in ODL is a complex and evolving field, and that there is a need for more research on

the topic. Dwivedi, A., & Kumar, A. (2018) presents a case study of assessment of learning outcomes in IGNOU, India's largest ODL institution. The authors argue that IGNOU has made significant progress in assessment of learning outcomes, but that there is still room for improvement. Ghosh, D., & Biswas, S. (2019) provides a perspective on assessment in ODL from India. The authors argue that assessment in ODL is a complex and challenging task, but that it is essential for ensuring the quality of ODL programs.

Mishra, S., & Singh, S. (2020) reviews the literature on assessment of learning outcomes in ODL. The authors argue that assessment of learning outcomes is a complex and challenging task, but that it is essential for ensuring the quality of ODL programs. Chatterjee, S., & Ghosh, S. (2021) presents a case study of assessment of learning outcomes in IGNOU. The authors argue that IGNOU has made significant progress in assessment of learning outcomes, but that there is still room for improvement. Dash, S., & Sahoo, S. (2022) discusses the challenges and strategies for assessment in open and distance learning (ODL) in India. The authors argue that assessment in ODL is complex and requires a flexible approach that considers the unique characteristics of ODL environments. Gupta, R., & Kumar, A. (2022) reviews the literature on assessment of learning outcomes in open and distance learning. The authors argue that assessment of learning outcomes is a complex and challenging task, but that it is essential for ensuring the quality of ODL programs. Mishra, S., & Singh, S. (2023) presents a case study of assessment of learning outcomes in a private university in India. The authors argue that the university has made significant progress in assessment of learning outcomes, but that there is still room for improvement. Rai, P., & Upadhyay, S. (2023) discusses the challenges and strategies for assessment in open and distance learning (ODL) in India from the perspective of the industry. The authors argue that assessment in ODL is complex and requires a flexible approach that considers the unique characteristics of ODL environments.

A few literature gaps related to "Addressing Challenges in Assessing and Evaluating Learning Outcomes in ODL Programs" from the research papers mentioned above:

- The use of technology in assessment: Most of the research papers focus on traditional assessment methods, such as exams and quizzes. There is a need for more research on the use of technology in assessment, such as online assessments and simulations.
- The role of feedback in assessment: Most of the research papers focus on the assessment of learning outcomes, but there is less research on the role of feedback in assessment. Feedback is essential for student learning, and more research is needed on how to provide effective feedback in ODL programs.
- The impact of assessment on student motivation: Assessment can have a significant impact on student motivation. More research is needed on how to design assessments that motivate students to learn and achieve their goals.

Research Methodology

***Objectives*:**

Objective 1:

To identify and analyze the key challenges faced by educators in assessing and evaluating learning outcomes in Open and Distance Learning (ODL) programs.

Objective 2:

To explore and propose innovative assessment methods and strategies that can effectively address the identified challenges and enhance the quality of assessing and evaluating learning outcomes in ODL programs.

Hypothesis

Null Hypothesis:

Implementing innovative assessment methods and strategies tailored for Open and Distance Learning (ODL) programs will not have a significant impact on the accuracy, authenticity, and validity in assessing and evaluating learning outcomes in ODL programs, and therefore, will not enhance the overall quality of ODL education.

Alternate Hypothesis:

Implementing innovative assessment methods and strategies tailored for Open and Distance Learning (ODL) programs will have a significant impact on the accuracy, authenticity, and validity in assessing and evaluating learning outcomes in ODL programs, leading to the enhancement of the overall quality of ODL education.

Research Design, Sample Size, and Sampling Plan:

For this study, a descriptive research design will be employed. The qualitative phase will involve conducting interviews and focus groups with educators and administrators in ODL programs to gather in-depth insights into the challenges faced in assessing and evaluating learning outcomes.

A sample size of 50 educators/administrators is adopted to ensure adequate representation and achieve meaningful results. A purposive sampling approach will be used to select educators and administrators who have experience with ODL programs. This approach will allow for a diverse range of perspectives and experiences to be included in the study.

Data Analysis and Testing

Section 1: Demographic Information

Table 1. Demographic Information of Participants in the Open and Distance Learning (ODL) Program.

What is your role in the Open and Distance Learning (ODL) program? (Select one)					
Educator			Administrator		
33			17		
How many years of experience do you have in ODL education?					
Less than 1 year	1-5 years	6-10 years	11-15 years	More than 15 years	Total
11	9	13	7	10	50

The table presents the demographic information of the participants in the ODL program, specifically their roles and years of experience in ODL education. Out of the total 50 participants, 33 identified themselves as educators, while 17 identified as administrators. Regarding their experience, 11 participants reported having less than 1 year of experience, 9 had 1-5 years, 13 had 6-10 years, 7 had 11-15 years, and 10 had more than 15 years of experience in ODL education.

Section 2: Challenges in Assessing and Evaluating Learning Outcomes

Please rate your level of agreement with the following statements on a 5-point Likert scale, where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree."

Table 2. Participants' Ratings of Challenges in Assessing and Evaluating Learning Outcomes in ODL Programs.

Item	1	2	3	4	5	Total
Assessing and evaluating learning outcomes in ODL programs is challenging due to the lack of direct physical supervision.	4	6	12	14	14	50
The diverse learner population in ODL programs poses challenges in assessing and evaluating learning outcomes.	5	7	8	19	11	50
Ensuring the authenticity and validity of assessments is a significant challenge in ODL programs.	3	5	7	13	22	50
Technological limitations and support issues hinder the effective assessment of learning outcomes in ODL programs.	6	9	11	16	8	50

The table presents participants' ratings of the challenges associated with assessing and evaluating learning outcomes in Open and Distance Learning (ODL) programs. Regarding the challenge of the lack of direct physical supervision, participants rated their agreement as follows: 4 participants strongly disagreed, 6 disagreed, 12 were neutral, 14 agreed, and 14 strongly agreed. In terms of the challenges posed by the diverse learner population, participants' ratings were as follows: 5 participants strongly disagreed, 7 disagreed, 8 were neutral, 19 agreed, and 11 strongly agreed. Participants' ratings of the challenge of ensuring the authenticity and validity of assessments were: 3 participants strongly disagreed, 5 disagreed, 7 were neutral, 13 agreed, and 22 strongly agreed. Regarding technological limitations and support issues hindering the effective assessment of learning outcomes, participants' ratings were as follows: 6 participants strongly disagreed, 9 disagreed, 11 were neutral, 16 agreed, and 8 strongly agreed. These ratings provide insights into the perceived challenges in assessing and evaluating learning outcomes in ODL programs, highlighting the varying degrees of agreement among the participants.

Section 3: Innovative Assessment Methods and Strategies

Please rate your level of agreement with the following statements on a 5-point Likert scale, where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree."

Table 3. Participants' Ratings of Innovative Assessment Methods and Strategies in ODL Programs.

Item	1	2	3	4	5	Total
Innovative assessment methods can improve the accuracy and authenticity of assessing learning outcomes in ODL programs.	4	5	3	17	21	50
Using project-based assessments and authentic performance tasks can enhance the validity of assessing learning outcomes in ODL programs.	3	6	9	14	18	50
Incorporating technology-supported assessments can address the challenges faced in assessing learning outcomes in ODL programs.	4	6	8	19	13	50
Providing clear instructions and guidelines for assessments can accommodate the diverse learner population in ODL programs.	3	4	9	19	15	50

The table displays participants' ratings of their agreement with statements regarding innovative assessment methods and strategies in Open and Distance Learning (ODL) programs. Regarding the statement on innovative assessment methods improving the accuracy and authenticity of assessing learning outcomes, participants' ratings were as follows: 4 participants strongly disagreed, 5 disagreed, 3 were neutral, 17 agreed, and 21 strongly agreed. In terms of using project-based assessments and authentic performance tasks to enhance the validity of assessing learning outcomes, participants' ratings were: 3 participants strongly disagreed, 6 disagreed, 9 were neutral, 14 agreed, and 18 strongly agreed. Participants' ratings of incorporating technology-supported assessments to address assessment challenges in ODL programs were as follows: 4 participants strongly disagreed, 6 disagreed, 8 were neutral, 19 agreed, and 13 strongly agreed. Regarding the statement on providing clear instructions and guidelines to accommodate the diverse learner population, participants' ratings were: 3 participants strongly disagreed, 4 disagreed, 9 were neutral, 19 agreed, and 15 strongly agreed. These ratings provide insights into participants' perceptions of the effectiveness of innovative assessment methods and strategies in ODL

programs. The varying degrees of agreement suggest the potential value of these approaches in enhancing the assessment process and outcomes in the ODL context.

Section 4: Overall Perception of Quality Enhancement

Please rate your level of agreement with the following statements on a 5-point Likert scale, where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree."

Table 4. Participants' Ratings of Overall Perception of Quality Enhancement in ODL Programs

Item	1	2	3	4	5	Total
Implementing innovative assessment methods and strategies can enhance the overall quality of ODL education.	3	2	4	19	22	50
Addressing the challenges in assessing and evaluating learning outcomes can contribute to the effectiveness of ODL programs.	9	4	11	15	11	50

The table illustrates participants' ratings of their agreement with statements regarding the overall perception of quality enhancement in Open and Distance Learning (ODL) programs. In terms of the statement on implementing innovative assessment methods and strategies enhancing the overall quality of ODL education, participants' ratings were as follows: 3 participants strongly disagreed, 2 disagreed, 4 were neutral, 19 agreed, and 22 strongly agreed. Regarding the statement on addressing the challenges in assessing and evaluating learning outcomes contributing to the effectiveness of ODL programs, participants' ratings were: 9 participants strongly disagreed, 4 disagreed, 11 were neutral, 15 agreed, and 11 strongly agreed. These ratings provide insights into participants' perceptions of the relationship between innovative assessment methods, addressing challenges in assessing and evaluating learning outcomes, and the overall quality of ODL education. Most participants expressed agreement, suggesting a positive association between these factors and the effectiveness and quality of ODL programs.

Hypothesis Testing

Null Hypothesis:

Implementing innovative assessment methods and strategies tailored for Open and Distance Learning (ODL) programs will not have a significant impact on the accuracy, authenticity, and validity in assessing and evaluating learning outcomes in ODL programs, and therefore, will not enhance the overall quality of ODL education.

Table 5 T-Test Results (Sample Size: 50)

Group	Mean	Standard Deviation	t-value	p-value	Interpretation
Sample	3.68	0.94	2.45	0.017	Significant ($p < 0.05$)

The t-test was conducted on a sample of 50 participants to evaluate the impact of implementing innovative assessment methods on the overall quality of ODL education. The sample mean was 3.68, with a standard deviation of 0.94. The calculated t-value was 2.45, indicating a significant result ($p < 0.05$). Thus, the alternate hypothesis was accepted, suggesting that implementing innovative assessment methods has a significant positive impact on the overall quality of ODL education.

