

A Study within Salalah's Higher Education Institutions on Online Learning, Motivation and Engagement Challenges during Covid-19

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Abstract: In this research article, we foregrounded the coronavirus outbreaks and the Oman government's efforts to combat the Novel Corona outbreak in the Sultanate. The sudden change from face-to-face to online learning assisted academic institutions in remaining open and working steadily on improving the quality of teaching and learning as it recovered from two long years of the critical period of the pandemic. However, it brought lots of challenges to the academic world as well. It has increased psychological pressure to make new educational strategies and assessment plan that suits the new learning. In such circumstances, to achieve high-quality learning outcomes, the motivation and Engagement of the students are pre-requisite that give us a reason to pursue this study in the Omani context. The research article aims to explore the creative and flexible thinking of academics to motivate and engage students in attaining essential core course learning objectives and challenges of online learning to maintain quality education. It also examines assessment options and technical factors in the success of online learning. A qualitative method has been applied. The scheduled questionnaire has been devised for the survey. The 360 samples have been collected from Dhofar region academic institutions. IBM (International Business Machines), SPSS*Statistics (Statistical Package for Social Sciences), version 25, has been used to analyze the data. The findings help understand the need for observation, which requires changes in student motivation directly related to online learning.

Keywords: Online Learning; Students; Academicians; Course Content; Oman; Covid-19; Coronavirus Pandemic; Perception, Pedagogy; Motivation and Engagement.

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1. Introduction

Due to the Coronavirus pandemic, the world has faced an unprecedented time. It disrupted the education system at the largest ever in history. To ensure public health, each country's government has taken many decisions as containment majors. The Colleges, Universities' campus activities had stopped, and the institution closed completely. Socio-cultural behavior had dramatically changed [1]. To combat the Novel Corona outbreak, Omani Supreme Committee has made many decisions to control the pandemic. Suspension of the academic classes across the country was one of them. This emerged a need for online learning and online working culture. For almost three semesters, the academic institutions worked online. Oman's government's response with its best capacities to mitigate the impact of the pandemic on people's life was commendable. The Supreme Committee's decision to vaccinate the mass and strict adherence to Covid-19 precautions worked well in controlling the situation. Mass vaccination policy helped the workforce to return to government and private work premises with a capacity of 100%. It encouraged holding social, cultural, sports, and religious events within the set measures and procedures. After three semesters of online teaching, the Oman Government has decided to open academic institutions. Higher education institutions

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started online and blended learning to safeguard students' and academicians' health. The disruption due to Covid-19 brought many challenges regarding the academic plan and developing new teaching activities with traditional course material. It has been experienced that the sudden shift to online teaching and learning limited the quality of learning at the beginning of 2020 [5]. However, quality learning is settling after three semesters of online teaching and learning. At the end of 2021, Omicron, a mutant Coronavirus variant from South Africa, again increased the tension in the whole world. After seeing the risk of mutant Coronavirus, academics and students are concerned about their well-being and the nature of future semesters. Academics and students have experienced many challenges and difficulties during Spring Semester-2021 (SP21) and Fall Semester-2021 (Fall21) online learning.

1.1. Challenges of Students' Motivation and Engagement in online learning

The abrupt closure of academic sessions and shifting online learning have ensured the continuity of the semesters without any break across Oman. During Fall20 and SP21, the education institutions have applied many experiments such as synchronous, asynchronous lecture arrangements, formative and summative assignments, multiple-choice, and objectives to maintain the teaching-learning quality. This experiment has been successful to some extent. However, a trend of negligible participation and lack of motivation has been noticed in virtual classrooms. Due to cultural barriers, the students are reluctant to open their cameras. This situation leads teachers towards confusion as they need to be aware of students' attentive status, level of motivation, and Engagement. Active participation from the students' side is the only way to understand their creative and analytical approach, critical thinking, and communication skills during lectures. It raises concerns about quality learning. Poor internet connection, shortage of devices, absence of technical knowledge, and lack of learning resources are the reasons that affect motivation and Engagement among the students. Students found difficulties in accomplishing their assignments and lab work submissions while staying remotely in the mountains. It shows a cause of concern for academics as it creates a big gap between face-to-face and online motivation and Engagement. It can affect the learning outcomes of theoretical and practical courses.

