Symbiosis Centre for Distance Learning
॥ वसुधैव कुटुम्बकम् ॥
Approved by All India Council for Technical Education (AICTE)

# SYMBIOSIS INTERNATIONAL RESEARCH JOURNAL ON ONLINE & DISTANCE LEARNING


SIRJODL: VOLUME 4 ISSUE 2 JULY 2022
ISSN 2582-9009

## SUSTAINING AND ENHANCING THE QUALITY OF ODL

PEER-REVIEWED | REFEREED | INTERNATIONAL | INTERDISCIPLINARY | BI-ANNUAL

SIRJODL: VOLUME 4 ISSUE 2 JULY 2022
ISSN 2582-9009

# 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.

SIRJODL: VOLUME 4 ISSUE 2 JULY 2022
ISSN 2582-9009



**Contact Address:**
**SIRJODL**
**Symbiosis Centre for Distance Learning (SCDL)**
1065 B, Gokhale Cross Road, Model Colony,
Pune - 411016, Maharashtra, INDIA.
Email: researchjournal@scdl.net

**Published in INDIA**

SIRJODL: VOLUME 4 ISSUE 2 JULY 2022
ISSN 2582-9009

# PATRON



## Editor-in-Chief



## Editor



## Co-Editor



## Editorial Board Members

SIRJODL: VOLUME 4 ISSUE 2 JULY 2022
ISSN 2582-9009

# TABLE OF CONTENTS



SIRJODL: VOLUME 4 ISSUE 2 JULY 2022
ISSN 2582-9009


**Contact Us:**

Editor
**Symbiosis International Research Journal on Online & Distance Learning (SIRJODL)**

Symbiosis Centre for Distance Learning (SCDL) 1065 B, Gokhale Cross Road, Model Colony, Pune - 411016, Maharashtra, India.

Website: www.scdl.net

**SIRJODL: Volume 4 Issue 2 July 2022**
**ISSN 2582-9009**

# The Shift from Face-To-Face to Online Tutorials since the Outbreak of the Covid-19 Pandemic: Assessing Learners' Perspectives at the Open University of Mauritius

**Ballah Permall, FHEA**
Lecturer
Communication, Media and Journalism
Open University of Mauritius
MAURITIUS

**Tomal K. Chadeea, FHEA**
Lecturer
Design and Multimedia
Open University of Mauritius
MAURITIUS

**Kaviraj S. Sukon, PFHEA**
Director General
Open University of Mauritius
MAURITIUS

## *Abstract*

*Since the outbreak of the pandemic of Covid-19, many higher educational institutions have forcefully shifted from face-to-face to online tutorials while adopting various online teaching tools. The Open University of Mauritius (OU) was no exception (Sukon, 2021). Unfortunately, there was little time to pilot these tools effectively and therefore, it is important to assess learners' perspectives of online tutorials. This study focused on undergraduate learners at OU who were attending online tutorials during the pandemic as the university had to swing entirely into this particular mode of delivery to ensure the continuity of its academic activities. A quantitative study was conducted among undergraduate learners of the BA (Hons) Communication, Media and Journalism, and BA (Hons) Graphic Design and Multimedia programmes enrolled at the OU up to January 2020. The results showed that there were six factors that encapsulated the students' perspectives. The most important were "Academic Benefits of Online Tutorials", "Advantages of Online Tutorials," and "Positive Contribution of Tutors". However, learners felt a lack of interaction during the online sessions. This research will help institutions and academics to better negotiate the shift to online teaching.*

***KEYWORDS***

*Covid-19, online tutorial, online learning, student engagement, distance learning, Open University.*

## Introduction

Since March 2020, the education system has been completely disrupted worldwide owing to the outbreak of the Covid-19 pandemic, leading to the widespread closure of educational institutions (Sukon, 2021). However, to avoid strain during the pandemic season and comply with newly imposed restrictions, educational institutions have been compelled to adopt online teaching and learning (UNESCO, 2020). At the Open University of Mauritius (OU), a public university established in 2012, most programmes are offered through the open distance learning mode. During regular years under normal conditions, learners were allowed to attend five on-campus face-to-face tutorials on Saturdays for each module. During the lockdown, the OU had to cancel all face-to-face tutorials and shift entirely to online teaching to ensure the continuation of teaching and learning. However, this sudden shift could harm the teaching and learning, as both tutors and learners were accustomed to conventional face-to-face learning (Janmaimool & Nunsunanon, 2021; Nawi, Mohd Yusof, Kamaludin & Sain, 2021). Several major concerns in online classes during the pandemic period have been reported, including poor broadband internet services faced by tutees, an inauspicious home-learning environment, and the tutor's difficulty in promoting learners' engagement (Almahasees, Mohsen, & Amin, 2021; Sari & Nayir, 2020). Thus, an investigation of how learners perceive online tutorials is imperative to ensure the sustainability of this mode of learning at the OU, and eventually, to better support their online learning needs. Hence, the specific research questions addressed in this study were as follows:

- What benefits and shortcomings of online tutorials have been perceived by learners since the Covid-19 pandemic?
- Has there been a change in students' engagement in tutorials since the pandemic?
- In the future, would learners choose online tutorials over face-to-face ones?

## Literature Review

### *Face-to-Face vs Online Tutorials: Advantages and Shortcomings*

In an ODL setting, the face-to-face classroom tutorial is a live interaction between the tutor and learner, convened to bring clarifications on complex aspects of the course content, respond to learners' queries, encourage student participation, and provide instant feedback on assignments to make learning more meaningful (Motaung & Makombe, 2021). The face-to-face mode imparts richer interpersonal attention and interaction, facilitating social learning and engagement, as learners can connect with the tutor in person, formulate questions, debate, and receive instant feedback (Dommett, Gardner, & Van Tilburg, 2019). In contrast, online tutorials are unlikely to accommodate a high degree of social interactions. Effective peer support activities such as sharing study notes or explaining complex concepts to classmates are difficult to replicate. This leads to isolation and demotivation (Suresh, Vishnu, Priya, & Gayathri, 2018).



Online learning can be characterized as learning experiences where learners, although not physically present in a classroom but equipped with proper technological devices such as computers and internet connection, can interact synchronously or asynchronously with instructors and other learners (Singh & Turman, 2019). In such a virtual learning environment, effective learning can only occur if internet connections are reliable and learners have access to appropriate technological devices and are engaged in various ways (Janmaimool & Nunsunanon, 2021). In contrast, face-to-face instruction is not dependent on digital technologies, and some learners still lack the basic tools to participate in online classes, such as the availability of an appropriate computer with internet connection (Paul & Jefferson, 2019). Furthermore, some tutors and learners still lack the necessary technical skills and appropriate competencies to use the specific digital tools offered by synchronous platforms to actively interact online (Ferri, Grifoni, & Guzzo, 2020). However, online education meets the needs of those who cannot commute to campus regularly, particularly ODL learners, due to professional, social, and family commitments (Paul & Jefferson, 2019).

***The Tutor as the Facilitator for the Success of Online Learning***

Though self-learning is of prime importance in an online learning system, learners rely on the support of knowledgeable tutors to facilitate meaningful deep learning and circumvent feelings of isolation (Motaung & Makombe, 2021). Despite physical separation from learners, tutors should do their best to create online face-to-face social interactions through the incorporation of collaborative learning tools such as chat sessions, forum discussions, group projects, polling, messaging, and seminars in the teaching and learning process (Boettcher and Conrad, 2021). The online learning platform is conducive to building an engaging community to enable learners to socialize with each other and exchange ideas, but provided that the instructor is sufficiently experienced in the use of those interactive tools (Dereshiwsky, 2021). Moreover, to positively enhance learners' performance, motivation, and satisfaction, tutors should provide timely and constructive feedback and establish and maintain regular contact with tutees through personal e-mails and phones (Alawamleh et al., 2020). In order, to adapt and interact with the virtual teaching and learning environment, it is strongly believed that a focused online tutorial training programme needs to be developed to help tutors acquire competencies, not only in the use of relevant software and interactive online tools but also in acquiring effective communication, problem-solving, administrative, and student counselling skills (Bean et al., 2019). Training the tutor as a facilitator to effectively utilise relevant ICT tools will serve to provide a great avenue for sharing ideas and experiences and predominantly resolve misunderstandings, thereby bridging the communication and psychological gap that may exist in an online learning setting (Motaung & Makombe, 2021).

Pg.3

**Methodology**

***Sampling***

In this cross-sectional study, 247 undergraduate learners in BA (Hons) Communication, Media, and Journalism, and BA (Hons) Graphic Design and Multimedia programs enrolled at the Open University of Mauritius up to January 2020 were selected. They attended face-to-face lectures and were, therefore, conversant with this mode of teaching but then transitioned to online learning in March 2020 in the context of the Covid-19 pandemic. In total, 115 questionnaires were retained for the survey.

***Data Gathering Instrument***

An anonymous online questionnaire was used for data collection. The online questionnaire was built through Google forms and then shared with learners through email with several reminders. Two experienced academics at OU reviewed the questionnaire for clarity, accuracy, and validity. The average time required to complete the questionnaire was 15 minutes. Data were collected during the post-pandemic period in August 2022. Almost all questions were selected from prior studies to reduce the risk of invalidity and unreliability, as shown in Annexe 1.

**Data Analysis**

***KMO and Bartlett's Test***

The KMO values shown in Table 2 confirm that the sample was adequate. Bartlett's test of sphericity confirmed that the correlation matrix was not an identity matrix. This allowed us to proceed further with factor analysis.

**Table 2.** KMO and Bartlett's Test

| | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | 0.875 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1747.857 |
| | df | 351 |
| | Sig. | 0.000 |

***Total Variance Explained***

Table 3 shows the six extracted factors. Together, these six factors explain 66.2% of the total variance.