Findings

The findings of the data analysis and testing suggest that implementing innovative assessment methods tailored for Open and Distance Learning (ODL) programs has a significant positive impact on the accuracy, authenticity, and validity of assessing and evaluating learning outcomes in ODL. The results indicate that these innovative methods enhance the overall quality of ODL education. The statistically significant t-value (2.45) and the p-value (0.017) below the significance level ($p < 0.05$) support the acceptance of the alternate hypothesis. This implies that ODL programs can benefit from the implementation of innovative assessment strategies to improve the quality of education and enhance the assessment of learning outcomes.

Conclusion

In conclusion, the analysis and testing of the data provide evidence to support the acceptance of the alternate hypothesis. It suggests that implementing innovative assessment methods and strategies tailored for Open and Distance Learning (ODL) programs has a significant impact on the accuracy, authenticity, and validity of assessing and evaluating learning outcomes. These findings highlight the potential for enhancing the overall quality of ODL education by incorporating innovative assessment approaches. Educators and administrators in ODL programs can consider implementing these strategies to improve the assessment process and promote better learning outcomes for students.

Suggestions

To address the challenges in assessing and evaluating learning outcomes in Open and Distance Learning (ODL) programs, innovative assessment methods and strategies can be proposed. One such method is the use of online collaborative platforms to facilitate group projects and discussions, allowing learners to demonstrate their understanding and application of knowledge. Additionally, incorporating multimedia assessments, such as video presentations or interactive simulations, can provide more authentic and engaging evaluation opportunities. Adaptive assessments that adjust to individual learners' needs and abilities can also be implemented to personalize the assessment process. Furthermore, integrating self-assessment and reflection activities into the learning journey can empower learners to actively monitor their progress and identify areas for improvement. By embracing these innovative assessment methods and strategies, ODL programs can enhance the quality of assessing and evaluating learning outcomes while promoting learner engagement and achievement.

Limitations

While the study provides valuable insights into the impact of implementing innovative assessment methods in Open and Distance Learning (ODL) programs, it is important to acknowledge certain limitations. Firstly, the study was conducted with a relatively small sample size of 50 participants, which may limit the generalizability of the findings. Additionally, the study focused solely on the

perceptions of participants regarding the effectiveness of the assessment methods, without directly measuring the learning outcomes. Moreover, the study did not account for potential confounding variables or control groups, which could influence the observed results. Future research should address these limitations to provide a more comprehensive understanding of the topic.

Future Scope of the study.

The present study opens up several avenues for future research on the topic of implementing innovative assessment methods in Open and Distance Learning (ODL) programs. Firstly, conducting a larger-scale study with a more diverse sample would enhance the generalizability of the findings. Additionally, future research should consider incorporating objective measures of learning outcomes to provide a more comprehensive assessment of the impact of these methods. Furthermore, exploring the effectiveness of specific innovative assessment strategies in different ODL contexts and subject areas would contribute to a deeper understanding of their applicability and potential benefits. Finally, investigating the long-term effects of implementing these methods on student engagement, retention, and academic performance would provide valuable insights for ODL program improvement.

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Online Classes: Preferences and Experiences of Distance Learners

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Abstract

The COVID-19 pandemic situation has completely disrupted conventional system of instruction across the globe. As a result, online education has emerged as an alternative to traditional system of face-to-face learning. The sudden shift from offline to online mode has posed many challenges to students, teachers and institutions in adapting to new situation as they are totally unprepared for the new system of teaching and learning. In this context, an attempt is made in this study to examine the experiences of distance learners in online learning and to find out their preferences about different aspects of online classes. Data were collected from 216 post-graduate psychology students of Dr. B R Ambedkar Open University, Hyderabad by using Google form questionnaire. The study focused on experiences of learners, preferred modes of learning, duration and timing of classes, content delivery, conduciveness of environment, devices used, problems faced etc. The results showed that most of the distance learners are satisfied with online classes. Many students preferred blended mode of learning which is in agreement with the policy of University Grants Commission (UGC). They favored 45-minute duration of classes, a break in between classes, usage of slides, video and audio clippings during online classes, question & answer sessions, discussions, quizzes to enhance teacher-student, student-student and student-content interaction.

KEYWORDS

Learners, Learning, Classes, UGC, Teachers, Online, Psychology, Experiences, University Grants Commission.

Introduction

The recent pandemic situation worldwide forced the Governments to close the schools and colleges for longer periods in order to control the spread of virus disease. The UNESCO (2020) reported that by July 2020 about 111 countries ordered the closure of all schools, affecting over 1.07 billion students which constituted 61% of the global student population. This forced all educational institutions to adapt to online system to provide students with ongoing education and to avoid disruption in teaching learning process. This sudden transition from traditional face-to-face learning to fully remote online learning posed many challenges to students, teachers and institutions as they are not mentally and technologically ready to adapt to new system of online education.

The collaborative activities and discussions that occur in a physical classroom are difficult to replicate in online platform. But it has become a compulsion for educational institutions to accept online system irrespective of their level of preparation for it. Thus, the COVID-19pandemic has become instrumental for the promotion of online learning on a large scale worldwide although there was encouragement for online education since a long time.

Institutional Efforts

Responding to the global trends in online education and pandemic situation, Dr. B. R. Ambedkar Open University, Hyderabad, Telangana has quickly shifted to the mode of online learning for the benefit learners. As a first step in this direction, the university has purchased 46 Zoom licenses and arranged as many as 10,040 theory and practical classes for PG and UG students of different faculties during the years 2021 and 2022 as detailed below:

P G	No. of Classes	U G	No. of Classes
Theory Classes (All subjects)	4927	Theory Classes (All subjects)	4975
Practical Classes (Psychology only)	57	Practical Classes (Psychology only)	64
Viva-voce (Psychology only)	17	-------	---
Total classes	5001	Total classes	5039
Total Classes - P G & U G - Theory + Practicum + Viva: 5001 + 5039 = 10040			

Source: BRAOU Computer Centre

The Departments of different faculties of the university namely Arts, Commerce, Science and Social Sciences are covered under online education. As shown in the above table, the university has arranged 9902 theory classes of all disciplines and 188 practical classes, including viva-voce sessions. In total, as many as 10,040 online sessions were conducted during the years 2021 and 2022. As a part of university's online program, the Department of Psychology has conducted 171 practical classes for PG & UG students and 17 viva-voce sessions of three hours duration for PG students through online. Further, the university has adopted blended learning approach, as recommended by the University Grants Commission (UGC). Under this approach, 50% of the content is delivered through online and the remaining 50% through physical classes.

Many studies reported that teachers' quality is an important factor of improving performance and satisfaction of online learners (Gopal, 2021). Institutions providing online learning services need to focus on capacity building of online teachers. Recognizing the importance of trained manpower in online education program, Dr. B. R. Ambedkar Open University has designed and arranged various workshops and orientation programs for teachers. They are equipped with technical skills relevant to online teaching and learning. Some of the programs organised in 2021 and 2022 are: orientation program on understanding online education, capacity building program on ICT and blended learning, workshop on online teaching tools and content management, online course development for SWAYAM etc. After this, Dr. B. R. Ambedkar Open University, Hyderabad has launched online education program for PG and UG students. PG students had five online sessions

of one and half hour (90 minutes) duration per day and UG students had three sessions of one hour duration. In this background, an attempt is made in this study to find out the preferences and experiences of students about various aspects of online classes.

A Brief Review of Studies

Various studies have been conducted in India and abroad to understand the process of online teaching-learning and to identify the challenges faced by the persons involved in online education. According to the study of Agung et al (2020), over two-thirds of students in rural Indonesia reported the issues of unstable internet, insufficient data and incompatible learning devices. It was found that about 76% of students used incompatible devices for online learning. The study further reported that only 15% of students used laptop and 85% of them used mobile phone. Barbour et al (2018) observed that laptop or desktop is the appropriate device for online teaching and learning. Berge (2005) observed that digital- readiness in countries could influence online experience of students. The term digital-readiness refers to availability and adoption of information technologies and infrastructures in a country. It was observed that students from low digital-readiness countries could experience additional technology-related problems. Barbour & Reeves (2009) stated that students need to have digital literacy skills to find and use relevant information through technological devices.

An important factor in online education is how and what to do to ensure classroom interaction and collaborative activities in online platform. Moore (1989) has suggested three forms of interactions, which include: 1. Student-content interaction, 2. Student-student interaction and 3. Student-teacher interaction. Student-content interaction refers to student engagement with content by way of reading, watching, listening or viewing something presented to them. Some of the examples are: assigned readings (text books, articles), charts, video, audio lectures etc. Similarly, some common student-student interactions are discussions, question and answers between students, listening to peers' ideas etc. The third category teacher-student interactions involve providing feedback on assignments, mentoring individual learners, promoting peer teaching, showing empathy, question & answer sessions, quizzes, video/audio discussion etc. besides formal teaching.

It is observed that online education can lead to a sense of isolation, which can be detrimental to student success (Mclnnerney & Roberts, 2004). Therefore, integration of social interaction into online learning is essential. But many studies reported that online learning delivery during Covid pandemic lacked interactions and collaborative experiences (Baczek et al., 2021; Yates et al., 2020).

Chakravarthy, P et al (2020) conducted a study in Netaji Subhas University of Technology (New Delhi) to find out the opinion of under graduate students on different aspects of online education. The broad areas of the study include content delivery, interaction, assessment, health issues, social issues and general issues. The study reported the ideas and experiences of 358 students. The students had a mixed opinion about online education. A majority of the students (65.9%) felt that learning takes place better in physical classrooms than through online education and about 31.6% opined that online education is better than attending MOOCs. Regarding their views on different aspects of education, about 58.7% and 69.0% of students reported that slideshows and note-taking programs respectively are effective in disseminating information. An important factor of online education is how to make class more interactive. Majority students felt that the use of chat box (76.3%), and digital pen (80.2%) can make the online class interactive. Only a few students (36.0%) reported that showing the faces of teachers and students during lectures can improve interaction. It needs to be examined that why the majority students are not preferring to show their faces during online lectures. Other findings are that three-fourths of students (74.6%) felt that excessive screen time causes stress and half of the students opined that regular assessments improve online education.

Muthuprasad, T et al (2021) made an attempt to find out students' perception and preferences for online education in India during Covid-19 pandemic. The respondents were 307 agricultural graduates of different agricultural universities in India. Of these respondents, more than half of the students (52%) have not attended online classes earlier. The study focused on preferences, perceptions, advantages and constraints of online classes. According to the study, the students preferred: 1. Smart phones for online classes (58%) followed by laptop (36%), 2. Recorded classes uploaded on university website/YouTube (54%) followed by live classes that can be recorded (27%), 3. Video content supplemented with reading material (84%), 4. Teacher teaching with

PowerPoint presentation (53%), 5. Forty five (45) minutes duration of each class (46%), 6. Twice a week classes (58%), 7. Two to four hours a day for online classes (48%), 8. A break of 15 minutes between two classes, 9. Quiz (76%) and assignments (56%) at the end of every class for effective learning, 10. Online examinations (60%), 11. Objective mode of examination instead of descriptive examination (70%). Regarding the benefits and bottlenecks of online learning, the study reported that flexibility and convenience were the major favourable factors and poor connectivity was the major bottleneck. Regarding the factors that could lead to failure of online classes, many respondents reported that technological constraints, students' digital inefficiency, teachers' digital incompetency, lack of access to internet and distractions were major problems in online learning.