Online learning with old pedagogy brought many challenges and psychological pressure on academics to make new course delivery strategies and assessment plan that suits the present learning style. In such circumstances, to achieve high-quality learning outcomes, the motivation and Engagement of the students are pre-requisite that give us a reason to pursue this study in the Omani context. The research article investigates the intricacies of online delivery with old course patterns and the different efforts of academicians to maintain the quality of learning. It examines the diverse strategies and assessment plans that suit the need to motivate and engage students in online learning. The article also focuses on students' expectancy of online learning and their preferred interaction platform with the teachers. It also discusses the psychological pressure on academics and students during online learning.

2. Motivation and Engagement: How it Works?

Technology-mediated remote learning is no more optional now. Due to the pandemic, it has become a necessity for the whole world [2]. Many types of research have been done in this realm to understand the motivation and engagement challenges of online learning. Some research shows that a lack of experience in technology-mediated learning has created a significant obstacle for students. Motivation and Engagement are considered the 'engine' of learning [8]. It can easily influence a learner to what, when, and how he or she will learn. It is considered a significant element in performance. It determines whether a student persists in some specific course or not. Their level of Engagement shows the quality of their academic work. Personal and social experiences and circumstances can influence the motivation and Engagement of an individual.

Motivation is connected with an individual's cognitive thought process, self-belief, decided goals in life, and emotional desperation. It works like a thread that links students to the learning environment. In contrast, Engagement works on certain variables such as course delivery strategy, teachers' initiative to understand students' struggles/ difficulties and readiness to solve them, to understand the motivation and Engagement of the student during online learning. Two different perspectives have been discussed; the first is the learning environment and technical support; this learning environment is created and constructed by course instructors, while the second factor, which is the self-characteristics of the student, is getting decided by his intrinsic and extrinsic interest in learning. In online learning, students need support and resources like classroom learning. They have learning videos and live lectures from the teachers, which creates difficulties in understanding the course content. In such a situation, they are working independently.

They need help to carry on their course without software and instruments [3]. For better learning motivation, a favorable environment is required to encourage students to attend classes daily and involve them in class discussions and question-answers. It also encourages them to complete their assignment by understanding its objective. The academics can create research-based intellectual strategies and opportunities to engage the whole class. Intellectual Engagement can be done by creating personal challenges, purposeful classwork and arousing curiosity. The student's Engagement towards the class is based

on the students'- teacher relationship and students to their friends' circle. If the bonding between teacher and students works well, it helps to create more interest and support for teamwork. The student's motivation can appear elusive, especially in technology-mediated learning. Lack of discussion, learning partners' unavailability, and absence of personal sharing.

The motivation concept works on four components, as it is well described by John M. Keller in 1983. These elements are attention (A), relevance (R), confidence (C), and satisfaction (S) [6] (figure 1).

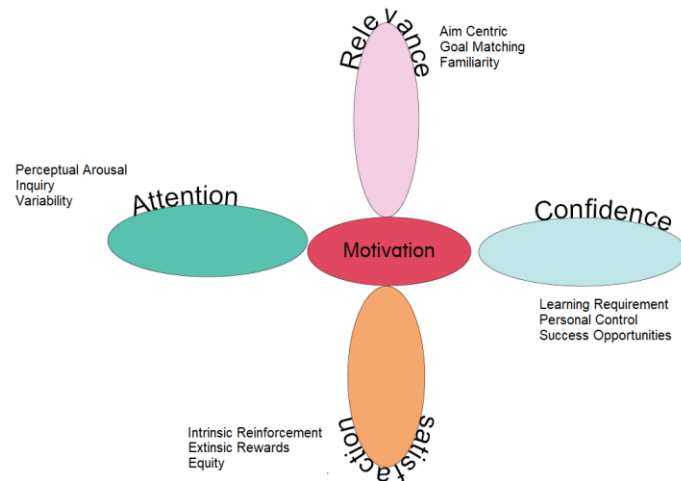


Figure 1: ARCS model [6]