**Table 3:** Total Variance Explained

| | Initial Eigenvalues | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| Component | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 10.124 | 37.495 | 37.495 | 5.493 | 20.346 | 20.346 |
| 2 | 2.103 | 7.788 | 45.283 | 4.833 | 17.899 | 38.245 |
| 3 | 1.907 | 7.064 | 52.347 | 3.471 | 12.854 | 51.099 |
| 4 | 1.371 | 5.077 | 57.424 | 1.410 | 5.223 | 56.321 |
| 5 | 1.245 | 4.611 | 62.035 | 1.393 | 5.160 | 61.481 |
| 6 | 1.116 | 4.133 | 66.168 | 1.265 | 4.687 | 66.168 |
| 7 | 0.957 | 3.546 | 69.713 | | | |
| 8 | 0.903 | 3.346 | 73.059 | | | |
| 9 | 0.757 | 2.805 | 75.864 | | | |
| 10 | 0.699 | 2.590 | 78.455 | | | |
| 11 | 0.662 | 2.450 | 80.905 | | | |
| 12 | 0.554 | 2.050 | 82.956 | | | |
| 13 | 0.539 | 1.995 | 84.950 | | | |
| 14 | 0.520 | 1.925 | 86.875 | | | |
| 15 | 0.492 | 1.822 | 88.697 | | | |
| 16 | 0.406 | 1.503 | 90.200 | | | |
| 17 | 0.375 | 1.389 | 91.589 | | | |
| 18 | 0.350 | 1.298 | 92.887 | | | |
| 19 | 0.326 | 1.206 | 94.093 | | | |
| 20 | 0.297 | 1.100 | 95.193 | | | |
| 21 | 0.256 | 0.950 | 96.143 | | | |
| 22 | 0.237 | 0.879 | 97.022 | | | |
| 23 | 0.217 | 0.805 | 97.827 | | | |
| 24 | 0.184 | 0.680 | 98.507 | | | |
| 25 | 0.160 | 0.594 | 99.102 | | | |
| 26 | 0.140 | 0.518 | 99.619 | | | |
| 27 | 0.103 | 0.381 | 100.000 | | | |

*Note. *Extraction Method: Principal Component Analysis*

***Factor 1: Academic Benefits of Online Tutorials***

The first factor as illustrated in Table 4 below which we have called "Academic Benefits of Online Tutorials" explains 20.3% (see table 3) of the total variance in the responses. More than 60% of the respondents found that the shift to online teaching was beneficial and 80% found online learning to be more advantageous than face-to-face learning. In fact, learners were able to benefit from online Open Educational Resources (OERs) as they were embedded in the lesson. This integration of theoretical knowledge and practical applications makes tutorials more interesting. Moreover, most related real cases can be discussed online by visiting institutions' websites without infringing on copyright laws. This is reflected in the significant percentage of respondents who said that they agreed with the statement that they could access learning content at any time (84.3%).

**Table 4.** Rotated Component Matrix of Factor

| | Component 1 |
|---|---|
| To what extent do you consider online learning to be disadvantageous as compared to face-to-face learning on the following factors? ***[Lack of practical applications]*** | 0.815 |
| To what extent do you consider online learning to be disadvantageous as compared to face-to-face learning on the following factors? ***[Technical problems during internet connection]*** | 0.806 |
| To what extent do you consider online learning to be disadvantageous as compared to face-to-face learning on the following factors? ***[Lack of interaction]*** | 0.782 |
| To what extent do you consider online learning to be disadvantageous as compared to face-to-face learning on the following factors? ***[Harder to learn]*** | 0.777 |
| To what extent do you consider online learning to be disadvantageous as compared to face-to-face learning on the following factors? ***[Less explanations given during classes]*** | 0.768 |
| It is difficult to focus during online classes compared to face-to-face classes. | -0.562 |
| Interacting with my tutors has become harder in online classes. | 0.556 |
| I am learning better now that I am taking my classes online. | 0.546 |
| I prefer taking online classes in the future. | 0.503 |

***Factor 2: Advantages of Online Tutorials***

The second factor illustrated in Table 5 and labelled as "Advantages of Online Tutorials" explains 17.9% (see table 3) of the total variances. Of the participants, 75.6% agreed that online tutorials provided them with the desired flexibility, and 84.3 % of the learners who participated in this survey agreed that following the adoption of online classes, they were better able to access more materials at any time and from anywhere. Thus, without such flexibility, they would not be able to shoulder their responsibilities at home, work, and in society. The age and gender distribution of the respondents, as shown in Figure 1, demonstrate that the majority are aged between 21-29 years and would most probably be part of the active working population with social, financial, and family obligations.

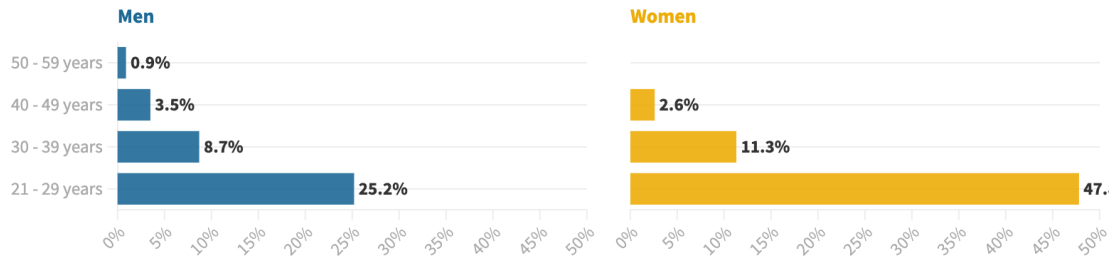



**Figure 1.** Age distribution of respondents

The fact that online tutorials allow learners to avoid travelling to university was nearly unanimously acclaimed. 67% found the online option to be more convenient, while 65.2% found it to provide more time to perform other tasks. The unprecedented increase in the number of vehicles and road networks has led to significant traffic congestion. Thus, learners spend a lot of time on the road attending tutorials. 79.1% said that online classes were not only the best way to protect them against the pandemic, but also ensured that they did not spread it.

**Table 5. Rotated Matrix of Factor 2**

| | Component 2 |
|---|---|
| To what extent do you consider online learning to be more advantageous as compared to face-to-face learning on the following factors? ***[Flexibility]*** | 0.785 |
| To what extent do you consider online learning to be more advantageous as compared to face-to-face learning on the following factors? ***[Lack of need to travel]*** | 0.749 |
| To what extent do you consider online learning to be more advantageous as compared to face-to-face learning on the following factors? ***[Convenience]*** | 0.715 |
| To what extent do you consider online learning to be more advantageous as compared to face-to-face learning on the following factors? [***Accessing course content anytime]*** | 0.675 |
| To what extent do you consider online learning to be more advantageous as compared to face-to-face learning on the following factors? ***[Doing other activities at the same time]*** | 0.625 |
| To what extent do you consider online learning to be more advantageous as compared to face-to-face learning on the following factors? ***[Health & Safety]*** | 0.603 |
| To what extent would you like to return to face-to-face learning? | 0.512 |
| To what extent do you consider online learning to be more advantageous as compared to face-to-face learning on the following factors? ***[Better structured class]*** | 0.507 |
| I feel more isolated now that I am taking online classes. | |

### *Factor 3: Positive Contribution of Tutors*

The third component as illustrated in Table 6 explains 12.9% (see table 3) of the total variance and has been labelled as "Positive Contribution of Tutors". 77% agreed that the tutors motivated them during the online classes and 67% affirmed that they could ask tutors questions during online sessions if they did not understand the instructional content. It is reassuring to note that 62.6% of respondents reported that they found their tutors more understanding and cooperative during the online sessions and also played a crucial role in effectively facilitating the course. However, only 33% asserted that academics were more enthusiastic about online learning and 36.5% of respondents stated that they could not discuss the content with their classmates as they would have

done when learning face-to-face on campus. Therefore, tutors must make extra efforts to boost interactions and prompt learners to participate through questions, discussions, participation in chat forums, and presentations. Thus, it is recommended that group discussions be included in online sessions.

**Table 6:** Rotated Matrix of Factor 3

| | Component 3 |
|---|---|
| The tutors motivated me to do my best. | 0.752 |
| Tutors are cooperative and more understanding of the hardships we faced as learners during the pandemic. | 0.751 |
| The tutors facilitated the course effectively during online learning. | 0.670 |
| Do you feel the tutors were enthusiastic about online teaching? | 0.548 |
| I am able to discuss content with classmates during online class. | -0.500 |
| I am able to ask the tutors questions during online classes if I do not understand the instructional content. | |

***Factor 4: Effort to Succeed in Online Learning***

The fourth component illustrated in Table 7 explains 5.2% (see table 3) of the total variance and is labelled 'Effort to Succeed in Online Learning'. Moreover, 71.3% reported that online learning does not require additional effort compared to face-to-face tutorials. In addition, the fact that 72% agreed that tutors personalized interactions with them whenever necessary indicates that if adequate effort is made by both tutors and learners during online learning, it can lead to comparable levels of academic learning and performance in both learning environments. The fundamental tenets of pedagogy and andragogy remain the same for both online and on-campus learning.

**Table 7.** Rotated Matrix of Factor 4

| | Component 4 |
|---|---|
| In comparison to face-to-face learning, the learning effort during online learning is: | -0.857 |

***Factor 5: Dedication and Self-Engagement***

The fifth factor illustrated in Table 8 explains 5.1% of the total variance and is labelled "Dedication and Self-Engagement". 71.3 % reported that online learning requires learners to be engaged and dedicated. The fact that 71% of respondents agreed that self-engagement and dedication are significant factors that contribute to online learning proves that they are aware that to thrive in an online learning setting, they should be capable of managing their learning by acquiring knowledge on their own and that self-directed and self-managed learning is critical. Learners must show the same level of seriousness that they would have shown during on-campus classes. During induction sessions, learners are advised to (1) learn through the online mode, (2) manage time so that they can learn while working and shouldering family and other commitments, and (3) maintain self-motivation.

**Table 8.** Rotated Matrix of Factor 5

| | Component 5 |
|---|---|
| Studying online requires lots of dedication and self-engagement. | 0.846 |

***Factor 6: Tutors' responsiveness***

The sixth factor illustrated in Table 9 explains 4.7% (see table 3) of the total variance has been labelled as "Tutors' responsiveness". 67% reported that tutors responded promptly to the learners' solicitations and queries.

**Table 9.** Rotated Matrix of Factor 6

| | Component 5 |
|---|---|
| Tutors responded promptly to my questions about course assignments. | 0.714 |

**Discussion, Conclusions and Recommendations**

The adoption of online teaching has been rapid, but it is yet to be perfect and accepted by all learners. The key component that must be considered is that both learners and tutors must be fully trained before embarking on an online shift. At the outset, academic staff must be empowered to use various online collaborative and interactive learning tools so that they do not replicate the chalk-and-talk method online. Online learning materials must be carefully and purposefully developed or recommended so that the texts are accompanied by visuals, videos, and other open educational content that will help attract learners. Recorded online sessions provide opportunities to enrich pedagogy by allowing learners to access, view, and review tutorials at their convenience. The effective use of artificial intelligence may also help identify weaknesses among learners at an early stage and provide them with additional support. Additionally, tutors must not spare any efforts to motivate learners by engaging them in online activities. The tutorials and lessons must be planned in such a way that there are effective interactions between learners and tutors, as well as between learners. This can take several forms, starting with informal questions as part of formative assessment and asking learners to make group presentations online.

Learners have reported several advantages of online teaching, including flexibility, convenience, time saving, and better learning-work-life balance. Institutions that have opted for online teaching

and learning must optimize the benefits of this method by ensuring that learners are independent and never isolated. Virtual rooms to perform group activities are highly recommended to boost student-student interactions. Therefore, online teaching and learning must be thoroughly prepared to ensure students' success. It is worth noting that the sample of this study was confined to learners of BA (Hons) Communication, Media, and Journalism and BA (Hons) Graphic Design and Multimedia. It might be that the findings would have been different if the study had been carried out with a wider range of learners on various programmes of the OU. Furthermore, a survey could be conducted to ascertain tutors' perceptions of online tutorials and ways to improve their overall learning and teaching experiences.

