




CHALLENGES OF INNOVATIVE TEACHING APPROACH IN TERTIARY
EDUCATION



UNIVERSITI TEKNIKAL MALAYSIA MELAKA

I hereby acknowledge that this project paper has been accepted as part of fulfillment for the degree of Bachelor of Technology Management (Technology Innovation) with Honours

SIGNATURE : 

NAME OF SUPERVISOR : ASSOC. PROF. DR. JUHAINI BINTI JABAR

DATE :



SIGNATURE :

NAME OF PANEL : DR. NOR AZAH BINTI ABDUL AZIZ

DATE :

CHALLENGES OF INNOVATIVE TEACHING APPROACH IN TERTIARY
EDUCATION

UMMI KHAIRIAH BINTI ALIAS

This thesis is submitted in partial fulfillment of the requirements for the award of
Bachelor of Technology Management (Technology Innovation) with Honours



22 January 2023

DECLARATION OF ORIGINAL WORK

I hereby declare that all the work of this thesis entitled “CHALLENGES OF INNOVATIVE TEACHING APPROACH IN TERTIARY EDUCATION” is originally done by myself and no portion of the work encompassed in this research project proposal has been submitted in support of any application for any other degree or qualification of this or any other institute or university of learning.

SIGNATURE

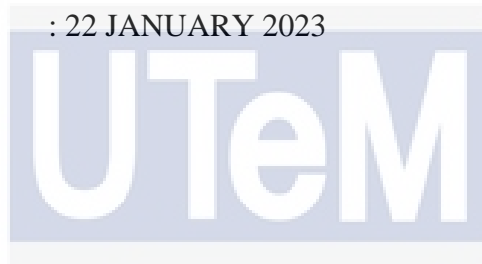
: 

NAME

: UMMI KHAIRIAH BINTI ALIAS

DATE

: 22 JANUARY 2023



اونيورسيتي تيكنيكل مليسيا ملاك

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

ACKNOWLEDGEMENT

First of all, I would like to express my gratitude to Allah for giving me good health, strength, and the opportunity to acquire knowledge successfully to complete this Bachelor Project (PSM) in the allotted time. I would like to thank my parents for their support and patience in waiting for me to finish my studies. I would also like to thank my colleagues infinitely for providing timely advice for this research project. They shared a lot of relevant knowledge to continue this research project. It helped me complete this research project more efficiently.

Secondly, I am expressing my sincere appreciation and thanks to my beloved supervisor Assoc. Prof. Dr. Juhaini Binti Jabar for her helping, teaching, monitoring, support, and contribution. She has guided and assisted me patiently during two semesters in session 2022/2023. Also, I sincerely appreciate and thank Dr. Nor Azah Binti Abdul Aziz as my panel researcher for sharing his knowledge and experience in Research Methodology. His suggestions have been useful for me to proceed well with this research project.

Last but not least, I would like to express my appreciation to all respondents who had contributed their time and efforts in filling the questionnaires. They provided valuable feedback that assist me in finishing this research. With the assistance and support from the respondents, I have successfully fulfilled all the components of a questionnaire. Once again, I am grateful and honestly thankful to all.

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

ABSTRACT

This study aims to investigate emerging learning techniques and challenges that educators in the subject of management face throughout the innovation of teaching, Health and Education, and Computing, encountered in using Virtual Learning during the Covid-19 pandemic in particular. The study was conducted covering Public Higher Education Institutions in Malaysia and focused on the State of Melaka in particular. Previous studies have revealed that although similar studies to the latest have been conducted in different countries around the world, conducting it in other different countries like India and in different contexts may provide new information. This study uses the Pedagogy approach as a theory because it is relevant and appropriate. This study is supported by constructivism paradigms, qualitative design as well as qualitative case studies. Sampling techniques are intended to be used in this research. Samples will be given to 8 to 10 instructors as study participants. This qualitative case study is based on online and face-to-face interviews that will be issued to lecturers. Data is generated based on emerging themes. The findings of the study based on several articles show that the majority of educators find Virtual Learning useful and user-friendly tools. However, facing challenges, it is necessary to give adequate focus and clear instructions to students. In general, conducting online learning will inevitably raise internet connection issues, as well as data expenditure has been identified as a stumbling block that discourages students' satisfactory engagement in Virtual Learning. Further discoveries reveal a variety of strategies including encouraging students to collaborate, grading student participation on the online platform, and consultations that can be used to overcome the challenges faced in using Teaching Innovation.