In John M. Keller's Model of Motivation, the four main core components have subsections explaining how these model elements work. For the 'attention' perceptual arousing, inquiry, variability, active participatory task and its correction can be used to hook up the students [6]. The first component of the ARCS model is interrelated to the second element, 'relevance'. The objective of learning, goal matching and its connection to student's life can be explained to them to ensure the class discussion is relevant. Gagne's nine events of Instruction theory discussed it clearly in 1965 [4]. Robert M. Gagne was an educational psychologist who developed nine instruction models after observing the learners' thought processes. He explained how people could achieve definite learning goals and formed instructional events to help them attain pre-decided objectives (figure 2).

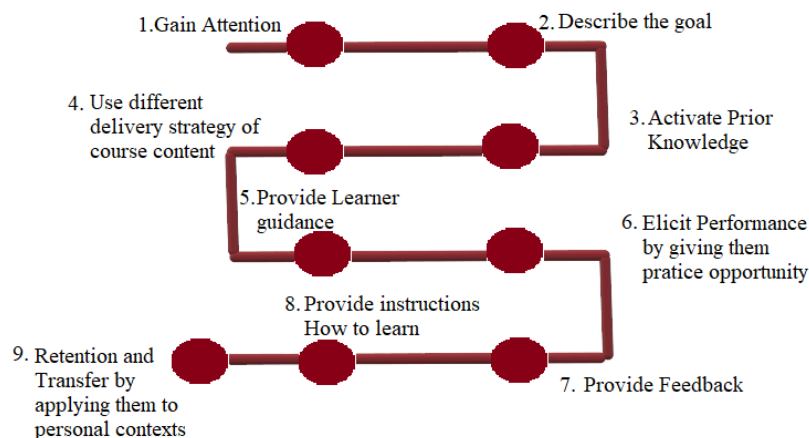


Figure 2: Gagne's Nine Events of Instruction Model [4]

The news, events, videos, case studies, and classroom activities such as quizzes and discussions on a particular topic of interest can grab students' attention. John M. Keller's ARCS model and Gagne's model of Nine Instruction theory emphasized communicating the learning objective to the learners. They need to know what they can accomplish after learning the course and how it can help them learn for their context. This enables learners to understand the learning requirement and self-growth, which is crucial for successful careers [9]. The sixth component of Gagne's model indicates performance by connecting present lessons to prior learning. Various course delivery methods can be used using video, case study, text, activities and practices.

Convenient scheduling brings satisfaction and positive outcomes. Unexpected rewards work as motivational elements. The last three components of Gagne's model emphasize positive feedback on practices and performance, instigating the learners to perform better.

According to De Bono's 'attention-directing tools, academicians can grab students' attention by following thinking tools [7] (table 1).

Table 1: Attention-directing tools [7]

Short Name	Abbreviation
PMI	Plus, Minus, Interesting
CAF	Consider ALL Factors
OPV	Other People Viewpoints
APC	Alternative Possibility and Choice
AGO	Aim, Goal and Objectives
FIP	First Important Priority

During the online classes, students can be asked after delivering the lecture topic, such as what they like about it. Moreover, what do they not like? What are the most appealing and exciting points? The PMI tool is more related to judging the good and bad topics, while CAF asks to work on possible factors of the topic. These tools also include how people think and can affect others. What is the position of such thinkers in the social structure? What kind of thought process do they have? During online learning, cognitive and Social interaction are required for creating knowledge and interactive attitude towards problem-solving certain course content. It supports learning and enhances the students' behaviors, attitudes, and relationships with others. Communication is an essential requirement for effective learning and motivation during online learning, as it plays an essential role in facilitating cognitive skills and building knowledge. It works in many ways to share opinions, information, and ideas contributing to learning. In this way, knowledge is socially built and supported through collaborative designs. It encouraged participants to share knowledge and handle projects that add features of group work, real-world practices, and use of varied information sources" [10].