## References

1. Alawamleh, M., Al-Twait, L. M., & Al-Saht, G. R. (2020). The effect of online learning on communication between instructors and students during Covid-19 pandemic. *Asian Education and* Development Studies.
2. Almahasees, Z., Mohsen, K., and Amin, M. O. (2021). Faculty's and Students' Perceptions of Online Learning During COVID-19. Frontiers Media SA.
3. Bean, M. V., Aldredge, T., Chow, K., Fowler, L., Guaracha, A., McGinnis, T., ... & Saez-Kleriga, G. (2019). Effective practices for online tutoring. *Sacramento: Academic Senate for California Community Colleges*.
4. Boettcher, J. V., & Conrad, R. M. (2021). *The online teaching survival guide: Simple and practical pedagogical tips*. John Wiley & Sons.
5. Dereshiwsky, M. I. (2021). Fostering Effective Learning in the Online Classroom. In *Enhancing Higher Education Accessibility Through Open Education and Prior Learning* (pp. 139-164). IGI Global.
6. Dommett, E. J., Gardner, B., & Van Tilburg, W. (2019). Staff and student views of lecture capture: A qualitative study. *International Journal of Educational Technology in Higher Education*, *16*(1), 1-12.
7. Ferri, F., Grifoni, P., & Guzzo, T. (2020). Online learning and emergency remote teaching: Opportunities and challenges in emergency situations. *Societies*, *10*(4), 86
8. Foo, C. C., Cheung, B., & Chu, K. M. (2021). A comparative study regarding distance learning and the conventional face-to-face approach conducted problem-based learning tutorial during the COVID-19 pandemic. *BMC medical education*, *21*(1), 1-6.

9. Janmaimool, P., & Nunsunanon, S. (2021). Online vs. Face-to-Face Lecture Courses: Factors Impacting the Effectiveness of Online Learning.

10. Md Nawi, S., Mohd Yusof, S., Kamaludin, P. N. H., & Sain, N. (2021). Exploring Malaysian Tertiary Students' Behavioural, Cognitive, Emotional and Social Engagement and Disengagement in ODL. In International Journal of Academic Research in Business and Social Sciences (Vol. 11, Issue 4). Human Resources Management Academic Research Society (HRMARS).

11. Motaung, L. B., & Makombe, R. (2021). Tutor experiences of online tutoring as a basis for the development of a focused tutor-training programme. The Independent Journal of Teaching and Learning, 16(2), 101-117.

12. Nawi, S. M., Yusof, S. M., Kamaludin, P. N. H., & Sain, N. (2021). Exploring Malaysian Tertiary Students' Behavioural, Cognitive, Emotional and Social Engagement and Disengagement in ODL. *International Journal of Academic Research in Business and Social Sciences*, *11*(4), 1296-1311.

13. Paliwal, M., & Singh, A. (2021). Teacher readiness for online teaching-learning during COVID− 19 outbreak: a study of Indian institutions of higher education. *Interactive Technology and Smart Education*.

14. Paul, J., & Jefferson, F. (2019). A comparative analysis of student performance in an online vs. face-to-face environmental science course from 2009 to 2016. *Frontiers in Computer Science*, 7.

15. Sari, T., & Nayır, F. (2020). Challenges in distance education during the (Covid-19) pandemic period. Qualitative Research in Education, 9(3), 328-360.

16. Singh, V., & Thurman, A. (2019). How Many Ways Can We Define Online Learning? A Systematic Literature Review of Definitions of Online Learning (1988-2018). In American Journal of Distance Education (Vol. 33, Issue 4, pp. 289–306). Informa UK Limited.

17. Sugilar, S. (2021). Students' Barriers to Online Tutorial. *Turkish Online Journal of Distance Education*, 22(1), 170-178.

18. Sukon, K. S. (2021). A Practical (Blended) Teaching and" Blearning" Model. *Ubiquitous Learning: An International Journal*, *14*(2).

19. Suresh, M., Vishnu Priya, V., & Gayathri, R. (2018). Effect of e-learning on academic performance of undergraduate students. *Drug Invention Today*, *10*(9)

20. UNESCO. (2020). Distance learning strategies in response to COVID-19 school closures. *UNESCO COVID-19 Education Response Education Sector Issue Notes*, *2*, 1-8.

## Annexure 1

| Section 2 - Transition to Online Learning | Authors |
|---|---|
| I am learning better now that I am taking my classes online | Alawamleh, Al-Twait, and Al-Saht (2020) |
| I prefer taking online classes in the future. | Alawamleh, Al-Twait, and Al-Saht (2020) |
| Studying online require lots of dedication and self-engagement. | Self- developed |
| Ability to discuss content with classmates during class. | (Janmaimool and Nunsunanon, 2021) |
| I feel more isolated now that I am taking online classes. | Alawamleh, Al-Twait, and Al-Saht (2020) |
| It is difficult to focus during online classes compared to face-to-face classes. | Self-developed |
| According to you, what is the main advantage of e-learning as opposed to face-to-face learning?<br>● Health Safety<br>● Doing other activities at the same time<br>● Better structured class<br>● Flexibility<br>● Accessing courses anytime<br>● Lack of need to travel<br>● Convenience | Gherhes, Stoian, Farcasiu and Stanici, (2021) |
| According to you what is the main advantage of face-to-face learning as opposed to e-learning?<br>● Harder to learn<br>● Fewer explanations given during classes<br>● Lack of practical applications<br>● Technical problems during internet connection<br>● Lack of interaction | Gherhes, Stoian, Farcasiu and Stanici, (2021) |
| In comparison to face-to-face learning, the learning effort during e-learning is:<br>● Lower<br>● The same as during face-to-face learning<br>● Higher | Gherhes, Stoian, Farcasiu and Stanici, (2021) |
| To what extent would you like to return to face-to-face learning:<br>To a very small extent<br>To a small extent<br>To a moderate extent<br>To a large extent | Gherhes, Stoian, Farcasiu and Stanici, (2021) |

| | |
|---|---|
| To what extent would you like to return to face-to-face learning:<br><br>To a very small extent<br>To a small extent<br>To a moderate extent<br>To a large extent<br>To a very large extent | Gherhes, Stoian, Farcasiu and Stanici, (2021) |
| Section 3 - Quality of Tutorials Offered by Tutors | Authors |
| The instructor facilitated the course effectively | Gopal, Singh, Aggarwal (2021) |
| The instructor was enthusiastic about online teaching | Gopal, Singh, Aggarwal (2021) |
| Ability to ask the instructor questions during class if they did not understand the instructional content. | (Janmaimool and Nunsunanon, 2021) |
| The instructor responded promptly to my questions about course assignments | Gopal, Singh, Aggarwal (2021) |
| Interacting with my instructor has become harder in online classes | Alawamleh, Al-Twait, and Al-Saht (2020) |
| Instructors are being cooperative and more understanding of the hardships we are currently facing as learners | Alawamleh, Al-Twait, and Al-Saht (2020) |
| The instructor personalized interactions with me whenever necessary | Gopal, Singh, Aggarwal (2021) |
| The instructor motivated me to do my best | Gopal, Singh, Aggarwal (2021) |
| Section 4 - Technical Factors | Authors |
| I appropriate an appropriate device for online learning | Self- developed |
| My internet connection was appropriate for online learning | Self- developed |
| I am able to hear the instructor's explanations clearly | Janmaimool and Nunsunanon (2021) |
| I have sufficient computer knowledge and IT skills to manage my online learning | Almahasees, Mohsen and Amin, (2021) |
| Section 5 Online Learning Experience | Authors |
| How many online learning courses (short, medium or long) have you followed during the years 2015-2020? | Self-developed |
| How many times have you visited our online learning platform on average during a week? | Self-developed |
| Please rate your skills in using the following computer-related tools/software used during online learning. | Self-developed |
| State 2 online learning features you appreciated. | Self-developed |
| State 2 online learning features you would like to be changed immediately in order to improve online learning. | Self-developed |

**SIRJODL: Volume 4 Issue 2 July 2022**
**ISSN 2582-9009**

# SWOT Analysis for Vocational Education and Training (VET) Program through Open Schooling in Bangladesh

**Md Mizanoor Rahman**
Bangladesh Open University, Gazipur, BANGLADESH
mizan2006@yahoo.com

**Manas Ranjan Panigrahi**
Commonwealth Educational Media Centre for Asia, Delhi, INDIA
mpanigrahi@col.org

**Santosh Panda**
Indira Gandhi National Open University, Delhi, INDIA
spanda.ignou@gmail.com

***Abstract***

*Bangladesh already fulfilled the eligibility criteria set by the United Nations to be recognized as a developing country and graduated to least developed countries (LDCs). In order to do this, Bangladesh achieved tremendous success in the education sectors, say, improvement in gross secondary enrollment ratio; but not much gain in vocational education and skills development although the country enjoyed huge progress in the development economic and industrial development. But country needs huge resources for the program on VET to gain productivity in the development process. Bangladesh Government has accepted the policy of vocationalization of education in the country. There are resources constraints; in this situation VET through open school is the innovative and cost-effective approach. Commonwealth Educational Media Centre for Asia (CEMCA) – regional affiliates of The Commonwealth of Learning – implements the project on VET through open schooling with the Open School of Bangladesh Open University (BOU-OS). CEMCA conducts some research works to know the feasibility of the said project and the current study contexts the BOU Open School only. The VET at OS has root in the past in a limited level and through this project VET is going to be mainstreamed. As the present study is an attempt of analyses the strength, weakness, opportunity and threat (SWOT) of vocational courses at secondary stage, the investigators adopts normative survey method for the present study. Qualitative analysis was deployed for analysis of data obtained through documents, observation schedule and interview schedule at the Open School.*

***Keywords:*** *VET, open schooling, OER, LDCs*

## Introduction

This paper presents external and internal aspects of the Open School of Bangladesh Open University (BOU-OS) to run vocational education and training (VET) through open and distance learning (ODL). This research is part of the formulation of the strategic plan to implement the VET program under the technology and financial support from the Commonwealth Educational Media Centre for Asia (CEMCA). Finally, it presents a situation analysis using a framework of SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of the School which addresses the issues in vocational education and training (VET) through open schooling in Bangladesh. The main aim of the Open School is to impart formal school education for dropouts who are unable to continue their studies for various socio-economic reasons. To address these emerging societal demands, instructional contents were primarily delivered in print-based formats (where instructional design is essential), supplemented with lesson components typically delivered in convenient audio and/ or video formats. Now, in addition to broadcast, it is integrating technology in the delivery of programmes. The VET programme also aims to integrate technology for bringing cost-effectiveness and widening access to skills development.