A study was conducted on 544 BBA/MBA students in Indian universities to identify the factors that affect students' satisfaction and performance in online learning. The results showed that four factors namely, quality of instructor, course design, prompt feedback and expectation of students have positive impact on students' satisfaction and performance. The findings also indicated that instructors' quality is the most dominant factor that affects students' satisfaction during online classes. The study concluded that institutions need to focus on these four factors to ensure a high-level satisfaction among online learners (Ram Gopal et al, 2021)

The study conducted in China by Yan. L et al (2021) examined school students' experience of online learning during Covid=19 pandemic. The study focused on four broad areas namely demographic, behaviour, experiences and expectations. According to the study, most of the school students (87.39%) used smart phones, followed by computers (25.43%) for online learning. The study also identified benefits and obstacles as perceived by school students. The benefits reported by the students are: more convenient to review course content (75%), 'can learn anytime and anywhere' (54%), helpful to develop self-regulation and autonomy (47%) and about 50% appreciated the access to courses delivered by famous teachers. In contrast, eyestrain due to long staring at screens (73%), poor internet connection (50%), disengagement caused by nearby disturbance (40%), confusion in setting up the platforms (20%) are perceived as obstacles in online learning.

Alamahasees, Z and Amin M O (2021) made an attempt in Jordan to understand perceptions of both students and teachers and to explore the effectiveness, challenges and advantages of online learning. The participants of the study were 280 under graduate and post graduate students and 50 teachers. The respondents indicated that online education problems lie in adapting to online learning, technical and internet issues, data privacy and security. The advantages were mainly self-learning, low costs, convenience and flexibility. The study recommended that blended learning would help in providing a rigorous learning environment.

The case study made in Punjab university, Pakistan by Mahamood, Samreen (2020) analysed the process of implementation of online education programs and identified various instructional strategies for online teaching in higher education. The strategies identified were:

1. **Voice and Pitch Management**: It is necessary for teachers to know the importance of voice modulation and pitch management in online teaching. Bao (2020) suggested that speaking gently/slowly is beneficial for students as it helps students in writing essential lecture points.
2. **Ensuring Higher Interactivity**: Teacher-student interaction needs to be given priority in planning online classes.
3. **Preparation of Smaller Modules**: Teachers need to prepare online class materials of less than 30 minutes to ensure concentration.
4. **Providing Learning Material Prior to Online Class**: Sharing the reading material before the class and asking the students to present a brief explanation of what they have understood improves online class discussion and interaction.
5. **Recording Online Lecture**: Online lectures need to be recorded for sharing them with students. This will be beneficial for students who missed or did not understand any part of the lecture.

Recent studies on online education mostly focused on students as subjects of study to investigate their experiences and feelings about online learning process. Very few studies focused on teachers' experiences and the strategies adopted for online teaching when they shifted to online education during the pandemic. One such study which investigated the teachers' online teaching activities was Taiwan's study by Wu S Y (2021). The study explored online teaching activities adopted by

teachers due to the suspension of classroom teaching during COVID-19 pandemic. The study also explored the similarities and differences among teachers of different levels - colleges, secondary schools and elementary schools - in the design of their online teaching activity processes. A sample of 223 teachers was drawn from schools and colleges through convenient sampling method. Descriptive statistics were used for analysing the data. According to the study, the modes frequently used in online teaching, about 40% of the teachers used synchronous teaching (teachers and students go online at the same time to carry out teaching and learning activities), 29% teachers used asynchronous teaching and 31% teachers used blended teaching. Among the four teaching ategories, the top four activities were 1. Roll call, 2. Lecturing with a presentation screen, 3. In-class task (assignment) allocation and 4. Whole-class synchronous video-/audio-based discussion. Thus, the most common behaviour in each category was teaching behaviour.

According to the study, most of the teachers at all levels frequently lectured with a presentation screen and shared their computer screens in online teaching. With regard to interaction, it was found that the teachers often conducted a whole-class synchronous discussion after teaching and allowed students to become familiar with the teaching content through their own practice. In terms of playing videos, most videos played in colleges were made by teachers, while most videos played in secondary and elementary schools were made by others.

Zoom Fatigue

Zoom fatigue, also called virtual fatigue, refers to the exhaustion one feels after any kind of video call. It is tiredness or stress associated with the overuse of virtual platforms of communication. It stems from how we process information over video. The phenomenon of zoom fatigue has been attributed to an overload of non-verbal cues and communication that does not happen in normal conversations. People have to pay more attention to non-verbal cues like pitch and tone of voice, facial expressions and body language. It requires the brain to work harder than in a face-to-face setting. Slight delay and silence in verbal responses create negative impression of others and generates unpleasant feelings. This may lead to misinterpretation of words. In video calls, minds are together but bodies are not. This cognitive dissonance causes unpleasant feelings which are stressful. Bailenson of Stanford University (2021) identified four causes for zoom fatigue. 1.

Excessive amount of eye contact with listeners generates stressful experiences. In online classes, everyone looks at everyone all the time. Constant staring at each other is uncomfortable. 2. Seeing one's own face on screen for longer hours is stressful. 3. Online class reduces one's mobility as teachers have to sit in the same spot before the camera. 4. Cognitive load is higher in video programs.

The above studies conducted on online education system focused on various aspects of online learning. But there are no much studies on preferences of online learners particularly with regard to duration of each online class, duration of online classes per day, timing of classes, need and extent of break during online classes, presentation techniques, types of classes (online, offline, blended), percentage of each mode and the specific problems the learners faced in attending online classes. Hence, an attempt is made in the present study to identify the preferences and examine the experiences of online students.

Objectives of the Study

The objectives of the study are:

- To examine the experiences of distance learners who have attended online classes
- To identify the preferences of students about the structure of online classes –content delivery, timing, duration, break, digital devices, learning platforms etc.
- To identify the strategies for effective online teaching and learning

Methodology

The respondents of the study were the post graduate psychology students of Dr. B. R. Ambedkar Open University, Hyderabad who have attended online practical classes for six days in two spells of three days each. Google form with 28 items was prepared and administered on250 post graduate students. Of these, 216 students submitted the forms successfully and it served as final sample of the study. The questionnaire consists of multiple-choice questions, open and closed questions. Pre-test was also conducted on 56 students to improve the precision of the Google form questionnaire. Based on this, some of the items of the questionnaire were deleted, added and rephrased. The respondents of the study belonged to different districts of Telangana state, India

Results and Discussion

Demographic Background of Respondents

The personal information of the respondents which include gender, age, education, occupation and region were collected to know their background. The details are presented below.

Table 1: Demographic Background of Respondents

Gender	Age Group (Years)	Education	Occupation	Area
Female 102 (47%)	**20-30** 63 (29%)	**U G** 45 (21%)	**Govt. Sector** 90 (42%)	**Urban** 158 (73%)
Male 114 (53%)	**31 – 40** 75 (35%)	**P G** 153 (71%)	**Private Sector** 81 (37%)	**Rural** 58 (27%)
	41 – 50 64 (30%)	**M. Phil/Ph, D** 18(8%)	**Self-employment** 36 (17%)	
	51 – 60 14 (6%)		**House Wife** 9 (4%)	
N=216	N= 216	N= 216	N= 216	N= 216

The sample size of the study is 216. Of these, men sample (53%) is slightly higher than women (47%). Regarding age group, majority of the respondents are in the age group of 30 -50 years of age (65%), followed by 20-30 of years age (29%). Occupation wise data shows that 79% of the respondents are employed, either in Government sector (42%) or in private sector (37%). While 17% are having self-employment, only 4% are house wives. Educational background information shows that overwhelming majority of the respondents are already holding post-graduate degrees (71%) and 8% are having M. Phi/Ph. D degrees. Over one-fifth (21%) are degree holders. Similarly, most of the respondents are from urban area (73%) and the remaining 27% are from rural area.

Preferred Modes of Learning

The student-respondents were asked to indicate their preferred modes of learning for theory and practical classes.

Table 2: Preferred modes of learning for theory and practicum

MODE OF LEARNING	THEORY CLASSES		PRACTICUM	
	f	%	f	%
Offline	58	27	106	49
Online	48	22	30	14
Blended	110	51	80	37
Total	216	100	216	100

Of the three modes of learning, more than half of the distance learners (51%) preferred hybrid mode for theory classes. In contrast, nearly half of the learners (49%) preferred offline mode for practical classes. However, more than one-fourth (27%) of the students preferred online mode for theory and more than one-third (37%) preferred blended mode for practicum. Students of science subjects including psychology need hands-on experience in conducting experiments. In view of this, most of the students (86%) preferred either offline mode or blended mode for practicum and very few students (14%) supported online mode for practicum.

Blended Learning Model: Preferred percentage of each component

Blended learning involves both face-to-face classroom learning and online technology-based learning. Here, there are two components – offline and online. But the question here is what should be percentage of each component. It is in this direction that the UGC has issued a circular to all higher education institutions in May 2021 suggesting them to cover 60% of syllabus of each course through in-person classes and the remaining 40% of the syllabus through online mode. In this context, the students were asked to indicate ideal percentage of each component for effective learning. Three options were given to respondents in questionnaire to choose one. The options are: 50:50, 60:40 and 40:60. The first one denotes offline and the second one online.

Table 3: Preferred percentage of each component in blended learning

Component	Response Mode	Preferred percentage of each component	
		f	%
Offline (50) – Online (50)	50:50	72	33.3
Offline (60) – Online (40)	60:40	92	42.6
Offline (40) – Online (60)	40:60	52	24.1
Total		216	100

The results show that there is a mixed opinion among students. Of the three modes namely, 1. Offline 50% - Online 50%, 2. Offline 60% - Online 40% and 3. Offline 40% - Online 60%, majority students (75.9%) preferred the modes which have higher (60:40) or equal (50:50) weightage for offline classes. Less than one-fourth of students (24.1%) favoured the mode which has higher weightage for online classes (60:40).

Preferred Duration of Online Classes: Hours per Day and Minutes Per Session

In conventional system and distance learning system, usually the theory classes/personal contact program classes are conducted for five or six hours a day with each session of one hour or one and half hours. This needs to be examined whether the same duration can be followed for online classes also. The students were asked to indicate how many hours of teaching is comfortable per day and also the duration of each session in minutes.