3. Research Methodology

This cross-sectional study addresses the key objectives of understanding the challenges of motivation and Engagement in online learning and the intricacy of the new delivery system with traditional course material. The opted research design is qualitative and quantitative. A structured interview was conducted for the academics, while a survey questionnaire was done for the students. A total of 331 Student and 43 academicians' sample has been obtained from the University of Technology and Applied Sciences Salalah, Dhofar region, Sultanate of Oman. The data of variables have been collected from October 2020 till the beginning of February 2021. Two separate questionnaires have been developed in English and Arabic, addressing the study's objectives. Questionnaire pre-testing has been done before the distribution of the survey forms. One questionnaire link for the students' survey has been created by using Google Docs form and distributed to the target respondents through emails and WhatsApp networks. In addition, desk reviews have been conducted to collect secondary data from various sources, such as research journals and media reports. Certain variables are devised to understand the challenges and difficulties of motivation and Engagement in online learning during COVID-19. Essential Elements of the course, like - Course goal, learning objectives, mode of course delivery, availability of resources and network availability and new course delivery and assessment strategy, are independent variables. At the same time, students' motivation and Engagement and quality of learning are dependent variables (figure 3).

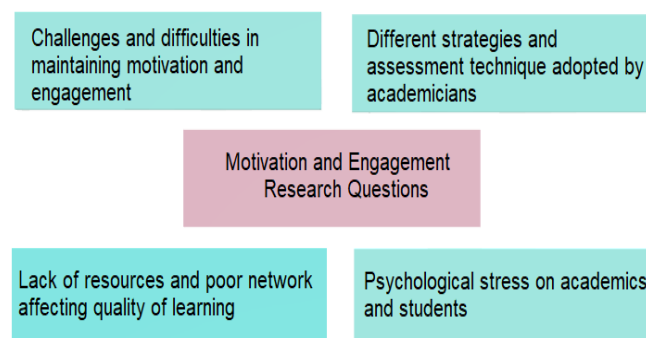


Figure 3: Research Questions

4. Discussion

The discussion is based on 374 responses from the University of Technology and Applied Sciences, Salalah, Oman. The data is analyzed using the SPSS descriptive method in the frequency percentage for the responses. The tables and charts have been used to display the results. For the Students' survey, 71.3% of female and 29.9% of male students' respondents have taken part. Most students are from the 18 to 25 age group, pursuing their Bachelor of Graduation and Diploma. Their majors are Mass Communication, English, Information Technology (IT), International Business Administration (IBA) or Tourism, etc. A total of 43 academics have also participated in this research.

The academic routine got severely affected due to a prolonged pandemic. The expectation of the students about online learning is a maximum of 78.9 percent towards live sessions as well as recorded videos of the lectures. They said that it would be easy for them as and when they get stuck at some points, they can take a look to ease their study, while only 21.1 percent of respondents said that classes should be live sessions so that interaction can be done to the maximum to clear all their doubts. Students of 60.4 percent said that the motivation of the students will be maintained if the classes are according to the timetable. It gives us the feeling of being in a routine, while 28.1 percent of respondents said it should be on an alternate day. Only 11.5 percent said that classes should be once a week. Communication plays a significant role in motivating and engaging students during online remote learning. 62.2 percent of students preferred WhatsApp to get connected with the teachers for queries and clarification, while 11.2 said official email is also a suitable communication medium. It keeps all records safe for future use. 26 percent of respondents said that a separate time or specific time during class should be allocated for students' queries. Maximum respondents said online education is good for them as it keeps them engaged in their semester work. However, there are a lot of issues and challenges which create barriers to their learning outcomes and fulfilment of course objectives. In addition, it affects their motivation level as well.