## Research Objectives

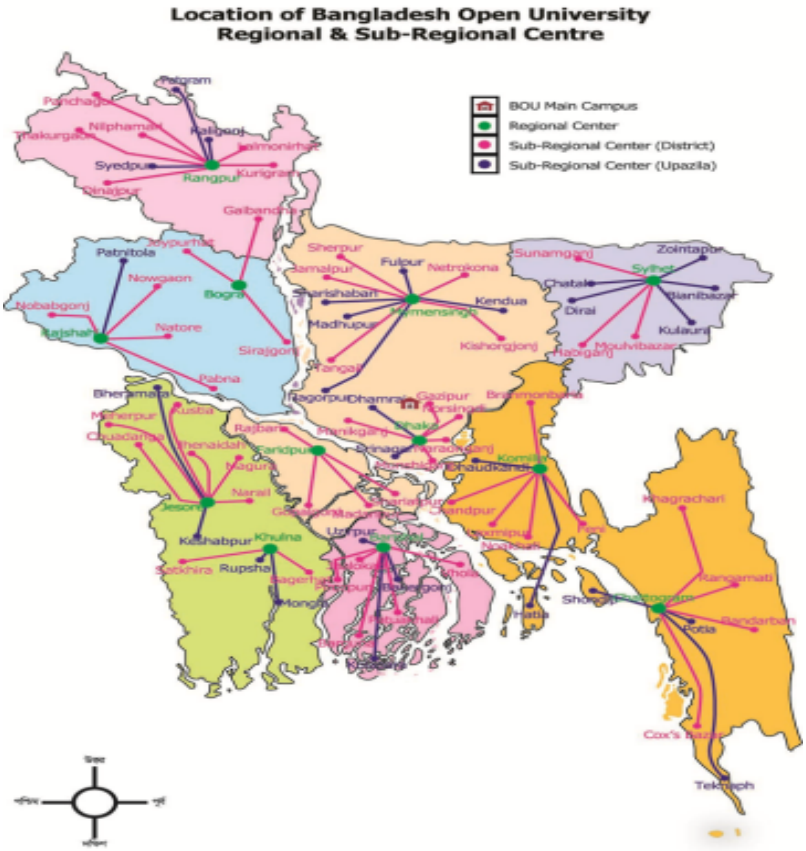
The aim of this study is to present the overview of the vocational education and training (VET) at the Open School of Bangladesh Open University. It also presents the following specific objectives:

i) To evaluate the extent to which the existing situation of the OS aligns with what was planned for, considering many indicators. This will be achieved through SOWT analysis of current conditions.

ii) To recommend for a general guideline that can be base for the School transformation plan which will have the capability to resolve the weaknesses and threats facing VET.

***Need for VET***

At present, Open School has been core faculty of Bangladesh Open University (BOU) which runs programs through open schooling using self-learning materials (SLMs), radio-TV broadcasts (RTBs) and face-to-face (f2f) contacts at the learners' corners. Open School has the experience of two kinds of programs – pre-University and tertiary programs which have no vocational components.



Open School runs two school programmes – Secondary School Certificate (SSC) for Grades: 9 & 10 and Higher Secondary Certificate (HSC) programmes for Grades: 10 & 11. I operate its programme throughout the country using the administrative setup of the University–Regional Centers (RCs) and Sub-Regional Centers (SRCs) (see Figure 1). There are country-wide12 RCs and 80 SRCs under the management of the Student Support Services SSS Department of the University). Open School affiliates the formal schools as Study Centers (SCs) of the SSC programme and formal colleges for the SCs of the HSC programme. Teachers from the formals schools and colleges are recruited as tutors of the Open School on contract basis and at BOU tutors are termed as contractors and also recognized as the field level practitioners of the ODL. There is a demand from the field to implement vocational education and training (VET) for dropout students who are already enrolled in the SSC and HSC programme (Rahman & Panda, 2012). Open Schools' academic portfolio has been the same for the last 20 years and no programmes had not been added except a pilot programme called JCS (Junior School Certificate) in 20017 in association with CAMPE - NGO coalition – for the students of the Open Basic Education (OBE) students graduated from the NGO schools (Masud & Rahman, 2013). The JSC curriculum was customized and coupled with vocational education. The programme was stopped when the project finished. In Bangladesh, enrollment in formal education has increased at the school level which indicates that formal schooling has been doing good and dropout rates declined. As a result, in the past couple of years, OS enrolment declined (Figure 2).

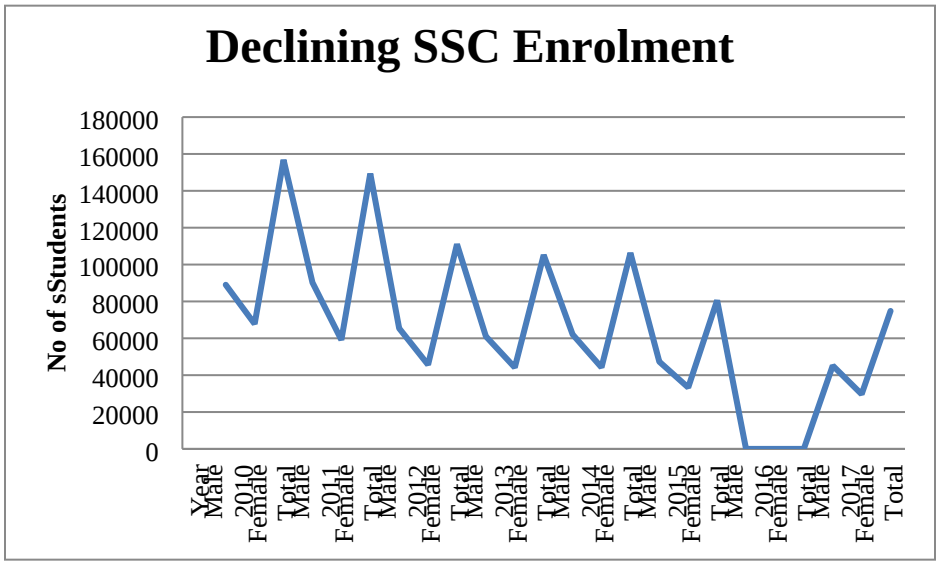



**Figure 2:** SSC Enrolment

But opposite happened in the HSC enrolment – the number increases over time (Figure 3). Over the last couple of years, the School used the Open Accessed Materials (OAM) and subsequently, the University developed the OER Policy 2014 and then, in 2017, it launched the OER repository for the learning materials – print, audio and videos, with the help of Commonwealth Educational Media for Asia (CEMCA) which has been found very cost-effective (Rahman & Panigrahi, 2018). The School plans to integrate the VET into the existing portfolio of the school curriculum.

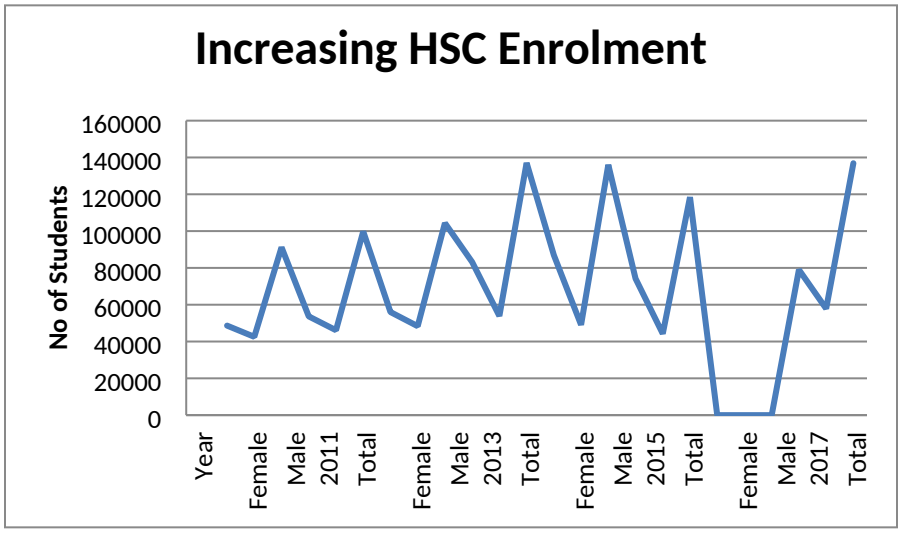



**Figure 3:** HSC Enrolment

### SWOT Analysis

SWOT analysis for VET at OS was performed to assess its external and internal weaknesses and strengths, opportunities, and threats. This analysis helps in developing strategic plans to enhance the quality of the existing and new programmes. When correctly applied, it is possible for School to get an overall picture of its present situation in relation to its environment. The SWOT analysis covered all of the following areas the School intervenes and each of these areas can be a source of strengths, weaknesses, opportunities, or threats.

## Findings and Discussion

Bangladesh has enjoyed impressive economic growth rates over the past decade and already graduated as a 'developing country' from the "least developed country', but challenges of how to make growth sustainable and more inclusive. Education, no doubt, assists growth, and when the country turns industrially, the education sector needs to put emphasis on vocational education and training (VET) to feed the increasing demand in the job market. The participants reflected as under:

*"In Bangladesh, we have resource constraints and we need to focus on vocational education and training (VET) through open schooling using the appropriate ICT leveraging the OER as it has development potential. We need to redesign the existing model of open schooling and focus on expanding the academic portfolio in consistent with the government's short-run and long-run policies. Therefore, the VET project has been befitting with these policies."*

### Strengths

- Accessibility to the local community through RC, SRC and SC in every corner of the country;
- Management activities are governed by the statute and other rules of business which are set and revised a number of times to update;
- Main stakeholders are the governments, BOU, teachers, tutors, students and communities;

- BOU already celebrated Golden Jubilee and gained huge experience in the delivery of ODL programmes using appropriate technologies.
- Applicability of ODL using different media
- Open School implements various project works along with its normal activities with international agencies such as COL, British Council, CEMCA, SPIDER, etc.
- BOU-OS has a number of qualified and experienced faculties to operate the VET program.
- Well-equipped Media-center with skilled professionals
- 12 RCs and 80 SRCs can, directly and indirectly, facilitate the VET program all over the country
- Strong Digital Support – government and private sector
- Faculties are exposed in media activities
- Countrywide Network with government and private schools
- Unity among faculties – supportive in all ventures
- Sufficient ICT support by the University to cater to any section or niche of the population.
- Faculties are experienced in learning material development.
- Well-equipped eLearning center is available at the University managed by trained personnel.

**Opportunities**

- VET's market is in very high demand
- Scope for integration of ICT to increase access to VET.
- Easy to the engagement of learners with the delivery of the appropriate VET curriculum.
- Scope of ODL for increasing the academic portfolio.
- Increased base for accessibility in rural/sub-urban areas.
- Direct employment opportunities for the learners.
- Uplifts the standard of living and directly contributes to the economy.
- Contributes to women's employment/empowerment.
- Enhance the foreign remittance, if they are employed overseas like another non-resident Bangladeshi.
- Adequate Vocational Institutions for running the planned vocational program
- Policy support from the Government.