Table 4: Online teaching hours per day and duration of each session in minutes

Number of Hours Per Day	f	%	Number of Minutes Per Session/Class	f	%
2 hours	46	21.3	30 minutes	10	4.8
3 hours	110	50.9	45 minutes	138	63.9
4 hours	46	21.3	60 minutes	60	27.8
5 hours	14	6.5	90	8	3.6
Total	216	100	Total	216	100

Majority of the distance learners (72%) preferred 2-3 hours of online classes per day. Only one-fifth (21%) of the students favoured 4 hours of online teaching per day. Similarly, the study conducted in India reported that half of the students favoured to have 2-to-4-hour online classes per day (Muthuprasad et al. 2021).With regard to duration of each session, majority students (64%) are in favour of 45 minutes duration followed by 60 minutes duration. It is clear that sessions of 90 minutes duration are not comfortable to students.

Need for Break in Online Classes

Continuous learning and long exposure to online teaching without any break is likely to affect the learning performance of students. Hence, the students were asked to state whether they need a break in between classes and if required, what should be the duration of break.

Table 5: Need for Break and Duration of Break

Need for Break	F	%	Duration of Break in Minutes	f	%
Yes	190	88	3-5 minutes	150	69
No	26	12	10-15 minutes	66	31
Total	216	100	Total	216	100

The above data show that most of the respondents (88%) favored a break in between online classes. With regard to the duration of break, nearly 70% of students wanted to have 3-5 minutes break and about 31% of students preferred 10-15 minutes break. Muthuprasad et al (2021) also found that nearly half of the students desired to have a break of 15 minutes in between two classes.

Convenient Timings for Online Classes

Another important factor for organizers of online classes to consider is convenient timings of students. Inconvenient timings would adversely affect the attendance rate of students in classes. Hence, an attempt is made find out convenient timings of students. Timings were set with three hours interval as the respondents have attended 3-hour duration of online classes from 11 am to 2 pm.

Table 6. Timings of convenience for online classes

Convenient Timings	f	%
8 – 11 am	22	10.2
11 – 2 pm	122	56.5
2 – 5 pm	24	11.1
5 – 8 pm	48	22.2
Total	216	100

More than half of the students (56.5%) preferred the timings of 11am to 2 pm. Other slot convenient for students is evening hours of 5 pm to 8 pm. Over one-fifth of students (22.2%) favored evening hours as these timings might be convenient for employees. Very few students, 10 % & 11%, preferred morning time (8-11 am) and afternoon time (2-5 pm) respectively. This suggests that organizers need to avoid morning and after noon time for online classes as they are not convenient for students.

Content Delivery

In a traditional face-to-face classroom setting, teachers usually use lecture method and blackboard for transmission of knowledge. A few developed institutions may have the facility of power point presentation in classrooms. But in online classrooms, there is much scope to use different technical devices for content presentation. This makes online classroom vibrant, interesting and effective. Even in online classes also, many teachers, particularly senior teachers who are not comfortable with online technology, use only lecture method. In this context, the respondents were asked to

indicate the type of materials/devices you expect the online teacher should use in delivering the content, in order to make the class effective and active.

Table 7: Use of audio, visual materials in online classes

Preferred Technical Devices	f	%
Ppt	32	14.8
Video/audio Clippings	10	4.5
Ppt, video, audio clippings	168	77.8
Only Lecture	6	2.9
Total	216	100

Most of the students (78%) opined that teachers should use power point, video and audio clippings while taking online classes, besides oral presentation. These modes of presentation attract the attention of students and make the teaching-learning process effective, active and interesting. The results suggest the use of multi-media approach and discourage lecture method alone in online classes. Muthuprasad et al. (2021) also reported that that more than half of the students (53%) desired teaching supported by PowerPoint presentation.

Experiences of Distance Learners in Online Learning

In the above pages, we have discussed the preferences of distance learners in online classes and how the online classes have to be designed. Now we will discuss the experiences of students in online learning.

Earlier Exposure to Online Classes and Devices used

For many students, the concept of online class may be very new and their online learning exposure may also be less. This concept suddenly emerged on a massive scale due to an outbreak of Covid. An attempt is made to find out whether the students had any exposure to online learning and also the devices they used for online classes.

Table 8. Past experience in online classes and Devices used for online classes

Earlier experience in online classes	f	%	Devices used for online classes	f	%
Yes	185	85.6	Laptop	34	15.7
No	31	14.4	Desktop	10	4.6
			Mobile	161	74.5
			I Pad/tablet	11	5.0

Most of the students (86%) had past experience of attending online classes. Regarding the use of devices, three-fourth of students (74.5%) have used mobiles/smart phones for attending online classes and only one-fifth of students (20.3%) have used laptop or desktop. The study conducted in China has also reported that 87% of students used smart phones for online education (Lixiang Yan, 2021). It is clear that the mobile users are far higher than laptop and desktop users for attending classes. This suggests that in online learning, the content presentation should be compatible with mobile technology. However, Barbour et al (2018) observed that laptop or desktop is the appropriate device for line teaching and learning.

Satisfaction with Online Classes

Though the online learning has certain limitations, yet the distance learners are comfortable with online classes. It may be due to the fact that they can attend classes from anywhere and at any time. It avoids travel and saves time. In this context, the students were asked to say whether the online classes were interesting and satisfactory.

Table 9. Satisfaction with online classes

Satisfaction	f	%
Satisfied	174	80.5
Uncertain	32	14.8
Not satisfied	10	4.6
Total	216	100

Most of the students (80.5%) are satisfied with online classes and found the classes interesting. However, about 5% of students are not satisfied and about15% of students are neutral. It is not clear whether the respondents are happy with online classes because of pandemic situation (Covid). It needs to be ascertained whether they prefer online classes even in normal days.

Need for online technology skills

Multiple studies observed that teachers and students need some technical skills for effective online teaching and learning. Patricia (2020) observed that students with less knowledge in technology are facing problems in attending online classes. Hence, the respondents were asked to say whether they require more technical skills for effective use of online classes.

Table 10: Need for Technical Skills

Need for more technical skills	f	%
Required	118	54.6
Not required	98	45.4
Total	216	100

There is mixed opinion on this item. More than half of the students (55%) opined that they require some more technical l skills for effective online learning. However, considerable number of students (45%) stated that they do not require further skills for online learning.

Conduciveness of Environment and Availability of Space

Usually, students attend online classes from home and the home environment is such that there would be family members and children around them. It is likely that there would be some distractions at home. Patricia (2020) reported that students who live in houses that are not spacious are facing problems in attending online classes. Hence, the students were asked to state whether they had disturbances at home while attending classes and their opinion about the conduciveness of home environment. Privacy is also required for learning and it is possible when there is separate space.

Table 11: Home Environment - Distractions, Conduciveness and Availability of Space at home

Occurrence of Distractions at Home	f	%	Home Environment is Conducive?	f	%	Availability of Separate Space at Home?	f	%
Many times	25	11.5	Yes	158	73.1	Yes	106	49.1
Some times	96	44.4	No	58	26.9	No	110	50.9
Rarely	44	20.3						
Never	51	23.6						
Total	216	100	Total	216	100	Total	2160	100

About one-fourth (24%) of students had no disturbances at home while attending online classes and 11% of students experienced disturbances very often. When the responses 'many times' and 'some times' are combined, about 56% of learners reported disturbances at home. However, majority students (73%) felt that home environment is conducive for online classes. With regard to the availability of separate space/room, the respondents are equally distributed. Half of the respondents have no separate room for online classes.

Internet Issues

Online education requires steady access to digital technology. But students living in rural areas may not have adequate access to online technology. Grishchenko (2020) reported that rural people and economically disadvantaged people have limited access to digital technology. Power supply is another important factor that affects online learning because one-fifth (20.3%) of the students are using computer/laptop for online classes.

Internet problems faced	f	%
Many times	4	1.8
Some times	66	30.6
Rare	52	24.1
Never	94	43.5
Total	216	100

The results show that majority of the students (67%) had not experienced much internet problems while attending online classes. This might be due to the fact that most of the respondents (73%) are from urban area. However, about one-third of the students faced internet problems. Rural sample constitute 27%.

Responses to open ended questions

Besides closed questions, there are some open questions in questionnaire. In the above pages, quantitative data obtained through closed items were analyzed. Now responses to open questions are presented below in the order of priority and high frequencies:

I. If you are teaching through online as a faculty, what would you do for effective teaching?

To deliver the content in an online class effectively and to make the class more interesting and engaging, the students said that they would:

1. Use audio, video clippings and ppt slides along with oral presentation
2. Make the online class more interactive by using chat box, quizzes, questions and answers
3. Use ppt slides
4. Use short experts' audio and video shows of 10-minute duration
5. Explain in Telugu also
6. Explain from basics
7. Would give more live examples, case studies
8. Intersperse lecture with stories
9. Ask students to open their videos
10. Assign some tasks to complete them in class
11. Conduct assessment tests periodically
12. Use white board

II. Problems Faced

About one-fifth of the respondents said that they have not faced any problem in online classes. The problems faced by other students are:

1. Internet issues/low band width
2. Noise problem from students' cross talking when they are in 'unmute' position
3. Less interaction with teachers
4. Lack of voice clarity/voice breaking

5. Disturbance from family members at home
6. Disturbance from colleagues in office
7. Non-availability of devices
8. Conduction of classes during working days
9. Zoom fatigue due to longer duration of classes
10. Mobile charging problem
11. Lack of break in classes
12. Irrelevant questions of students and wastage of time
13. Lack of online technology skills among teachers and students
14. Difficult to grasp in short time

III. Suggestions Offered by the Students

1. Explain by using ppt slides, video, and audio clips
2. Make the online class more interactive
3. Mute all students to avoid disturbance
4. Share ppt slides used in classroom to students
5. Record online classes and share with students
6. Arrange offline classes also
7. Give break between sessions
8. Conduct classes during weekends/holidays
9. Evening hours are convenient
10. Revision on the last day
11. Explain in Telugu also
12. Conduct more webinars to improve knowledge
13. Provide more time for questions
14. Taking screenshots and photos are not comfortable

Conclusion

An attempt was made in this study to find out preferences of students about different aspects of online classes and to examine their experiences in online learning. Data were collected from 216 post-graduate psychology students of Dr. B R Ambedkar Open University, Hyderabad by using Google form questionnaire. Simple descriptive statistics like frequencies and percentages were used for analyzing the data. Conclusions are drawn on the basis of data obtained. The results of the study would help the policy makers, administrators and teachers in understanding different factors of online education and in designing online program effectively.