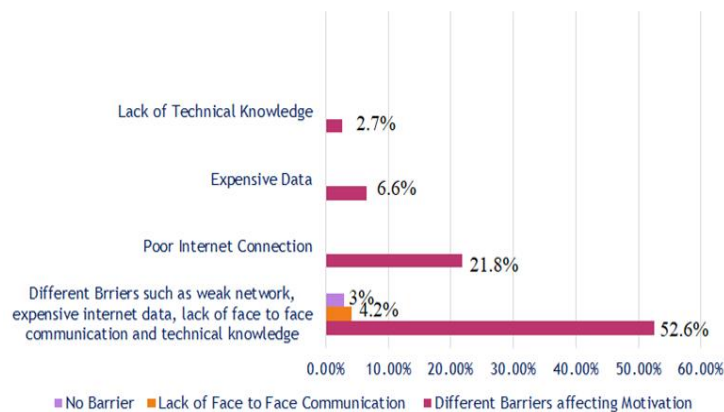


Figure 4: Different Variables affecting motivation and Engagement

Figure 4 explains that 52.6% of respondents believe the non-availability of resources significantly impacts the student's Engagement and motivation. In comparison, 21.8% of respondents say that the lack of robust internet infrastructure is one of the variables that significantly impact students' Engagement. Eventually, it is connected with the quality of learning.

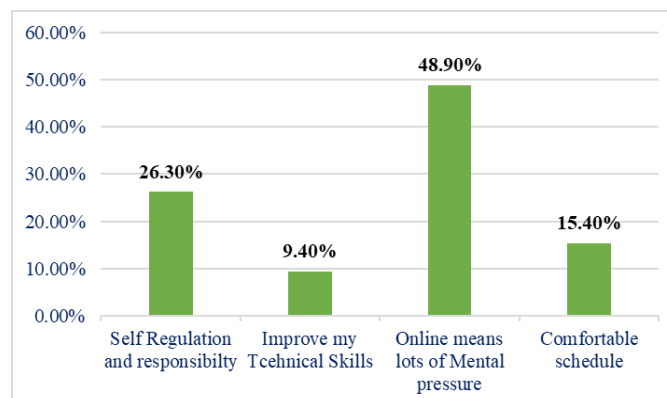


Figure 5: Students' Experience for Online Learning

Figure 5 indicates that online learning is different for each student. That is why 48.9% of students feel mental pressure during their online semesters, while 26.3% of students' experience it requiring self-regulation and more responsibility. This is more related to self-learning and practices without face-to-face communication. For 9.4% of students, they say that it helps them improve their technical skills, while 15.40% of students find online learning more comfortable.