- Scope of employability at home and abroad

**Weaknesses**

- Lack of sufficient trained HR in BOU and in the vocational sector.
- Lack of ICT support for vocational education
- No in-house (at the OS) infrastructural support for vocations
- Religious and cultural barriers for voc, say, gender-sensitive voc such as nursing, beauty culture, etc.
- Faculties have unwillingness and reluctance about the VET program.
- No VET center at the BOU.
- Insufficient manpower at the School
- Lack of effective policy
- Lack of technical support (Lab/training center)
- Not specialized in VET
- Insufficient number of VET course materials.

**Threats**

- There is the likelihood of change in policy toward policy
- Lack of infrastructural support
- Lack of awareness about VET.
- Competitive to the traditional program.
- Equivalence with the national framework.
- Acceptability in the job market or society for VET through ODL
- Learners may be treated as lower-class professionals in the job sector.
- Dependency on financial support to run the project.
- Lake of awareness of women's participation.
- To cover remote areas as per need.
- Ensuring quality of VET education
- Possibility of dropout.

Despite the abovementioned weakness and threats, VET is crucial for social and economic security in Bangladesh and its citizens.

**Recommendations**

- Open Schools planned VET should be at par with the National VET Framework and compatible to pursue higher studies in any stream;
- It should have the compliance of national agenda, access, equity, economic inclusion, relevance, and quality as measured by the variety of systems and competencies.
- Design the VET as a L3 i.e. lifelong learning;
- Transform the open schooling to produce skills relevant to the labour market emerging from the knowledge economy which emerged, in turn, from the digital-Bangladesh agenda and the country's Vision 2021. Therefore, the design of the VET should be responsive to the market needs, and the OS should respond accordingly. This can be achieved through:
    - i) Needs Assessment Survey should be conducted to select the market-driven trades or skills;
    - ii) Develop the policy components for the SC by drawing the international and national context;
    - iii) Run couples of piloting on VET through open schooling;
    - iv) Create linkages with the chamber of commerce and develop MoU with the conventional VET providers – private, NGO and governments;
    - v) Identify the key policy directions with respect to OS transformation to meet the requirements of the V2021.
    - vi) Demand-driven stills need to be identified and maximize the relevant competencies through redesigning the curriculum and the OS should work with the NSDC.
    - vii) Ensure the stakeholders' involvement in designing and implementing the VET.
    - viii) Value and adopt appropriate technologies for developing and implementing the VET courses of study.

- Evaluate OER-based VET to bring it cost-effective;
- Remedial courses such as English as soft skills should be incorporated in the courses of studies.
- VET should be intended learning outcome (ILO) based rather than output-based and the process should concentrate on learner-centric and learning portfolio should be designed in such a way that the ILO should be achieved through tutorials, readings, laboratory and workshop activities and hands-on training.
- Use of various media such as print, electronic and social – Facebook for publishing the VET initiatives of the BOU Open School to encourage enrolment in the OS-run VET programme.
- Develop admission standards at par with the government set framework.
- To ensure compliance with the accreditation policy of the NSDC framework.
- To design the learning environment initiatives at the VET center by ensuring the required facilities including the ICT.
- Measures should be taken to the VET cost-effective so that the sustainability of the programme can be achieved through the innovative modus-operandi – it can be achieved through implementing the OER-based approach – which will be given as the proposed VET Framework of the Open School. The school shall adopt the framework after having a review of the existing VET rules and regulations of the nation and the VET providers.
- M & E should be implemented in such a way that ensures the continuous assessment and the stakeholders reflections should be noted and the performance standards at the lead of activities.
- VET tutors should be prepared in such a way that they can replace their own classical view of instruction with the modern view of facilitation of learning. In order to do that the CPD (continuous professional development) programme for the VET tutors should be in place using the international standard of curriculum, say, ITC, ILO, Italy and the School of Education of the BOU should be dedicated to providing training of the VET tutors through face to face and/or online using the specialized platform.

- Self-adopted technology, say, Facebook, to be promoted by the school to ensure the best use of learning objects prepared through the mobile handset and self-edited by the VET tutors.
- Conduct scientific research and document for dissemination of the results for learning of other providers. In this situation, the school can recruit at least two PhD students to conduct research throughout the project.

**ICT-based VET Framework for BOU Open School:**

OER is being used to achieve the learning objectives and to bring the cost of programme delivery at a minimum range. Bonito et al. (2017) find that there is a sufficient number of learning resources are in the form of OER for students to meet the learning objective/s which are mix of media used (print, video, audio, multimedia) and these reduce the cost of delivery. One of the most well-known benefits of OER is its cost potential because OER can reduce the cost of the delivery of distance education courses (Bliss, Hilton, Wiley, & Thanos, 2013; Millard, 2014; OpenStax College, 2014; Wiley, Hilton, Ellington, & Hall, 2012). OER is now being used in different educational institutes for distance education delivery.

Our analysis realistically recognized the weaknesses and threats that exist for the Open School's effort is the first step to countering them with a robust and creative set of strengths and opportunities to run the VET project. The identified strengths, weaknesses, opportunities and threats shall assist Open School in making strategic plans and decisions for launching VET through open schooling integrating the pedagogic training for the VET tutors. The present policy of towards vocational education in the country is to provide VET for demand-driven skills in a cost-effective manner to bring economies of scale in human resource development (NSDC, 2014)

**In conclusion, propose an ICT-based VET Framework for BOU Open School:**

Open School runs programme using traditional open and distance learning (ODL) mode. The government is implementing digital-Bangladesh agenda and the Education Policy 2010 also emphasizes BOU to be a digital university. In line with this, the Open School strategizes paperless open schooling with the modus-operandi (see figure 4) as under:

**Texts:** 10 lecture notes @ 12 pages totaling **120 pages** of text materials for each course – to be developed by the Course Lecturer. The size of the total book will be the same for all courses; No external teacher will be recruited. Only in-house faculty will develop the lecture note using the University template.

**PPTs:** 10 PPTs slides to be used as supplementary materials – to be developed by the Course Lecturer;

**Video:** 10 Video lectures with interactive discussion for broadcasting through BTV chunk and/or WebTV – to be developed by the Course Lecturer; 20 short video clips, say 5-10 minutes, recorded through webCamera for use in the smartphone – to be developed by the Course Lecturer;

**Audio:** Required audio programmes will be used as required through WebRadio and Bangladesh Betar;

**Tutorials:** Tutorial Support Services – by the local Tutors under the guidance of the Course Lecturer (discussed in the tutor database);

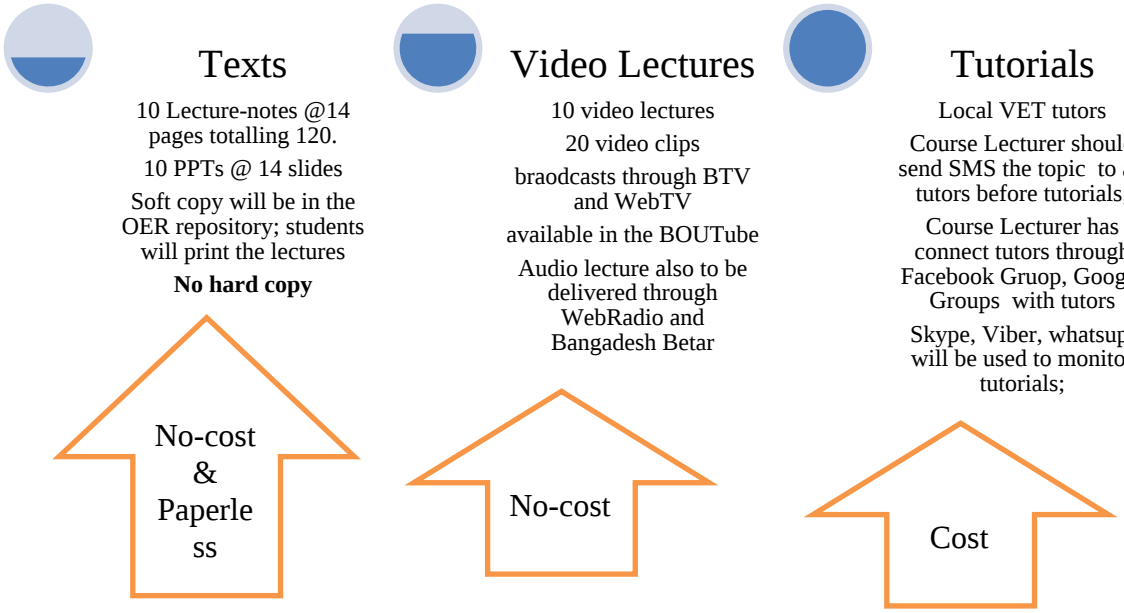



**Figure 3.6:** Open School's TEDL Framework for VET

[Prepared from first researcher's PhD work]

**References:**

1. Bliss, T. J., Hilton, J., Wiley, D., & Thanos, K. (2013). The cost and quality of online open textbooks: Perceptions of community college faculty and students. Available at: http://journals.uic.edu/ojs/index.php/fm/article/view/3972/3383 [last accessed on 25 August 2020]

2. Bonito, S., Serrano, J., Reyes, C. Ramos, R. and Orias, C. (2017). Impact of OER on Cost and Quality of Course Materials in Postgraduate Distance Education Courses. Open Education Consortium. Available at: https://www.slideshare.net/oeconsortium/impact-of-oer-on-cost-and-quality-of-course-materials-in-postgraduate-distance-education-courses. [Last accessed on 25 Aug 2021]

3. Masud, M. P. & Rahman, M. M. (2012). Tri-partite Collaboration in Leveraging ODL Towards Open Schooling, Developments if JSC Program in Bangladesh: a Case Study on Bangladesh Open University, *Journal of History and Civilization.* Vol. 1, 2013. P. 2003-212.

4. Millard, M. (2014). Open-source textbooks can help drive down the overall cost of college. Available at: https://wiki.creativecommons.org/OER_Case_Studies/United_States [last accessed on 25 August 2020]

5. NCDC (Bangladesh National Skills Development Council). (2014). National Skill Development Policy-2011 (revised in 2014) Available at: http://www.nsdc.gov.bd/wp-content/uploads/2017/01/NSDP-11.pdf [Last accessed on 25 August 2020]

6. Rahman, M. M. & Panda, S. (2012). Open Vocational Education in Bangladesh and Challenges of Using ICT. *COMOSA Journal of Open Schooling.* Volume: III Number: 2 July-December 2012

7. Rahman, M. M. & Panigrahi, M. R. (2017). Open Educational Resources (OER) Policy of Bangladesh Open University (BOU): An Evaluation Available at: http://dlkkhsou.inflibnet.ac.in:8080/jspui/handle/123456789/308 [Last accessed on 25 August 2021]

8. Rahman, M. M. (2018). A Critical Study on Policy and Developments in Technology-Enabled Distance Learning for Open Schooling and Open Basic Education in Bangladesh. PhD Research (unpublished) at the Staff Training and Research Institute of Distance Education (STRIDE), IGNOU.