- The students who have participated in the study are distance learners. They are mostly post-graduate degree holders besides the one currently pursuing, employed (Government or private), urbanites and are equally distributed gender wise.
- Of the three modes of learning – online, offline and blended – more than half of the students preferred blended learning mode for theory classes and offline mode for practicum.
- Blended learning involves both offline and online mode of teaching and learning. In this context, UGC suggested to offer courses with 60% offline and 40% online mode of teaching. The findings of the study are also in agreement with the UGC policy. Majority students (76%) preferred the modes which have higher (60:40) or equal (50:50) weightage for offline classes.
- Most of the distance learners (72%) preferred 2-3 hours of online classes per day. Similarly, students (64%) prefer 45-minute duration of each session followed by 60-minute duration (28%). It means overwhelming majority of students (92%) do not like class duration of more than 60 minutes.
- Online students (88%) want a break in between two classes and the preferred duration of break is 3-5 minutes (70%).
- Timing of online classes is also is an important factor to ensure higher participation of students. The convenient timings are 11 am to 2 pm (56%) and 5 pm to 8 pm (22%).
- An important factor for online teaching and learning is how to present the content effectively. Students (78%) want the teachers to use PowerPoint, video and audio clippings while taking online classes. In other words, content delivery through lecture method alone is not preferred.
- Many students (75%) are using mobile for attending online classes. Similar trend is found in other states and countries as well. Hence, content delivery needs to be designed in such way that is compatible with mobile technology. Many studies suggested that laptop/desktop is the appropriate device for online learning. Hence, universities may plan to have a tie up with corporate companies to supply laptops/desktops to students at subsidized rates. This would help students to benefit more from online learning
- Many students (55%) desired to have a orientation program on online technology for effective learning.

- In order to ensure effective online classroom interaction and active participation of students in teaching-learning process, the teachers can undertake activities like whole-class video/audio-based discussions, question & answer sessions, quizzes, chat box usage etc.
- Short audios/videos of 10-15 minutes duration may be prepared by the teachers concerned or other experts and they may be played during online class for discussion.
- Online teachers need to focus on voice modulation and pitch management practices.

Pre-class reading material or audio/video may be shared to students and encourage them to read and understand before they come to the online class and facilitate discussion during the class.

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Online and Distance Learning During the Covid-19 Pandemic

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Abstract

The predominant physical classrooms in the primary/traditional times were effective as they were the foundational blocks of education and due to lack of resources it was the only way for an individual to get a formal path of learning. However, today's times have completely changed the shape of education. Before the novel Covid-19, people were very much aware of online/distance learning and education and were also using it as per their needs, requirements, and circumstances.

Since the inception of Covid-19, every sector throughout the world had gone into a virtual mode. The education sector made the most out of it. All the courses offered by the institutions had inadvertently turned into online learning and offered everyone a new structure of education. The Covid era that lasted for two years made everyone so dependent on virtual education that most of the institutions have readily adopted the concept of hybrid learning where one can attend the physical classes for a few days and attend classes online for rest of the days. Distance learning is something which the modern generation can highly benefit from and which may increase their productivity.

KEYWORDS

Online Learning, Pandemic, Distance Education, Environmental Studies, Social Impact.

Introduction

India has around 35-40 million students taking admission into higher education and contributing to a very small gross enrolment ratio of around 26%; however, China with a larger population has a much larger gross enrolment ratio of 51.6%. If we really have to achieve the target of 50% by the new National Education Policy (NEP) 2020, we have to give preference to online learning. Besides, the NEP studies suggest that multi point entry-exits and credit banks will only be workable if they are sufficiently facilitated for adoption in an online education environment.

The concept of traditional education has changed a lot over the last couple of years. Being physically present in a classroom is not the only learning option anymore. Online education has various benefits (Özüdoğru, G. (2021)). One of the most convenient reasons is that online education is flexible. Online education enables the teacher and the student to set their own learning pace, and there is an added flexibility of setting a schedule that fits everyone's agenda. The pandemic caused further shocks to the conventional education system with schools forced to shut down during the lockdown period, and therefore there was transition of students and teachers to online teaching-learning.

Data says that in India around 250-300 million students were affected due to school closure at the onset of lockdowns due to Covid-19. Pandemic has disrupted education in more than 150 countries and affected around 1.6 billion students. Many countries implemented some or the other form of remote education.

In recent years, E-Learning and Ed-Tech companies are the new beginnings. This revolution affected the entire education process. Online learning made it easier and convenient to learn advances in science and technology. In this changing world, online education has become more accessible.

Another important aspect is budget. Students who enroll in online classes typically save money and do not suffer as much debt as traditional students (Sari, T., & Nayır, F. (2020)).

Cost saving also has the biggest effect on online education than conventional school education. In conventional mode of education, you need to pay for infrastructure costs, transportation, and time. In case of online education, all the other miscellaneous expenses get reduced (Huang, R., Tlili, A., Chang, T. W., Zhang, X., Nascimbeni, F., & Burgos, D. (2020)).

One more important aspect in this study is safety. Online study is a safe alternative in case of any threats. During lockdown, it was dangerous to step out of house. We all were well aware that during lockdown students were not supposed to come in physical proximity with each other, thereby reducing the possibility of disease spread.

Furthermore, there is considerable concern from the academic community about the quality of online learning. Pre-pandemic, some faculty and students were already sceptical about the value of online learning. The longer the pandemic lasts, the more they may question the value of online education. The obvious question is s , asking; can online education during the pandemic produce learning some outcomes that are similar to face-to-face learning before the pandemic?

Despite the documented benefits of online education before the pandemic, the actual impact of online education during Covid-19 students' academic performance is still unknown due to reasons outlined below.

On the one hand, several factors beyond the technology used could influence the effectiveness of online education, one of which is the teaching context.

In addition to these mixed results, little attention has been given to factors affecting students' acceptance of online education during the pandemic. With the likelihood that online education will persist post pandemic research in this area is warranted to inform online course design. In particular, prior research has demonstrated that one of the most important factors that influence student's performance in any learning environment is a sense of belonging, the feeling of being connected with and supported by the instructor and classmates.

The COVID-19 pandemic lockdown has ranged on now for more than a year and there is still too much uncertainty on its prognosis. This is especially given the contemporary underlying factors worldwide like globalization that eased its spread from one border to another through air, land and sea, hence escalating the health, social and economic situation with immeasurable damages on the human cost and the economies of the world. (Yilmaz Ince, E., Kabul, A., & Diler, İ. (2020)).

Many educational institutions have discontinued physical classes as a precaution to prevent the spread of the disease and the 2020 academic year has already been lost with 2021 was also unpredictable and that time alternative education systems with more convenient and reliable assessment strategies need to be created and innovated. Digital education has been introduced wit online learning platforms trending all over the world. This was however as a matter of crisis management.

Objectives of The Study

- To get better understanding of the concept of online education.
- To get better understanding of the importance of online education during and after coronavirus lockdown period.
- To ascertain the online education as a best possible solution to resolve the existing issues and upcoming challenges like Covid-19.
- To evaluate online Education System as a best tool to challenge uncertainties.
- To suggest the measures to uplift the standards of higher education to meet global challenge during such an accidental time.
- One more major part of distance learning or distance education, a form of education in which the main elements include physical separation of teachers and students during instruction and the use of various way to facilitate student-teacher communication.
- Distance learning traditionally has focused on non-traditional students, such as full-time workers, military personnel, and non-residents or individuals in remote regions who are unable to attend classroom lectures. However, distance education has become

an established part of the educational world, with trends pointing to ongoing growth (El Firdoussi, S., Lachgar, M., Kabaili, H., Rochdi, A., Goujdami, D., & El Firdoussi, L. (2020)).

Research Approach

This is qualitative research and the key source of the information in this research is the secondary data. As already mentioned, many schools and teachers were not prepared to run virtual classes, especially at the primary and secondary school levels. Therefore, at the beginning of the pandemic, those secondary teachers were in a privileged position. They had a large range of ICT tools at their disposal and fresh knowledge on how to use them, Organizing the educational process online, they could freely choose the form of inclusion of the experiment in to their lessons.

The described study was based on monitoring of teachers participating in some XYZ sector during academic projects in the pandemic situations. Some major consequences to have occurred during Covid-19 crisis have meant limited or n education, or falling further behind their peers for many who already experienced barriers in accessing education-children with disabilities. A decrease in the share of international students may, in turn, have severe repercussions on the funding model of some higher education institutes where international students pay higher education tuition fees than domestic ones.

Challenges confronting effective online learning

Online education is having so many problems such as internet connectivity, data shortage, network problems, lack of awareness, lack of awareness of the main challenges for online or distance learning do not realize the impact of this of learning. They may feel that online education is not as effective training within training centres and that trainee will miss the opportunity.

In other way if we can see solutions online earning can be an effective way to start and enhancement e-learning promotions. Develop communicating and develop effective communicating the public can be another approach towards creative awareness.

Second point is boning online education people around you sleeping and you alone attending classes/Learning, There types of courses make the learner bored with online learning. Get-out of these problems search for dynamic, fun and interactive online learning. Technical difficulties faced by students, the study are not in high quality, and many students does not know how to proceed. With this new technologies. Some of lacking in motivation, students not get motivation in online learning. Infrastructure problem, many students feel that if we were in school than they play, they roam meet with the friend.(Utomo, M. N. Y., Sudayanto, M., & Saddhono, K. (2020).)

Course structure and quality not good sometimes. Abundant distractions, lacking of discipline. All these kind of problems occur when online classes started. And how the educators adopt to the all challenges of on line education.

There are some common technical problems in online education. Covid-19 pandemic has disturbed teaching in a variety of institutions. It has tested the readiness of academic institutions to deal with such abrupt crisis. The analysis showed that the common online platforms in world in ZOOM, Microsoft teams offering online interactive classes, and WhatsApp in communication with students outside the class.

Online education comes with challenges irrespective of the status of development. This means that even the most developed countries also have their own share of the challenge. Course challenges related to content, design and delivery, characteristics of the individual student or the teacher, technological challenges, contextual challenges related to organizational, culture and societal (Anderson, A., & Grönlund, A. (2009))

Online learning during COVID-19 revealed that students indicated distraction of online classes as some of the challenges they faced.

Online intention among students as compared to traditional face to face study. Paechter and Maier (2010) in their study found that Austrian students still preferred face-to-face study for better communication.

Apprehension

Really thanks to technology advancement, the method that education is given has been Permanently altered. Online learning has developed into a versatile teaching method that allow students to conveniently access study material from the comfort of their homes. one side we can see that teaching is art and teachers have to become an actor and performer, teachers need to learn new ways of performing on a digital platform, to connect with their students, to create curiosity among them, to understand their requirements and help overcome anxiety and ambiguities perplexing their minds.

One of the major points to address the increasingly well-documented problem of teacher stress and attrition focusing upon the need for critical conversations about this problem.

While a variety of approaches can help students with communication apprehension, among the most common is the development of skills, such as through a basic communication course.

For our study, the basic course serves as an ideal environment to compare the level of apprehension and self-efficacy of students in blended and face-to-face modalities.

The history of education is as old as human civilization. Primitive people had to learn from nature. Now days like online shopping, online interview, online official work, online conference, etc. online education is a buzzword now a days, basically it is a learning system where student receive education through internet using their personal phones and other technology.

In the pre-pandemic world, online learning was viewed with apprehension quarters. Alongside the clear benefits of studying online-such as enhanced flexibility, greater convenience, and access to

new learning techniques and smart technologies-there were fears that employers might not take online qualifications seriously.

But in the post-pandemic world, employers see online study in a renewed light, said Andrew Vincent. It has become clear that there are benefits to this mode of learning that are immediately applicable in real-life employment situations.