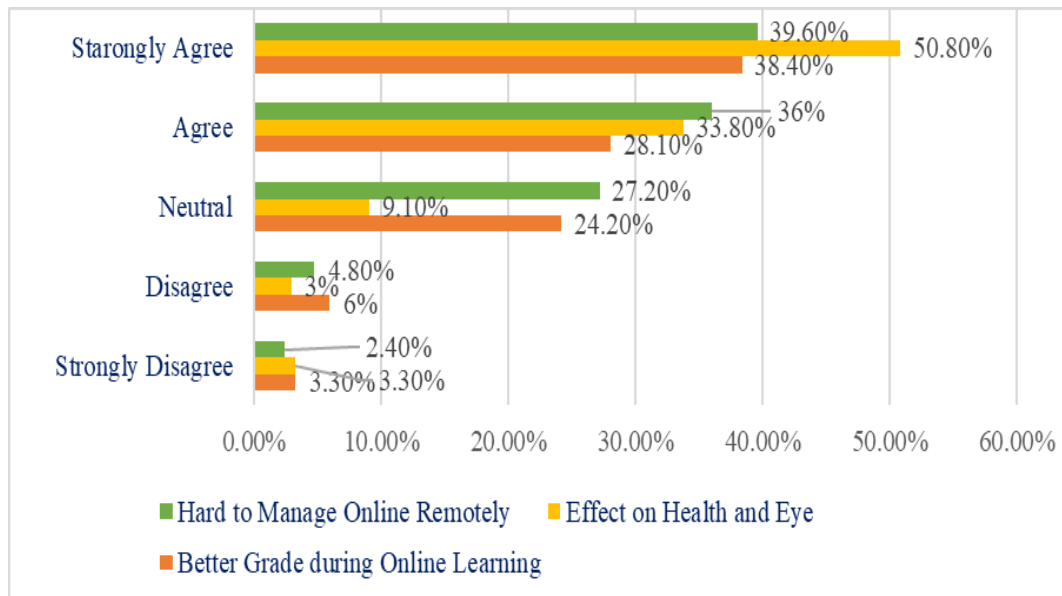


Figure 6: Advantages and Disadvantages of online learning

Regarding the advantages and disadvantages of online learning, students have mixed opinions. As it is clear from Figure 6, 75.6 percent of students find it difficult to manage online, while 66.50% say that they are getting better grades from the last three semesters. On the other hand, 84.6% of students say that long hours sitting online in front of a computer or mobile device affects their eyes and health (figure 7).

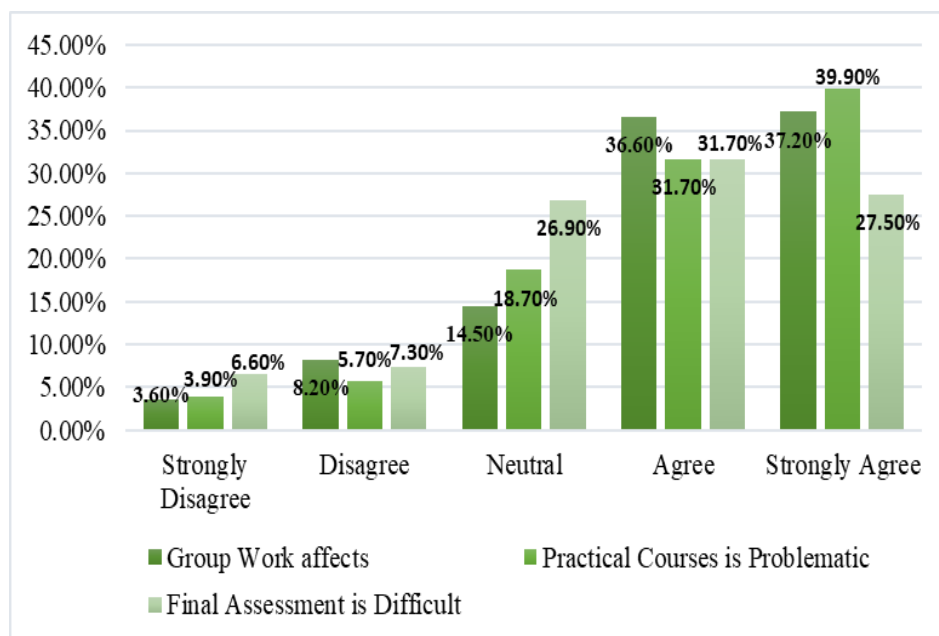


Figure 7: Issue of Assessment and Group Work

Most respondents, 71.6% and 73.8%, agree they need help managing their practical courses. Along with this, group assignments are also difficult to manage.

Table 2: Statistics of Academicians on Motivation and Engagement

		Statistics			
		Basic Elements-an idea, experience, or theory in online class	Teaching Strategies to engage and motivate students	Challenges of motivation and engagement in online learning	Difficulties of online assessment
N	Valid	43	43	43	43
	Missing	0	0	0	0
	Mean	3.67	5.79	4.91	3.72
	Median	4.00	7.00	6.00	4.00
	Mode	4	7	6	4
	Std. Deviation	.993	2.569	1.849	1.161
	Sum	158	249	211	160

The present data is the statistics of academics' responses. As it is clear from the students' responses that motivation and Engagement are dependent on two essential perspectives. The learning environment and technical support. The learning environment includes the availability of resources, strategy, and delivery of educational material, assessment nature, and students' self-regulation. During our study, we notice that essential elements of the course, teaching strategy, and assessment difficulties significantly impact the motivation and Engagement of the students in online learning as it has a high mean of 3.67, 5.79, and 3.72 with std. deviation .993, 2.569 and 1.161.

Currently, the course is designed for classroom learning, while online teaching needs more comprehensive course materials. However, academics do their best to generate extra work and visually reach content. Table 2 shows their approach to engaging and motivating students during online learning. It shows their effort to maintain the quality of learning and achieve maximum learning outcomes.