9. Wiley, D. A., Hilton III, J. L., Ellington, S., & Hall, T. (2012). A preliminary examination of the cost savings and learning impacts of using open textbooks in middle and high school science classes. International Review of Research in Open and Distance Learning (IRRODL). Available at: http://www.irrodl.org/index.php/irrodl/article/view/1153[last accessed on 25 August 2020]

**Acknowledgement:**

BOU-CEMCA Joint Initiative Project on VET through OER at Bangladesh Open University from July 2018

**SIRJODL: Volume 4 Issue 2 July 2022**
**ISSN 2582-9009**

# Innovative Formats of Designing and Development of SLM in ODL

**Partha Pratim Chakraborty**
Doctoral Scholar
Swiss School of Business and Management
Geneva, SWITZERLAND

## *Abstract*

*The advent of technology and the internet has led to the growth of online distance learning as a viable alternative to traditional classroom-based instruction. One of the key aspects of online distance learning is the use of self-learning modules, which allow learners to study at their own pace and on their own schedule. However, designing and developing effective self-learning modules can be challenging. In this abstract, we will explore the challenges of designing and developing innovative formats for self-learning modules in online distance learning.*

*One major challenge is the lack of structure in self-learning modules, which can make it difficult to design a module that is both engaging and effective for learners. Another challenge is the assessment of learning outcomes, as the format does not typically involve direct interaction between the learner and the instructor. Engagement can also be a challenge, as self-learning modules lack the opportunity for face-to-face interaction with instructors and other learners. Additionally, self-learning modules must be accessible to all learners, including those with disabilities. Technology dependence, adaptability and personalization are also other challenges that should be considered while developing and designing these modules.*

*Despite these challenges, innovative formats of self-learning modules have the potential to provide learners with a more personalized and flexible learning experience. By understanding the challenges and limitations of self-learning module design, instructors and course designers can create more effective modules that better meet the needs of online distance learners.*

***KEYWORDS***

*learning module design, innovative formats, learners, instructors, disabilities, engagement.*

**The Major Factors**

There are several innovative formats for designing and developing self-learning modules in online distance learning. The top ones are:

1. Interactive tutorials: These types of modules use interactive elements such as quizzes, polls, and games to engage students and help them retain information.
2. Video lectures: Video lectures can be a powerful tool for online distance learning, as they allow students to hear and see the instructor, which can make the material more engaging and easier to understand.
3. Virtual reality: Virtual reality (VR) can be used to create immersive, interactive learning experiences that simulate real-world situations. This can be particularly useful for fields like engineering and science, where students need to understand complex systems and processes.
4. Gamification: This approach uses elements of game design, such as points, badges, and leaderboards, to make learning more engaging and enjoyable. Gamification can also be used to motivate students to complete modules and progress through the curriculum.
5. Adaptive learning: Adaptive learning systems use data from student interactions to tailor the learning experience to the individual student's needs. By adjusting the level of difficulty, pace, and content, these systems can help students learn more efficiently and effectively.
6. Project-based learning: PBL is a pedagogical approach where students learn by working on projects, which can be done independently, collaborative or in small groups. This approach is designed to help students learn through experience and application of the concepts learned.

Overall, the key to developing effective self-learning modules is to design them in a way that is engaging, interactive, and tailored to the needs and preferences of the students.

Now let us dig deep for each of these factors that we have discussed:

**Interactive tutorials**: Interactive tutorials can help students in online learning in several ways:

1. Engagement: Interactive elements such as quizzes and games can make the material more engaging, which can help students stay focused and motivated to learn.
2. Active learning: Interactive tutorials require students to actively participate in the learning process, which can help them better understand and retain the information.
3. Feedback: Quizzes and polls provide immediate feedback to students, which can help them identify areas where they need to focus their studies. This can also allow students to self-assess their understanding and their own learning progress.
4. Real-world application: Interactive tutorials can provide an authentic learning experience where students can apply their knowledge in a realistic context. This can help to make the learning process more meaningful and relatable.
5. Variety: Interactive tutorials can offer different ways to approach a given topic and with that offers a variety of ways to engage with the material which can cater to different learning styles.
6. Collaboration: Some interactive tutorials have elements that allows students to collaborate with each other, like creating a shared document to answer a question or a shared virtual space to do a task. This can help students learn from their peers, build their teamwork and communication skills, and create a sense of community in the online learning environment.

Overall, interactive tutorials can be a powerful tool for online learning, as they can provide an engaging and interactive experience that can help students learn more effectively and efficiently.

**Video lectures:** There are several ways to make video lectures more innovative for online students:

1. Incorporating interactive elements: One way to make video lectures more innovative is to incorporate interactive elements such as quizzes, polls, and discussion boards. This can help students engage with the material more actively and provide feedback on their understanding of the material.
2. Using animation and simulations: Using animation and simulations can make the material more engaging and easier to understand. This can be particularly useful for subjects such as science and engineering, where visual aids can help students understand complex concepts.
3. Incorporating case studies and real-world examples: Incorporating real-world examples and case studies can make the material more relatable and help students understand the relevance of what they're learning.
4. Using multiple presenters or perspectives: Having multiple presenters or perspectives can provide different perspectives on the material and can give a broader and more nuanced understanding of the topic.
5. Using breakout sessions and Q&A: During a video lectures, using breakout sessions and Q&A sessions can help students clarify doubts, ask questions and apply the concepts learned.
6. Creating interactive transcripts: Creating interactive transcripts can give students the ability to skip around the video, review certain parts and make annotations or highlights which can enhance the learning experience and engagement.
7. Gamification: Similar as interactive tutorials, video lectures can incorporate elements of game design, such as points, badges, and leaderboards, to make learning more engaging and enjoyable.

Overall, the key to making video lectures more innovative for online students is to design them in a way that is engaging, interactive, and tailored to the needs and preferences of the students. And incorporating a variety of elements that can cater to different learning styles and preferences.

**Virtual reality**: Virtual reality (VR) can be used to create immersive, interactive learning experiences that simulate real-world situations as discussed earlier.

Collaborative problem solving in a virtual environment can be a valuable tool for developing teamwork, communication, and problem-solving skills in students. Some specific ways that VR can be used for collaborative problem solving include:

1. Virtual teams: VR can be used to create virtual teams, where students from different locations can work together on a project or challenge in a shared virtual environment. This can help students develop skills such as teamwork, communication, and collaboration, as well as help them build relationships with students from other locations.
2. Virtual simulations: VR can be used to create virtual simulations of real-world situations, such as an emergency response scenario or a business simulation. This can help students develop problem-solving skills and critical thinking skills as they work together to navigate the situation and find solutions.
3. Virtual worlds: VR can be used to create virtual worlds, where students can work together to build and explore new environments. This can help students develop creativity, critical thinking and problem-solving skills as they work together to design and build a new world.
4. Virtual tours and presentations: VR can be used to create virtual tours and presentations, where students can work together to design and create a virtual tour or a presentation of a certain topic. This can help students to work in a collaborative way, develop presentation skills and share their knowledge with their peers.
5. Virtual mentor and peer-to-peer teaching: VR can be used to create virtual mentorship programs, where students can work with a mentor or teach each other in a virtual environment. This can help students to develop problem-solving skills, critical thinking and communication, as well as receive and give feedback.

Overall, VR can be a powerful tool for collaborative problem solving, as it can provide a shared virtual environment where students can work together to solve problems and develop important skills.

**Gamification**: This approach uses elements of game design, such as points, badges, and leaderboards, to make learning more engaging and enjoyable**.**

Yes, gamification is a popular approach that uses elements of game design to make learning more engaging and enjoyable. It can also be used to motivate students to complete modules and progress through the curriculum. Some specific ways that gamification can be used in online learning include:

1. Quests and challenges: Creating quests and challenges that students must complete in order to progress through the curriculum can help to motivate students and make the learning experience more enjoyable.
2. Leader boards: Creating leader boards that show students how they are performing compared to their peers can be a powerful motivator. Leader boards can also create a sense of friendly competition and motivate students to put in more effort.
3. Rewards: Providing students with rewards such as badges, points or certificates for completing certain tasks or achieving certain milestones can help to motivate students and create a sense of accomplishment.
4. Game-based assessments: Using game-based assessments instead of traditional forms of assessment can make the process more engaging for students, and can also provide valuable feedback on students' learning progress.
5. Gameful design: Using gameful design to create a sense of play in the learning experience, allowing students to explore, experiment and experiment with the material at hand.
6. Game-based environments: Creating game-based learning environments, such as virtual worlds or simulations, in which students can explore and learn through play.
7. Adaptive learning: Gamification can be integrated with adaptive learning systems, which adjust the level of difficulty, pace, and content to cater to individual student's needs, providing a more personalized and engaging experience.

Overall, gamification can be a powerful tool for making online learning more engaging and enjoyable, and can also be used to motivate students to complete modules and progress through the curriculum. It can provide an added layer of engagement and motivation, which can help students to maintain focus and retain the material better.

**Adaptive learning**: Adaptive learning systems use data from student interactions to tailor the learning experience to the individual student's needs.

Adaptive learning systems use data from student interactions to tailor the learning experience to the individual student's needs. The main idea behind adaptive learning is to provide a personalized learning experience for each student. Here are a few examples of how adaptive learning systems can be used to help students learn more efficiently and effectively:

1. Personalized content: Adaptive learning systems can use data from student interactions to provide personalized content and recommendations. For example, if a student is struggling with a particular topic, the system can provide additional resources or adjust the level of difficulty to better match the student's needs.
2. Adaptive assessments: Adaptive learning systems can use data from student interactions to provide adaptive assessments that adjust the level of difficulty and the type of questions based on the student's level of understanding.
3. Learning pace: Adaptive learning systems can use data from student interactions to adjust the pace of the learning experience, providing more time for students who need it, and moving more quickly for students who are able to absorb the material more quickly.
4. Real-time feedback: Adaptive learning systems can provide real-time feedback to students on their progress, allowing them to quickly identify areas where they need additional support.
5. Progress tracking: Adaptive learning systems can track student progress over time and provide actionable insights for teachers, instructors and students on how to improve.
6. Learning analytics: Adaptive learning systems can gather data on student interactions and learning behaviour, allowing teachers to gain insights about student's learning style, performance, preferences and identify areas that need improvement.

Overall, adaptive learning systems can provide a more efficient and effective way for students to learn by adjusting the learning experience to match the individual student's needs. These systems can also provide valuable data to teachers, instructors and students which can be used to improve the teaching and learning process.

**Project-based learning:** PBL is a pedagogical approach where students learn by working on projects, which can be done independently, collaborative or in small groups.