We all knows that the Covid-19 pandemic has caused a dramatic transformation in education systems in which face-to-face education was candled to protect public health in many countries. (Katz, V. S., Jordan, A. B., & Ognyanova, K. (2021))

Never in the history of academic were online learning channels used so extensively at a global scale. Now, more students, parents, and teachers have learned how to use online tools for education and we believe that the blended learning approach will be the way to go forward for the industry. Education to date followed a system that had been in use for decades, but people started adopting new learning methods with Pandemic.

There are multiple reasons to believe that virtual education is the future of education. A some of the reasons pointed that students undertake, and institutes offer online classes. Altogether it provide a better experience to learners. Each and every students must process their unique situation and decide according to their needs and goals.

Although making education fun. That is what gasification is all about. Online education has become interesting and exciting and will continue to do so. Game based strategies, such as giving badges, leader boards, and activities that involve play, are gaining prominence. Play-based learning also improves cognitive and behavioural abilities. Hence, gamification will increasingly be an integral feature of education, development of skills, testing, assessment, and more.

Virtual reality and augmented reality will both be a reality when it comes to e-learning. Technology and education will fuse in a way unimaginable. Since every individual is unique and different, their cognitive abilities and understanding levels also differ.

Last but not the least, learning will be more video-based than ever in the future. In fact, this is perhaps the most important trend in online education.

There is an all-world out there when it comes to online education. In future, learning will also become flexible, where students will be able to access course content from anywhere, besides, students will have access to learning modules by expert tutors.

Most importantly virtual reality and education will play a big role in imparting knowledge (Nenko, Y., Kybalna, N., & Snisarenko, Y. (2020))

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Best Practices and Effectiveness of Online Learning

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Abstract

The 21st Century is the century of science and technology. During the pandemic situation, online learning was the only source of education. The University of Phoenix (1989) became the first institution to launch a fully online college, which was for Bachelors as well as Masters degrees.

Online learning offers solutions such as flexible study schedule and self-paced study patterns with tension-free environment. Students get great opportunities for effective learning. In India, online learning provides excellent opportunities for students to gain mastery over the content. Students can fill learning gaps through a technology–based education system. Online learning is flexible, it reduces cost, gives more free time, there is a variety of courses and we get immediate feedback. The government gives more focus on these courses with the help of DIKSHA, SWAYAM, NIOS, UGC, NCERT and Indira Gandhi National Open Schooling like these and many more institutions.

KEYWORDS
DIKSHA, SWAYAM, UGC, IGNOU, Open University.

Introduction

The 21st century is the century of science and technology. This century brought tremendous changes in every sector. Education is one of them. Before this, education was given with the help of classroom and traditional methods. In the traditional method, there is huge complexity and various challenges. However, with the help of technology, all these problems are solved successfully.

Brief History of Online Education

Online education began in the late 1900s when the postal services were developed in the US. This postal service was between students and teachers in the US. Ana Eliot Ticknor established the first official correspondence education program (Society to Encourage Home Studies) in Boston (Massachusetts) in 1873. In 1911, the University of Queensland (Australia) founded a Department of Correspondence Study. In 1946, The University of South Africa reshaped online education. Now this university is one of the world's biggest distance education colleges which are very popular for online learning. In the United States (1953), the University of House (Houston PBS) made distance-learning history, which was the first public television station in the United States. In this station, many of the courses were arranged in the evenings so that working students can join this class and view materials.

Television, Personal Computers and Internet are the important factors in online education. The University of Phoenix (1989) became the first institution which launched a fully online college, which offers both Bachelors as well as Masters Programmes. Glen Jones and Bernard Luskin started the web-based International University. The University of Toronto started the first-ever completely online course in 1984.

Definitions of Online Learning:

- "Education which takes place online or with the help of the internet is called online learning"
- "Online learning is the use of software programs to instruct students in content and skills and to facilitate learning in and out of the traditional classroom setting" – (Emotions, Technology and Learning, 2016)

- "Any form of learning conducted partly or wholly over the internet" – Bates (2016).
- "Online learning uses the internet as a delivery modality to offer thoughtfully designed, quality, student-focused learning experiences, built on proven best practices that create effective interactions between learners, peers, instructors, and content"
- "Online learning means educational activity in which instruction and content are delivered primarily via the internet and through emerging technologies"

Need for Online Learning:

1. It has the potential to support learning during challenging times

During the pandemic situation, online learning is the only source of education. Due to online learning, we can take continuing education. As a result, parents and students know the need of online learning during the pandemic situation.

2. Save students from dropping out

Dropout is a major problem in the Indian education system. There are various reasons for dropouts. Online learning is the only solution for academically backward, non – traditional and struggling students.

3. Online learning nurtures 21st-century skills

Independence is an important skill in the 21st century. In online learning students becomes independent. They learn various new things which are necessary for effective learning. They develop highly critical thinking, problem-solving and digital skills.

4. Voids of traditional schooling remain unresolved

Every year we see a lot of violence on school premises. For example – Ragging. Children and adolescents suffer from these issues. Looking at these issues schools and institutions are not safe for students. The solution for this problem is online learning. Parents and students feel free from these situations. It is the safest way of taking education.

5. Barriers to learning are hampering several students

School timing, traditional teaching methods, punishments, rules and regulations, school distance from home and many more are the barriers to learning that are hampering several students. Online learning offers proper solutions like flexible study schedules and self–paced study patterns with tension-free environments. Students get great opportunities for effective learning.

6. Helps in effective learning

In India, online learning provides a good opportunity for students to gain mastery over the content. Students can fill learning gaps through the technology – based education system. Therefore, online learning is as effective as traditional learning methods.

Importance of Online Learning

1. Connects students and teachers internationally

Online learning can connect students and teachers around the whole world. This is not possible in traditional education. Because the traditional education is given in a particular classroom. In on line learning student can attain classes from any part of the world. Student can build their network and develop their international mindset.

2. Offers flexible learning hours

In the traditional classroom method, you have to follow the timetable. Online learning offers students to learn whenever they have time. Due to flexible time, they are comfortable joining classes from anywhere. They can balance their life. There is a time limit. You can get access when you want.

3. Allows children to create their oven learning environment

The environment is very much necessary for healthy and comfortable learning. Sometimes this is not possible in a traditional classroom. You can learn anywhere in online learning. Every student is different from others. In this method, there is flexibility to learn anywhere to create a proper learning environment.

4. Considers individual learning patterns

Every child is different. They learn differently. In traditional teaching, you have less freedom. You have to follow rules and regulations in the traditional method. In online learning, children have more freedom to work in their own space, which will be helpful to improve learning experiences as well as better understanding.

5. Provides students with more control over their learning

In the traditional method, teachers and student have limited sources. However, online learning provides more flexibility and gives children control over their education. In online learning, there are various tasks for students. It allows students to learn different learning methods. This will help them retain information.

Advantages of Online Learning

1. Flexibility

While doing a service or job you can learn with the online method. However, in the traditional method, there is fix timetable. It is done as per institute availability. If you are currently doing jobs you cannot attain classes or you cannot complete these courses. Online learning method allows you to fix your schedule at your convenience. It means you can study whenever and whatever is convenient for you.

2. Reduced costs

Now a day's education is more expensive but online learning provides several ways for students to save money. Education fees, transportation, books, and course materials should be saved with the help of online learning.

3. More Free time

You make your planning for classes. There is no need to attain regular classes as per the institutes' availability. You can reschedule your classes also there is no need to go to campus. You can save time as well as money. You save transportation costs also. You will get extra time for your work as well as study.

4. Increased course variety

In online learning, there are various courses. There is a worldwide open platform for you. You can choose any course that you want. You are free to choose the course which you want. There is no limitations for choosing courses.

5. Carrier advancement opportunities

You are a master of your schedule as well as courses. Online learning provides you with several carrier advancement opportunities. Students prepare themselves very properly for better opportunities. You are free for doing any course which you want for your carrier.

6. Increased collaboration

Online learning students have better opportunities to collaborate with other students in virtual groups and online meetings and projects. Assignments, and feedback these types of activities are done in groups. Students get more time to one to one communicate with students as well as teachers.

7. Personalised Education

Shy students do not participate in classroom activities in the traditional method. But in online learning, students select their interesting courses. They have a lot of opportunities for practice. While doing class work-interesting methods are used so they can take active participation in various activities.

8. Enhanced Time management Skills

Online learning gives the flexibility to complete assignments and tasks. Students can manage time to complete these activities. Online learning teaches students how to manage time better. In this method, students gain knowledge as well as sharpen their management skills.

9. Immediate Feedback

In traditional learning, we have to wait days, weeks or months for results after examination. But in online learning when student uploads their assignments or exams we will get immediate results. Students will get proper feedback that is given by teachers. Due to this students' time will be saved also they get more time for other assignments.

10. Repeated Access to Course Materials

In the classroom, we have to give attention because it is taken only one time. We have to make notes also in lectures. If we are absent then there are various problems with understanding as well as notes. In online learning we have a lot of access also, we have video recordings. Students will use these videos as a supplementary tool to understanding concepts and assignments.

Disadvantages of Online Learning

- Social Isolation - Students learn alone so there is a fear of social isolation.
- Limited Teacher to student feedback – There are limited teachers. Therefore, the student-teacher ratio is not appropriate.
- Require Self-Motivation – we have to learn ourselves. There is no motivator for motivation.
- Health Issues- Due to more screen time there are health issues like- Eyes.
- No Cultural Exposure – There is only a learning process. There is no face-to-face communication. There are no rules, regulations or traditions for this method.
- Less importance to practicals – We cannot do practicals physically. Therefore, we will not get live experiences.

There are some disadvantages of online learning though it is very useful in today's generation. Government Takes following steps for online education

- PM e - Vidya
- DIKSHA
- Swayam Prabha TV Channel
- Shiksha Vani
- Digitally Accessible Information System (DAISY)
- PRAGYATA
- MANODARPAN
- SWAYAM
- All India Council for Technical Education
- National Programme on Technology Enhanced Learning for Engineering
- National Institute of Open Schooling
- University Grants Commission
- National Council of Educational Research and Training
- Indira Gandhi National Open Schooling

Various Reports about Online Learning

- Online Education in India: 2021, the market for online education in India is expected to witness a magnificent growth of eight times in the three years – KPMG India and Google
- India's online education market is set to grow to USD 1.96 billion and around 9.6 million by 2021 from USD 247 million and 1.6 million users in 2016- KPMG in India and Google in 2017: -
- Online education has reduced the age constraint for learning. (KPMG in India & Google, 2017) 101 International Journal of Policy Sciences and Law Volume 1, Issue 1 Now, imagine the change in statistics and the importance of e-learning with the dawn of COVID - 19 where one thing that helped millions of educational

institutes across India and the globe are virtual classrooms and different modes of online education.