Table 3: Teaching Strategies to Engage and motivate students

Teaching Strategies to engage and Motivate the Students					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Visually rich and interactive materials delivered via screen	4	9.3	9.3	9.3
	Writing Skills and inviting personal interest questions from the students.	1	2.3	2.3	11.6
	Critical and analytical thinking approach through scenario-based questions.	9	20.9	20.9	32.6
	Trying all above mentioned strategies	22	51.2	51.2	83.7
	Encouraging writing and speaking skills, light exercise, and motivation to search	2	4.7	4.7	88.4
	Critical thinking and light exercise	4	9.3	9.3	97.7
	Visual rich content, critical thinking exercise, light class work and group work	1	2.3	2.3	100
	Total	43	100.0	100.0	

Three significant issues affecting the motivation and Engagement of the students during online learning are understanding of the course and follow-up difficulties, course nature and delivery design, and the need for robust network connection. Though the pedagogy is old, academicians use innovative teaching strategies to engage and motivate students. For example, table 3 shows that 51.2 percent of academicians use visually rich content to interact with the students via the screen. They invite students' interest questions and encourage them to write on specific topics. This technique helps to evoke their critical and analytical thinking approach (figure 8).

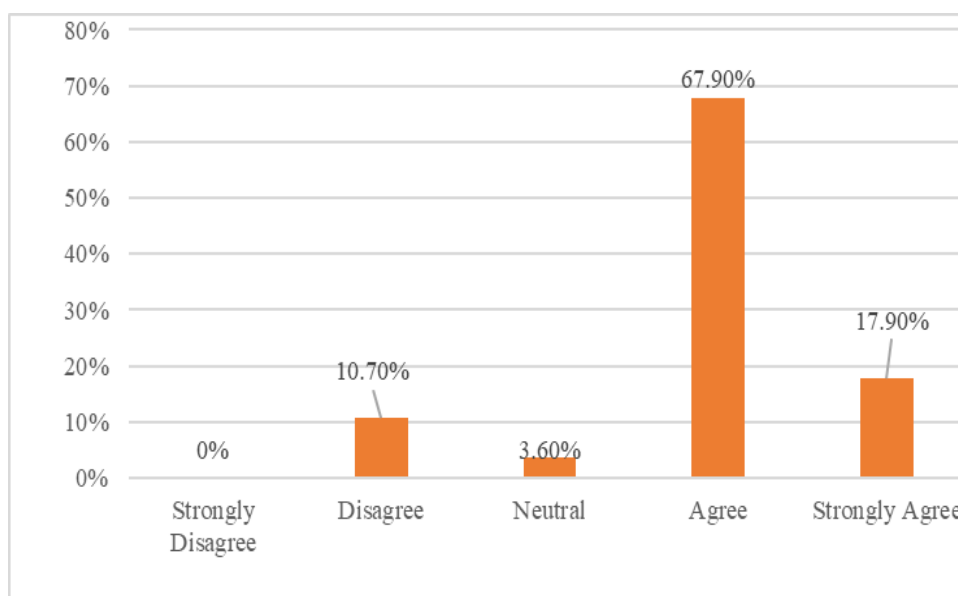


Figure 8: Online teaching needs more comprehensive course material.

Most academicians, 67.9%, say online teaching requires more comprehensive course material (table 4).

Table 4: Challenge of Motivation and Engagement in Online Learning

Challenges of Motivation and Engagement in Online Learning					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Students attitude of not learning those material which are not likely to be in the exam	5	11.6	11.6	11.6
	Lack of robust networking infrastructure	5	11.6	11.6	23.3
	Online Assessment	5	11.6	11.6	34.9
	All above mentioned challenges	26	60.5	60.5	95.3
	Lack of robust network and language barriers	1	2.3	2.3	97.7
	Students' attitude towards learning and network issues	1	2.3	2.3	100.0
	Total	43	100.0	100.0	