Project-based learning (PBL) is a pedagogical approach that emphasizes student-centered, hands-on learning by having students work on projects. It is a powerful tool for student engagement and to help students learn through experience and application of the concepts learned. Here are some ways PBL can be implemented in an online learning environment:

1. Real-world applications: PBL can be used to help students apply the concepts they are learning to real-world problems or projects. This can make the material more engaging and relevant to students, and can help students see the importance of what they are learning.
2. Collaboration: PBL can be done in small groups, or even as a group project. This can help students learn teamwork, communication and collaboration skills while working together towards a common goal.
3. Independent learning: PBL can also be done independently, which can help students learn self-directed learning skills and develop a sense of autonomy.
4. Authentic Assessment: PBL provides a way of authentic assessment, where students have to demonstrate their understanding of a topic or a concept through a project. This type of assessment can give a more complete picture of student understanding of a given subject.
5. Creativity and Innovation: PBL encourages student creativity and innovation as students can take ownership of their learning process and come up with their own ways of solving a problem or addressing a topic.
6. Problem solving: PBL projects usually involve problem-solving, which is an essential skill for many fields and careers. With PBL, students can practice problem-solving and critical thinking in an authentic and meaningful context.

Overall, PBL can be a powerful tool for online learning as it helps students learn through experience, fosters engagement and provides a way for authentic assessment. It can also promote critical thinking, problem solving, teamwork, and collaboration while providing opportunities for creativity and innovation.

What are the challenges for developing innovative formats for self-learning modules in online distance learning?

There are several challenges that can arise when developing innovative formats for self-learning modules in online distance learning:

1. Lack of structure: Self-learning modules can be difficult to structure in a way that is both engaging and effective for learners. It can be challenging to design a module that provides enough guidance to keep learners on track, while also giving them enough freedom to explore the material at their own pace.
2. Assessment: Assessing the learning outcomes of self-learning modules can be challenging, as the format does not typically involve direct interaction between the learner and the instructor. This can make it difficult to gauge a learner's understanding of the material and provide feedback.
3. Engagement: Self-learning modules can be less engaging than traditional, classroom-based instruction, as they lack the opportunity for face-to-face interaction with instructors and other learners. This can make it harder to hold learners' attention and maintain their motivation.
4. Accessibility: Self-learning modules need to be accessible to all learners, including those with disabilities. This can be challenging, as the design of the module needs to take into account the needs of a wide range of learners, including those with visual, auditory, or motor impairments.
5. Technology dependence: Self-learning modules are dependent on technology for the delivery and assessment of the content, so the reliability and usability of the technology used is crucial. A lack of access to the required technology and unreliable internet access can prevent students from completing coursework.

6. Adaptability: As the field of technology is advancing and innovation is happening at a rapid pace, keeping self-learning module design up-to-date can be challenging. As the designs may become outdated quickly and the need for updating is crucial to keep the relevancy and effectiveness of the module.
7. Personalization: The ability to adapt the module to the personal needs of each learner is key to making self-learning effective. It can be challenging to create a system that can provide personalized feedback, guidance, and recommendations to each learner.

**SIRJODL: Volume 4 Issue 2 July 2022**
**ISSN 2582-9009**

# Acceptance of Self-Learning-Based Model among Online and Distance Learning Pupils: A Qualitative Study

**Prashant Ubarhande, *PhD***
Assistant Professor, Symbiosis Centre for Distance Learning, Pune, INDIA
prashant.ubarhande@scdl.net

**Radhika K, *PhD***
Assistant Professor, Symbiosis Centre for Distance Learning, Pune, INDIA

**Shashank Bhandakkar**
Assistant Professor, Symbiosis Centre for Distance Learning, Pune, INDIA

**Tejaswini Shevate**
Assistant Professor, Symbiosis Centre for Distance Learning, Pune, INDIA

## *Abstract*

*Conventional teaching methods exclusively focus on the use of textbooks and face to face lectures; however, studies of teaching efficacy have shown that most learners who are taught using this manner do not fully grasp the course material and its real-life utility. Non-traditional teaching strategies have been proposed by numerous scholars, however there is no scientific agreement on the best non-traditional teaching strategies that are adapted to learners' abilities and most successfully fulfil the course objectives. The current study intends to investigate how ODL learners feel about the self-learning approach. The purpose of the current paper is to demonstrate that there is a compelling need to examine closely how self-learning-based models are created and governed. Researchers have conducted a qualitative study of the replies provided by ODL learners and have classified them then beneath different themes The investigation produced useful recommendations, which included a list of the advantages of the self-learning-based approach.*

***KEYWORDS***

*Self-learning, ODL, acceptability, qualitative study*

## Introduction

Every society needs education as a key element, and investing in education is necessary for every country to achieve sustainable economic growth in all of its manifestations. Hence, the focus of many nations' development has shifted to knowledge and skill acquisition.

The foundation of conventional teaching strategies is laid on lecturers outlining material from a textbook. Learners therefore are not active participants. unconventional teaching strategies on the other hand spark learners' creativity and curiosities and encourage them to participate in class activities (Chen et al., 2021) . In the past two decades, a number of researchers and authors have proposed a variety of non-traditional teaching strategies to maximise learners' successes (J. K. Ritter, 2020)

Because each learner has a diverse set of skills and talents, it is impossible to find a single, effective strategy for every learner (Pinnegar et al., 2020).

Researchers have used the phenomenology approach to explore the acceptance of self-learning-based model among learners of ODL. The main purpose of this approach is to deduce a phenomenon (Creswell and Poth, 2016). The present study intends to uncover student's responses with respect to acceptance of self-learning-based model to make the learning effective using the phenomenology approach. Authors reached out to Learners of open and distance learning with following research questions: -

### 1. Research Questions

- *RQ1: What are the benefits of self-learning model?*
- *RQ2: Categories of the benefits of self-learning model?*
- *RQ3: Is self-learning model yields more ease of learning among Learners over traditional learning methodologies?*

Answer to the above questions will provide insights into understanding the importance of self-learning model. The findings of the study will be useful to regulators, higher education institutes (HEIs) learners and teachers of not only ODL environment but also of traditional teaching environment (Ubarhande & Bagade, 2020). This will also help to grow use of self-

learning-based models in the Indian education industry. These insights will also provide clues as to how the academic programs should be designed in future to maximise the student interest**,** provide time flexibility, with minimum engagement cost to program facilitator.

Students who are taught through traditional methods spend majority of time listening to lectures and working on assignments at home. The authors of "the effectiveness of an inverted classroom to a traditional classroom in an upper-division engineering course" noted in 2013 that Learners who participated in self-learning programmes performed better or at least on par with Learners who received instruction through more conventional means (Mason, 2013). Although they had trouble with the self-learning-based format at first, learners were able to adjust to it fast and discovered that it was useful and beneficial. Similar to this, Anderson, H.G (2017) explained that Learners who were taught using the self-learning-based teaching technique saw a significant improvement in their short-term performance. The pre-test and post-test outcomes of were evaluated by (Koo C. L., 2016) learners to evaluate the efficiency of the self-learning-based method and discovered that, despite some Learners having issues with the time necessary, there was overall a significant improvement. their performance has been enhanced.

According to (Sun P. et al, 2010), the instructor's function in the self-learning model is limited to acting as an advisor for all of the methods used to help Learners reach their individual goals. In 2011, Robertson (Robertson J., 2011) outlined how the self-learning approach involves Learners in the learning process by having them organise their tasks, evaluate their completion, and revise their objectives. In other words, using the self-learning educational technique gives Learners more control over their education because they are responsible for more aspects of their assignments (Klopfenstein B. J., 2003).

With the use of the self-learning approach, Learners can thoroughly examine the course contents and speed up or slow down their education in accordance with their particular needs. The self-learning approach, according to (Grandinetti M., 2013), can serve as a basis for lifelong learning. Stewart (Stewart, 2007) conducted research on the self-learning educational approach and found that Learners were driven by a strong desire to learn and gave their all to finish their courses in order to get work experience.

The Internet and social media, including Facebook and Twitter, are essential parts of college and university Learners' everyday lives, having an impact on them in many ways, including

their ability to learn (Cao Y., 2013). According to a report, university Learners are progressively incorporating computer-mediated social networks into their academic life, making them a significant part of their daily lives.

## 2. Methods

### 2.1 Study Design

Present study is exclusively focused on exploring the acceptance of self-learning-based model among Learners of ODL and gaining insights on improvising it. The study also gives an insight as to how acceptance of self-learning-based model yielding benefits among Learners of ODL.

### 2.2 Selection of Participants

The participants are Learners of online and distance learning who have acquaintance with self-learning-based model. Learners categorically mentioned that the viewpoints, inputs, expressions, answers are their own and not of the company in which they work which they represent and they have gained this insight throughout their learning careers.

### 2.3 Data collection

The Learners were interviewed over phone calls. This was chosen for the reason of suitability and convenience for both interviewer and interviewees. The authors have thoroughly reviewed the literature, using databases such Scopus, Web of Science, Google Scholar where these studies are listed. Using these resources, authors designed the preliminary set of questions which was based on literature review and questions were framed so that they should be able to extract the most relevant information. These questions were prepared to enable the authors to carry out semi-structured interviews.

### 2.4 Sampling Strategy

Qualitative research uses snowball sampling methods extensively where samples consist of units which have similar interest (Biernacki and Waldorf, 1981). The method is used to reach out to a specific group of people who have similar traits and characteristics and it would be difficult to reach out to them otherwise. Self-learning-based model among Learners of ODL is very niche and specific areas and these are usually not known to all. Therefore, the snowball sampling method was found to be more appropriate for the present study. The sampling unit

consists of Learners who are from specific domains such as management, law, education and information technology.

### 2.5 Sample size

Unlike to quantitative studies, qualitative ones are always sample size independent. The latter is influenced by the number of respondents, whilst the former is more motivated to explore phenomena. The saturation point in qualitative investigations depends on a number of variables, including the quality of the data, the scope of the study, the information provided by participants, and the study design (Morse, 2000). Because the current study is qualitative in nature and has a very specific focus, there won't be as many participants. The quantity and quality of the data are another crucial determinant of size; the more these, the fewer participants are required. The authors took interviews and decided to stop the interviews when saturation point was achieved and no new insights were emerging from the respondents. Saturation started coming from expert 15 onwards, so this study included 18 interviews as the final sample size.

### 2.6 Data analysis

By using a qualitative research methodology, the main goal of this study is to get a thorough understanding of how self-learning-based models are accepted by online and distance learning Learners.

Structured content analysis, one of the most well-known approaches, is utilised as a data analysis technique because it can provide useful information by carefully analysing texts.

When doing content analysis, the writers employed the same methods as in quantitative investigations (Long and Johnson, 2000). Developing ideas for upcoming quantitative investigations is the goal of the qualitative content analysis, which never invalidates any theories (Mayring, 2014). Researchers should employ content analysis in a methodical and clear way in order to reap its benefits (Elo and Kyngäs, 2008). The raw data collected from interviews is used to perform latent analysis to derive relevant results.