- Further, there was a report in the media on April 13, 2020, quoting the Chairman of the University Grants Commission (UGC) as saying, among other things, that to maintain social distancing, online learning and e-education were the only way out, and that it was the need of the hour for students, teachers and the education system as a whole.(Menon, 2020)

Tips for Successful Online Learning

Learning Strategies

- Make your learning plan and stick with them
- Write brief summary in Video
- Organise small group discussions in small video break

Self-Care

- Identify your and your student's learning needs
- Take short breaks
- Maintain healthy habits

Time Management

- Add important due dates
- Minimize distractions
- Set aside time for learning

Logistics

- Make relevant information which is easily available to everyone
- Download all necessary software
- Make a plan for internet access
- Save your work every time

Conclusion

Today's world is the world of science and technology. The pandemic situation gives a gift to the world and that gift is online learning. In that situation, there is no alternative to education. Now a

day there are a lot of alternatives but online education is the best source of taking education. With the help of minimum expenditure, we can acquire various important skills in a limited period. Online education solves all the difficulties of students as well as parents.

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A Study on Implications of NEP – 2020 on ODL

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Abstract

The National Education Policy (NEP) 2020 in India has several implications on Open Distance Learning (ODL). One of the primary goals of the NEP 2020 is to increase access to education for all, regardless of their geographic location or socio-economic background. This is particularly relevant for ODL, which is designed to cater to the students who are unable to attend regular classes like conventional system of education due to various reasons. One of the key implications of NEP 2020 on ODL is the emphasis on digital technology. The policy recognizes the potential of online and digital technologies in enhancing the reach and quality of education. It highlights the need to develop digital infrastructure and tools to support online and distance learning. This is particularly relevant for ODL system, as it relies heavily on digital tools and platforms to deliver content to student's community.

Another important implication of NEP 2020 on ODL is the focus on flexibility and customization. The policy recognizes that every learner has unique needs and learning styles, and therefore, education should be designed to cater to the individual needs. ODL provides a unique opportunity to customize learning experiences to meet the needs of each learner. The NEP encourages the development of flexible and customizable educational programs that can be tailored to suit the needs of individual learners.

Additionally, NEP 2020 emphasises the importance of quality assurance in education. This is particularly relevant for ODL system, as it is often criticized for its quality and credibility. The policy encourages the development of robust quality assurance mechanisms for ODL programs to ensure that they meet the same standards as traditional classroom-based programs. Overall, the NEP 2020 has several implications on ODL. The policy recognizes the potential of digital technology, emphasizes flexibility and customization, and underscores the importance of quality assurance. These implications are likely to have a significant impact on the future of open distance education in India, and could potentially lead to increased access to quality education for millions of learners. Hence, an attempt is made here to study the implications of NEP2020 on ODL.

KEYWORDS

NEP2020, ODL, Digital Technology, Flexibility, Education, Digital Infrastructure

Introduction

Open and Distance Learning (ODL) programs have gained significant popularity and recognition in recent years as a flexible and accessible mode of education. With advancements in technology and the increasing demand for lifelong learning, ODL has become an integral part of the education landscape. However, ensuring the quality of ODL programs remains a critical challenge for educators and institutions. Among the various aspects of quality assurance, assessing and evaluating learning outcomes in ODL programs stands out as a complex and multifaceted task.

Assessing and evaluating learning outcomes is an essential component of any educational system, serving as a means to measure students' knowledge, skills, and competencies. It provides valuable insights into the effectiveness of teaching and learning processes, helping educators identify areas of improvement and make informed decisions about instructional strategies. In traditional face-to-face education, assessment methods such as exams, projects, and presentations are commonly used. However, the unique characteristics of ODL pose distinct challenges when it comes to assessing and evaluating learning outcomes.

One of the primary challenges in assessing and evaluating learning outcomes in ODL programs is the lack of direct physical supervision. Unlike traditional classrooms, where instructors can directly observe students' participation and performance, ODL programs rely heavily on self-paced learning and remote communication. This lack of physical presence makes it challenging to monitor and assess students' progress accurately. Educators must find alternative methods and tools to evaluate learning outcomes effectively while maintaining academic integrity.

Another challenge arises from the diverse learner populations in ODL programs. ODL attracts students from various backgrounds, age groups, and educational experiences. These learners have different learning styles, motivations, and levels of prior knowledge. Designing assessments that accommodate such diversity and provide equitable opportunities for all students to demonstrate their learning outcomes is a complex task. It requires careful consideration of assessment formats, clear instructions, and accommodations for different learning needs.

Furthermore, the authenticity and validity of assessments in ODL programs must be ensured. With the proliferation of online resources and readily available information, there is an increased risk of plagiarism and academic dishonesty. Ensuring that assessments accurately reflect students' individual capabilities and prevent unauthorized collaboration becomes crucial. Educators must explore innovative assessment methods, including project-based assessments, simulations, and authentic performance tasks, that promote critical thinking, problem-solving, and application of knowledge.

Technological infrastructure and support also play a significant role in addressing challenges in assessing and evaluating learning outcomes in ODL programs. Institutions must invest in robust learning management systems (LMS) and assessment platforms that offer secure and reliable assessment environments.

Additionally, providing adequate technical support and guidance to students is essential to minimize technological barriers that may hinder their ability to participate in assessments effectively.

In conclusion, assessing and evaluating learning outcomes in ODL programs presents unique challenges that require innovative solutions. The lack of direct physical supervision, diverse learner populations, maintaining authenticity and validity, and ensuring adequate technological infrastructure are among the key challenges faced by educators and institutions. Overcoming these challenges is crucial to sustain and enhance the quality of ODL programs. By exploring alternative assessment methods, leveraging technology, and considering the diverse needs of learners, educators can develop effective assessment strategies that accurately measure learning outcomes and support student success in ODL programs.

Literature Review

Ahern, T. C., & McInnerney, J. M. (2010) discusses the challenges and opportunities of assessing and evaluating online learning. The authors argue that online learning presents unique challenges for assessment, but also offers new opportunities for innovation. Bruff, D. (2009) discusses the need for a new approach to assessment in online learning. The author argues that traditional assessment methods are not effective in online learning environments, and that a new approach is needed that is more flexible, learner-centered, and focused on authentic learning. Garrison, D. R., Anderson, T., & Archer, W. (2000) presents a model of cognitive presence in online learning. The authors argue that cognitive presence is essential for effective learning in online environments, and that it can be fostered through the use of computer conferencing. Orr, D., & Pinder, R. (2011) discusses the practices and challenges of assessment in online learning. The authors argue that assessment in online learning is complex and requires a flexible approach that takes into account the unique characteristics of online environments. Savin-Baden, M., & Major, C. H. (2013) provides an overview of problem-based learning (PBL). The authors argue that PBL is an effective approach to learning that can be used in both online and face-to-face environments.

Brooks, C., & Kember, D. (2014) discusses the use of rubrics to assess student learning in an online course. The authors argue that rubrics can help to improve the reliability and fairness of assessment and can also provide students with clear expectations for their work. Henderson, M., & Phillips, P. (2012) reviews the literature on authentic assessment in online learning environments. The authors argue that authentic assessment can be an effective way to assess student learning in online environments, and that it can help to promote deep learning. McInnerney, J. M., & Zemke, R. (2015) provides a practical guide to assessment in online learning. The authors discuss a variety of assessment methods and provide tips on how to select and use the methods that are most appropriate for your specific needs. Orr, D., & Bruff, D. (2016) provides an overview of assessment in online and blended learning environments. The authors discuss the challenges and opportunities of assessment in these environments and provide strategies for overcoming the challenges and maximizing the

opportunities. Russell, T. L., & McPherson, T. (2018) discusses the challenges and opportunities of scaling up online learning. The authors argue that scaling up online learning requires a careful consideration of the pedagogical and technological challenges, and that it can be a successful way to provide high-quality education to a wider range of learners.

Biswas, S., & Ghosh, D. (2016) discusses the challenges and strategies for assessment in open and distance learning (ODL) in India. The authors argue that assessment in ODL is complex and requires a flexible approach that considers the unique characteristics of ODL environments. Chawla, S. (2017) reviews the literature on assessment in ODL in India. The author argues that assessment in ODL is a complex and evolving field, and that there is a need for more research on the topic. Dwivedi, A., & Kumar, A. (2018) presents a case study of assessment of learning outcomes in IGNOU, India's largest ODL institution. The authors argue that IGNOU has made significant progress in assessment of learning outcomes, but that there is still room for improvement. Ghosh, D., & Biswas, S. (2019) provides a perspective on assessment in ODL from India. The authors argue that assessment in ODL is a complex and challenging task, but that it is essential for ensuring the quality of ODL programs.

Mishra, S., & Singh, S. (2020) reviews the literature on assessment of learning outcomes in ODL. The authors argue that assessment of learning outcomes is a complex and challenging task, but that it is essential for ensuring the quality of ODL programs. Chatterjee, S., & Ghosh, S. (2021) presents a case study of assessment of learning outcomes in IGNOU. The authors argue that IGNOU has made significant progress in assessment of learning outcomes, but that there is still room for improvement. Dash, S., & Sahoo, S. (2022) discusses the challenges and strategies for assessment in open and distance learning (ODL) in India. The authors argue that assessment in ODL is complex and requires a flexible approach that considers the unique characteristics of ODL environments. Gupta, R., & Kumar, A. (2022) reviews the literature on assessment of learning outcomes in open and distance learning. The authors argue that assessment of learning outcomes is a complex and challenging task, but that it is essential for ensuring the quality of ODL programs. Mishra, S., & Singh, S. (2023) presents a case study of assessment of learning outcomes in a private university in India. The authors argue that the university has made significant progress in assessment of learning outcomes, but that there is still room for improvement. Rai, P., & Upadhyay, S. (2023) discusses the challenges and strategies for assessment in open and distance learning (ODL) in India from the perspective of the industry. The authors argue that assessment in ODL is complex and requires a flexible approach that considers the unique characteristics of ODL environments.

A few literature gaps related to "Addressing Challenges in Assessing and Evaluating Learning Outcomes in ODL Programs" from the research papers mentioned above:

- The use of technology in assessment: Most of the research papers focus on traditional assessment methods, such as exams and quizzes. There is a need for more research on the use of technology in assessment, such as online assessments and simulations.
- The role of feedback in assessment: Most of the research papers focus on the assessment of learning outcomes, but there is less research on the role of feedback in assessment. Feedback is essential for student learning, and more research is needed on how to provide effective feedback in ODL programs.
- The impact of assessment on student motivation: Assessment can have a significant impact on student motivation. More research is needed on how to design assessments that motivate students to learn and achieve their goals.

Research Methodology

Objectives

Objective 1:

To identify and analyze the key challenges faced by educators in assessing and evaluating learning outcomes in Open and Distance Learning (ODL) programs.

Objective 2:

To explore and propose innovative assessment methods and strategies that can effectively address the identified challenges and enhance the quality of assessing and evaluating learning outcomes in ODL programs.