It has also been noticed that students are reluctant to study the material that is outside their assessment plan. 11.6% of students are sharing one of the challenges, like lack of robust network infrastructure and assessment difficulties, which eventually create challenges to student engagement and motivation. In addition, 53% of respondents say online assessments are less controllable. It is challenging to manage the final assessment as it has a high risk of dishonesty. As assessment is always a critical component in online learning, students and academicians have their suggestions to improve teaching and learning. 33.2% of students say that scenario-based practical assessments help them to understand more, while 27.20% say that daily-based activities can also be included in the assessment process. 36.9% say that visual presentation and research-based work will benefit motivated and quality learning more. While 67.9% of academicians say that formative and summative assessments are required to achieve course objectives. 25% of academics believe that class-to-class-based activities can be great for assessing and engaging students.

5. Finding

The present findings display the scenario of technology-mediated learning and academic challenges of motivating and engaging students during COVID-19:

- The new delivery system's biggest intricacies are the course's traditional nature. Present course content and assessments are according to face-to-face learning, which creates issues with achieving learning objectives again. In addition, learning Practical courses suffers a lot as they all are lab-based. However, the good part is developing technologies that help them to maintain the quality of learning outcomes.
- Strong connectivity and robust Internet infrastructure are pre-requisite to online learning. In the absence of this, it has all power to disrupt whole learning and can negatively impact students' motivation and Engagement.
- With the help of visually rich content, academics are trying to create new educational strategies and deliver them systematically. In addition, it helps the students to understand the course materials. However, at the same time, the assessment plan creates other issues. For example, it has been discovered that there needs to be more control over final assessments.
- The students have their expectations before arriving at the online course. Their preferred way of interacting with the teachers to get connected and motivated to study is through social media platforms and emails.
- The sudden closure of academic institutions has created pressure on students and teachers which causes mental stress during COVID-19. Students' stress was related to completing group assignments and lab work, while academic pressure was related to creating course content and assessments.
- Online learning has three basic requirements- Students' understanding and follow-up Course design and course content, connectivity, and technical infrastructure. In the absence of one, it creates many big and small issues. During our research, we found that most students and academic respondents said that though online learning saved the students' semester, it would not solve the purpose of quality learning in the long run.
- During the online live session, the class duration also matters a lot, as long class hours can cause disruption or create monotony for the learning. So, one hour or 45 minutes of class time is enough for the students while we can keep the frequency of the classes as per the timetable schedule.
- Online learning differs from face-to-face learning, so training and technical support are required to ease the learning process. In the absence of this, teaching and learning become tiresome.
- As assessment is a critical component in online learning, summative, formative, and class-to-class-based assignments are the best assessment choice for academicians. At the same time, students prefer to drag and drop assignments more.
- Academics and student respondents agreed that the chances of academic dishonesty are higher in online learning as there is less control and tracking of the student's work.
- There are also some advantages to online learning for students, such as flexibility over not coming to the university every day. If they have just one class in a day, before, even then they have to come to the college, which consumes a lot of their time. However, they can quickly finish that class and use their time for other work.
- Students' scoring has become better because of assignments' changing nature. The majority of the students from different majors said that they had received excellent marks than before.

6. Conclusion

Based on the discussion and findings, we could prove that Omani students and teachers are working hard to achieve the course learning objectives and outcomes. Strong motivation and well-planned Engagement play an essential role in achieving high-quality learning outcomes during online learning. The main challenges in remote learning are low motivation due to poor internet, the risk of academic dishonesty, and less control over course assessment. It can be minimized if students' self-attitude towards learning and self-regulation is high to achieve their life goals. Along with this, course material and course delivery strategy help build an encouraging environment among the students. Along with this, course content needs to be modified, and mixed delivery methods must be applied. The assessments need to be changed each time to maintain academic uprightness. Different question sets can be prepared for each student, and a live presentation can be an excellent option to understand the seriousness of the students towards online learning. Various assessment methods can be utilized to maintain the motivation and engagement level among the pupils, such as peer review activities, student-led discussions in the class, and representative submission of their work. Social media and email can be utilized effectively for better communication with students.

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Ethics and Consent Statement: The consent has been taken from the Colleges during data collection. Ethical Approval and Participant Consent have been received.

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