### 2.7 Rigor

The current study was carried out by four authors. Many activities were done simultaneously by all the authors in the sense of conducting a literature review, preparing semi-structured

questionnaires, getting time slots for interviews from experts, transcribing, coding, extracting themes, proofreading, finalising of manuscript, final submission, etc. All the authors consulted each other after each interview to discuss the insights given by the learners along with strategizing the future course of action.

## 3. Results and Analysis

Most of the experts and learners mentioned and gave their inputs on the condition of anonymity, therefore they have been coded as R01, R02 and R03. All the discussions were conducted using other audio-visual means OAVM. The experts and learners belong to many fields including education, content development and the IT industry. The average time duration taken for interviews was 09.78 minutes.

**Table 01: Cluster analysis of respondents**

| S. No. | Cluster | Theme(s) |
|---|---|---|
| 1 | Gen-Z | Ease of Use |
| | | Practical Application |
| | | Time/Duration |
| 2 | Millennial | Conceptual Understanding |
| | | Applicability of knowledge gained |

### 3.1 Gen Z

As per the research conducted by Michael Dimock, president of Pew Research Center, Generation Z**,** also called Gen-Z**,** zoomers**,** iGeneration**,** centennials**,** post-millennials**,** or Homelanders**,** term used to describe Americans born during the late 1990s and early 2000s. we have categorised the views of this group to get the better idea about acceptance of self-learning-based models among different age groups. Themes under this cluster are discussed in following paragraphs:

### 3.1.1 Ease of Use:

Ease of use of any system determines its success. A system or model, which is not use-friendly may get out of the race sooner or later.

Sample verbatim as follows –

1. *If the self-learning course is available at the fingertips of learner, is user friendly and does not require much technological knowledge then popularity of these courses will be increase*
2. *The acceptance of self-learning material is largely based on the simplicity of language , rich content and powerful instructional design.*

According to respondents, ease of use of Self Learning Material is an Important aspect in its acceptance among Gen Z.

### 3.1.2 Practical Application:

The practical application is how the knowledge learnt needs to be implemented in certain real-life situations. The mode of practical application along with theory gives everyone a clear explanation about the facts. Theory teaches about the experiences of others while by practically experiencing the particular task you can build your own experiences. Philosophically, knowledge is intangible but the practical application makes it tangible by applying those skills in practice.

Sample verbatim as follows –

1. *Today the education system mainly creates graduates with limited job opportunities. This is mainly because of lack of skills developed and practical aspects of all subjects taught.*
2. *To make self-learning-based model more acceptable , there has to be hands on experience backed to such models.*

Respondents are of the opinion that to Self-Learning Model can only get popularity if it is supported by practical examples, cases and in-built Virtual lab exposure.

### 3.1.3 Time/Duration:

Different Programs have different time duration to complete the same based on its content , learning outcomes and evaluation. We have asked experts and learners in ODL system to express their views on acceptability of Self Learning Based models and its relation with Duration required to complete the program.

Sample verbatim as follows –

> *A self-learning-based program should not be time bound. There should exists learners' flexibility to read, refer and take tests.*

Maximum duration required to complete the program is calculated by considering various components. If a self-learning-based program is made free from time bounds, we may not have rigorous regulations on it. Here we contradict the sample verbatim in the sense that a program without any time bound cannot be regulated properly unless there are not commercial outcomes expected such as employability. Moreover, if a program is not time bound, there may be threat to relevance of some concepts in fast changing, technology sensitive, innovation hungry business processes.

## 3.2 Millennial

Researchers have clustered the responses in second category called millennials. A group of persons born in the 1980s or 1990s. Themes under this cluster are discussed in following paragraphs:

### 3.2.1 Conceptual Understanding

When it comes to education and certification, learners and experts fetch the conceptual understanding gained out of such certification. Most of the evaluations of short term and practical courses is based mainly on the conceptual understanding. We have identified this as one of the important themes to assess the acceptability of self-learning-based model among learners of ODL.

Sample verbatim as follows –

1. *Self-paced certifications should have measurable outcomes and clearly defined evaluation parameters. This will help recruiters to understand the conceptual understanding a learner achieved after having certification*
2. *We have ample of free content available to learn the concepts. Why one should pay and need certificate to prove that he/she got certain understanding unless he/she is applying for a job.*

Existence of conceptual understanding as an outcome of self-learning model has mixed views. We believe that, a course should generate strong conceptual understanding among learners to justify its applicability.

### 3.2.2 Applicability of knowledge gained

Application of the knowledge is more important that to just acquire it. We emphasised on the applicability aspect of self-learning-based models to access the acceptance of the same among learners.

Sample verbatim as follows –

1. *Mentors in the field who can **not only be** instructors but also guest speakers and other industry professionals who can provide learner with priceless information not found in textbooks, as well as personal tales and feedback about their own life and work experiences can help Self Learning model more demanding*

A self-learning-based model should ensure that, its learners get the knowledge which they can apply in real life situations.

## 4. Implications

The acceptability of self-learning-based models, which employ multiple platforms to automatically manage and certify learners, has grown over the past several years for a variety

of reasons, including the fact that they are straightforward, practical, and affordable. Concerns have been raised about the application and recognition of certificates obtained later as a result of the employment of such models.

Consequently, this study's goal is to look into these issues in India. By conducting semi-structured interviews with professionals and Learners in the fields of online and distance learning, this study adds to the body of literature, its findings.

Self-learning-based model can be regulated by regulatory authorities to provide it an authentic weightage so that the acceptability of such certification among recruiters rises. This would also help in reducing the cost of learning for both learners and facilitator of such certification. In addition, regulators have the ability to encourage such learning that are able to meet the requirements as per industry standards and put regulations into place.

## 5. Conclusion

For a few reasons, self-learning-based models are currently undergoing a significant evolution. The first problem is that specialised learning is lacking in today's quick-paced world of information availability. The learner must commit time or money in order to get such specialised learning. Presence of high-quality, well-regulated self-paced courses would undoubtedly alleviate both issues. Second, since we live in the digital age, it is only natural to expect that this cutting-edge technology will aid in self-paced learning.

The purpose of the current paper is to demonstrate that there is a compelling need to examine closely how self-learning-based models are created and governed. We also contend that there should be an integration of behavioural aspects of learners and experts designing such model to make it user friendly and to align it to current industry requirements. In India, for example, the use of self-learning model has enabled hundreds of thousands of women to earn a degree, regardless of gender, caste, or social class. In South Africa, UNISA’s Institute for Open Distance Learning contributed greatly to higher education. Virtual mobility, as a substitute for physical mobility, offers undeniable economic benefits for development policy-makers (UNESCO, 2020).

This study is qualitative in nature; hence it is subject to limitations like the inability to generalise the results. A qualitative article's goal places more emphasis on conceptualization

than generalisation (McCracken, 1988). So, adopting quantitative approaches may be given more focus in future studies.

More specifically, the components mentioned in the conclusions and conversations may be included in a survey, and a sizable poll could aim to measure the impact of the elements we noticed when speaking with the experts.

**References:**

1. Anderson, H.G.; Frazier, L.; Anderson, S.L.; Stanton, R.; Gillette, C.; Kim, B.; Yingling, K. (2017). *Comparison of Pharmaceutical Calculations Learning Outcomes Achieved Within a Traditional Lecture or Flipped Classroom Andragogy*. Am. J. Pharm. Educ., 70-81.

2. Biernacki, P., & Waldorf, D. (1981). Snowball sampling: Problems and techniques of chain referral sampling. *Sociological methods & research*, *10*(2), 141-163.

3. Cao, Y.; Ajjan, H.; Hong, P. (2013) *Using social media applications for educational outcomes in college teaching: A structural equation analysis*. Br. J. Educ. Technol. 2013, 44, 581–593.

4. Chen Y.L., L.-F. Huang, and P.-C. Wu, "Preservice preschool teachers' self-efficacy in and need for STEM education professional development: STEM pedagogical belief as a mediator," *Early Childhood Education Journal*, vol. 49, no. 2, pp. 137–147, Mar. 2021, doi: 10.1007/s10643-020-01055-3.

5. Creswell, J. W., & Poth, C. N. (2016). *Qualitative Inquiry and research design: Choosing among five approaches*. Sage publications.

*6.* Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of advanced nursing*, *62*(1),107-115.

7. Grandinetti, M. (2013) *Motivation to Learn, Learner Independence, Intellectual Curiosity and Self-directed Learning Readiness of Pre-licensure Sophomore Baccalaureate Nursing Students*. Ph.D. Thesis,Widener University, Chester, UK.

8. Klopfenstein, B.J. Empowering Learners (2003) *Strategies for Fostering Self-directed Learning and Implications for Online Learning*. Master's Thesis, University of Alberta, Edmonton, AB, Canada.

9. Koo, C.L.; Farris, C.; Bowman, J.D.; Panahi, L.; Boyle, P. (2016) *Impact of flipped classroom design on student performance and perceptions in a pharmacotherapy.* Am. J. Pharm. Educ, 80, 33.

10. Long, T., & Johnson, M. (2000). Rigour, reliability and validity in qualitative research. *Clinical effectiveness in nursing*, *4*(1), 30-37.

*11.* Mason, G. S., Shuman, T. R., & Cook, K. E. (2013). *Comparing the Effectiveness of an Inverted Classroom to a Traditional Classroom in an Upper-Division Engineering Course.* IEEE Transactions on Education, 56, 430-435.

12. Mayring, P. (2014). Qualitative content analysis: theoretical foundation, basic procedures and software solution.

13. Morse, J. M. (2000). Determining sample size. *Qualitative health research*, *10*(1), 3-5.

14. Pinnegar S. E., C. Lay, R. Cutri, and M. Newberry, Exploring the contribution of self-study of teacher education practice to the conversation on research on teacher education. New York, NY: EdTech Books, 2020.

15. Ritter J. K., "The educational self as a starting point for understanding and self-study in teaching and teacher education," 2020, pp. 129–142.

16. Robertson, J. (2011) *The educational affordances of blogs for self-directed learning*. Comput. Educ, 57,1628–1644.

17. Stewart, R.A. (2007) *Investigating the link between self-directed learning readiness and project-based learning outcomes: The case of international masters' students in an engineering management course*. Eur. J. Eng. Educ, 32, 453–465.

*18.* Sun, P.; Feng, Q.E.; Guo, C.H. (2010) *Application of web-based periodical self-directed learning mode. In Proceedings of the International Conference on Artificial Intelligence and Education (ICAIE*), Hangzhou, China, 29–30.

19. Ubarhande P., Bagade S. (2020). *Critical Evaluation of Competency Mapping for Teachers in Traditional and ODL Environment.* Symbiosis International Research Journal on Online & Distance Learning (SIRJODL), 2(1), 01-11.