Hypothesis

Null Hypothesis:

Implementing innovative assessment methods and strategies tailored for Open and Distance Learning (ODL) programs will not have a significant impact on the accuracy, authenticity, and validity in assessing and

evaluating learning outcomes in ODL programs, and therefore, will not enhance the overall quality of ODL education.

Alternate Hypothesis:

Implementing innovative assessment methods and strategies tailored for Open and Distance Learning (ODL) programs will have a significant impact on the accuracy, authenticity, and validity in assessing and evaluating learning outcomes in ODL programs, leading to the enhancement of the overall quality of ODL education.

Research Design, Sample Size, and Sampling Plan:

For this study, a descriptive research design will be employed. The qualitative phase will involve conducting interviews and focus groups with educators and administrators in ODL programs to gather in-depth insights into the challenges faced in assessing and evaluating learning outcomes.

A sample size of 50 educators/administrators is adopted to ensure adequate representation and achieve meaningful results. A purposive sampling approach will be used to select educators and administrators who have experience with ODL programs. This approach will allow for a diverse range of perspectives and experiences to be included in the study.

Data Analysis and Testing

Section 1: Demographic Information

What is your role in the Open and Distance Learning (ODL) program? (Select one)					
Educator			Administrator		
33			17		
How many years of experience do you have in ODL education?					
Less than 1 year	1-5 years	6-10 years	11-15 years	More than 15 years	Total
11	9	13	7	10	50

Table 1. Demographic Information of Participants in the Open and Distance Learning (ODL) Program.

The table presents the demographic information of the participants in the ODL program, specifically their roles and years of experience in ODL education. Out of the total 50 participants, 33 identified themselves as educators, while 17 identified as administrators. Regarding their experience, 11 participants reported having less than 1 year of experience, 9 had 1-5 years, 13 had 6-10 years, 7 had 11-15 years, and 10 had more than 15 years of experience in ODL education.

Section 2: Challenges in Assessing and Evaluating Learning Outcomes

Please rate your level of agreement with the following statements on a 5-point Likert scale, where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree."

	1	2	3	4	5	Total
Assessing and evaluating learning outcomes in ODL programs is challenging due to the lack of direct physical supervision.	4	6	12	14	14	50
The diverse learner population in ODL programs poses challenges in assessing and evaluating learning outcomes.	5	7	8	19	11	50
Ensuring the authenticity and validity of assessments is a significant challenge in ODL programs.	3	5	7	13	22	50
Technological limitations and support issues hinder the effective assessment of learning outcomes in ODL programs.	6	9	11	16	8	50

Table 2. Participants' Ratings of Challenges in Assessing and Evaluating Learning Outcomes in ODL Programs.

The table presents participants' ratings of the challenges associated with assessing and evaluating learning outcomes in Open and Distance Learning (ODL) programs. Regarding the challenge of the lack of direct physical supervision, participants rated their agreement as follows: 4 participants strongly disagreed, 6 disagreed, 12 were neutral, 14 agreed, and 14 strongly agreed. In terms of the challenges posed by the diverse learner population, participants' ratings were as follows: 5 participants strongly disagreed, 7 disagreed, 8 were neutral, 19 agreed, and 11 strongly agreed. Participants' ratings of the challenge of ensuring the authenticity and validity of assessments were: 3 participants strongly disagreed, 5 disagreed, 7 were neutral, 13 agreed, and 22 strongly agreed. Regarding technological limitations and support issues hindering the effective assessment of learning outcomes, participants' ratings were as follows: 6 participants strongly disagreed, 9 disagreed, 11 were neutral,

16 agreed, and 8 strongly agreed. These ratings provide insights into the perceived challenges in assessing and evaluating learning outcomes in ODL programs, highlighting the varying degrees of agreement among the participants.

Section 3: Innovative Assessment Methods and Strategies

Please rate your level of agreement with the following statements on a 5-point Likert scale, where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree."

	1	2	3	4	5	Total
Innovative assessment methods can improve the accuracy and authenticity of assessing learning outcomes in ODL programs.	4	5	3	17	21	50
Using project-based assessments and authentic performance tasks can enhance the validity of assessing learning outcomes in ODL programs.	3	6	9	14	18	50
Incorporating technology-supported assessments can address the challenges faced in assessing learning outcomes in ODL programs.	4	6	8	19	13	50
Providing clear instructions and guidelines for assessments can accommodate the diverse learner population in ODL programs.	3	4	9	19	15	50

Table 3. Participants' Ratings of Innovative Assessment Methods and Strategies in ODL Programs.

The table displays participants' ratings of their agreement with statements regarding innovative assessment methods and strategies in Open and Distance Learning (ODL) programs. Regarding the statement on innovative assessment methods improving the accuracy and authenticity of assessing learning outcomes, participants' ratings were as follows: 4 participants strongly disagreed, 5 disagreed, 3 were neutral, 17 agreed, and 21 strongly agreed. In terms of using project-based assessments and authentic performance tasks to enhance the validity of assessing learning outcomes, participants' ratings were: 3 participants strongly disagreed, 6 disagreed, 9 were neutral, 14 agreed, and 18 strongly agreed. Participants' ratings of incorporating technology-supported assessments to address assessment challenges in ODL programs were as follows: 4 participants strongly disagreed, 6 disagreed, 8 were neutral, 19 agreed, and 13 strongly agreed. Regarding the statement on providing clear instructions and guidelines to accommodate the diverse learner population, participants' ratings were: 3 participants strongly disagreed, 4 disagreed, 9 were neutral, 19 agreed, and 15 strongly agreed. These ratings provide insights into participants' perceptions of the effectiveness of innovative assessment methods and strategies in ODL programs. The varying degrees of agreement suggest the potential value of these approaches in enhancing the assessment process and outcomes in the ODL context.

Section 4: Overall Perception of Quality Enhancement

Please rate your level of agreement with the following statements on a 5-point Likert scale, where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree."

	1	2	3	4	5	Total
Implementing innovative assessment methods and strategies can enhance the overall quality of ODL education.	3	2	4	19	22	50
Addressing the challenges in assessing and evaluating learning outcomes can contribute to the effectiveness of ODL programs.	9	4	11	15	11	50

Table 4. Participants' Ratings of Overall Perception of Quality Enhancement in ODL Programs

The table illustrates participants' ratings of their agreement with statements regarding the overall perception of quality enhancement in Open and Distance Learning (ODL) programs. In terms of the statement on implementing innovative assessment methods and strategies enhancing the overall quality of ODL education, participants' ratings were as follows: 3 participants strongly disagreed, 2 disagreed, 4 were neutral, 19 agreed, and 22 strongly agreed. Regarding the statement on addressing the challenges in assessing and evaluating learning outcomes contributing to the effectiveness of ODL programs, participants' ratings were: 9 participants strongly disagreed, 4 disagreed, 11 were neutral, 15 agreed, and 11 strongly agreed. These ratings provide insights into participants' perceptions of the relationship between innovative assessment methods, addressing challenges in assessing and evaluating learning outcomes, and the overall quality of ODL education. Most participants expressed agreement, suggesting a positive association between these factors and the effectiveness and quality of ODL programs.

Hypothesis Testing

Null Hypothesis:

Implementing innovative assessment methods and strategies tailored for Open and Distance Learning (ODL) programs will not have a significant impact on the accuracy, authenticity, and validity in assessing and evaluating learning outcomes in ODL programs, and therefore, will not enhance the overall quality of ODL education.

Group	Mean	Standard Deviation	t-value	p-value	Interpretation
Sample	3.68	0.94	2.45	0.017	Significant ($p < 0.05$)

Table 5 T-Test Results (Sample Size: 50)

The t-test was conducted on a sample of 50 participants to evaluate the impact of implementing innovative assessment methods on the overall quality of ODL education. The sample mean was 3.68, with a standard deviation of 0.94. The calculated t-value was 2.45, indicating a significant result ($p < 0.05$). Thus, the alternate hypothesis was accepted, suggesting that implementing innovative assessment methods has a significant positive impact on the overall quality of ODL education.

Findings

The findings of the data analysis and testing suggest that implementing innovative assessment methods tailored for Open and Distance Learning (ODL) programs has a significant positive impact on the accuracy, authenticity, and validity of assessing and evaluating learning outcomes in ODL. The results indicate that these innovative methods enhance the overall quality of ODL education. The statistically significant t-value (2.45) and the p-value (0.017) below the significance level ($p < 0.05$) support the acceptance of the alternate hypothesis. This implies that ODL programs can benefit from the implementation of innovative assessment strategies to improve the quality of education and enhance the assessment of learning outcomes.

Conclusion

In conclusion, the analysis and testing of the data provide evidence to support the acceptance of the alternate hypothesis. It suggests that implementing innovative assessment methods and strategies tailored for Open and Distance Learning (ODL) programs has a significant impact on the accuracy, authenticity, and validity of assessing and evaluating learning outcomes. These findings highlight the potential for enhancing the overall quality of ODL education by incorporating innovative assessment approaches. Educators and administrators in ODL programs can consider implementing these strategies to improve the assessment process and promote better learning outcomes for students.

Suggestions

To address the challenges in assessing and evaluating learning outcomes in Open and Distance Learning (ODL) programs, innovative assessment methods and strategies can be proposed. One such method is the use of online collaborative platforms to facilitate group projects and discussions, allowing learners to demonstrate their understanding and application of knowledge. Additionally, incorporating multimedia assessments, such as video presentations or interactive simulations, can provide more authentic and engaging evaluation opportunities. Adaptive assessments that adjust to individual learners' needs and abilities can also be implemented to personalize the assessment process. Furthermore, integrating self-assessment and reflection activities into the learning journey can empower learners to actively monitor their progress and identify areas for improvement. By embracing these innovative assessment methods and strategies, ODL programs can enhance the quality of assessing and evaluating learning outcomes while promoting learner engagement and achievement.

Limitations

While the study provides valuable insights into the impact of implementing innovative assessment methods in Open and Distance Learning (ODL) programs, it is important to acknowledge certain limitations. Firstly, the study was conducted with a relatively small sample size of 50 participants, which may limit the generalizability of the findings. Additionally, the study focused solely on the perceptions of participants regarding the effectiveness of the assessment methods, without directly measuring the learning outcomes. Moreover, the study did not account for potential confounding variables or control groups, which could influence the observed results. Future research should address these limitations to provide a more comprehensive understanding of the topic.

Future Scope of the study

The present study opens up several avenues for future research on the topic of implementing innovative assessment methods in Open and Distance Learning (ODL) programs. Firstly, conducting a larger-scale study with a more diverse sample would enhance the generalizability of the findings. Additionally, future research should consider incorporating objective measures of learning outcomes to provide a more comprehensive assessment of the impact of these methods. Furthermore, exploring the effectiveness of specific innovative assessment strategies in different ODL contexts and subject areas would contribute to a deeper

understanding of their applicability and potential benefits. Finally, investigating the long-term effects of implementing these methods on student engagement, retention, and academic performance would provide valuable insights for ODL program improvement.

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