Keywords: teaching innovation, online learning, internet, educator, technique

ABSTRACT

BAHASA MALAYSIA VERSION

Kajian ini bertujuan untuk menyiasat teknik pembelajaran baru muncul dan cabaran yang mana tenaga pengajar di bahagian subjek pengurusan hadapi sepanjang melakukan pendekatan terhadap inovasi pembelajaran. Pelbagai cabaran yang perlu dikaji seperti kesihatan dan pendidikan serta pengkomputeran yang dihadapi dalam menggunakan Pembelajaran Secara Maya semasa pandemik Covid-19 khususnya. Kajian dijalankan merangkumi Institusi Pendidikan Tinggi Awam di Malaysia dan tertumpu di Negeri Melaka terutamanya. Kajian yang dijalankan sebelum ini mendedahkan walaupun terdapat kajian yang serupa namun, yang terkini telah dijalankan di negara yang berbeza di seluruh dunia, menjalankannya di negara lain yang berbeza seperti india dan dalam konteks yang berbeza mungkin memberikan maklumat baharu. Kajian ini menggunakan pendekatan Pedagogi sebagai teori kerana ia relevan dan sesuai. Kajian ini disokong oleh konstruktivisme paradigma, reka bentuk kualitatif serta kajian kes kualitatif. Teknik persampelan bertujuan digunakan dalam kajian ini. Sampel akan diberikaan kepada 8 ke 10 tenaga pengajar sebagai peserta kajian. Kajian kes kualitatif ini adalah berdasarkan temu bual dalam talian dan bersemuka yang akan dikeluarkan kepada pensyarah. Data dijana berdasarkan tema yang muncul. Dapatan kajian berdasarkan beberapa artikel menunjukkan bahawa majoriti pengajar menemui Pembelajaran Secara Maya berguna dan alat yang mesra pengguna. Walau bagaimanapun, menghadapi cabaran, perlu memberi tumpuan yang secukupnya dan arahan yang jelas kepada pelajar. Secara amnya menjalankan pembelajaran secara atas talian pasti akan timbul isu sambungan internet, serta perbelanjaan data telah dikenal pasti sebagai batu penghalang yang tidak menggalakkan penglibatan memuaskn pelajar dalam Pembelajaran Secara Maya. Penemuan selanjutnya mendedahkan pelbagai strategi termasuk menggalakkan pelajar bekerjasama, mengged penyertaan pelajar pada platform dalam talian dan perundingan boleh digunakan untuk mengatasi cabaran yang dihadapi dalam menggunakan pendekatan inovasi terhadap pembelajaran.

Kata kunci : Pembelajaran inovasi, atas talian, internet, teknik pembelajaran, pengajar

TABLE OF CONTENT

| CHAPTER | CONTENTS | PAGES |
|------------------|---|----------|
| | DECLARATION | i |
| | ACKNOWLEDGEMENT | ii |
| | ABSTRACT | iii |
| | ABSTRAK | iv |
| | TABLE OF CONTENTS | v |
| | LIST OF APPENDICES | xi |
| CHAPTER 1 | INTRODUCTION | 1 |
| | 1.1 Introduction | 1 |
| | 1.2 Background of Study | 2 |
| | 1.3 Problem Statement | 3 |
| | 1.4 Research Questions | 4 |
| | 1.5 Research Objectives | 4 |
| | 1.6 Scope and Limitation of the Study | 4 |
| | 1.7 Summary | 5 |
| CHAPTER 2 | LITERATURE REVIEW | 6 |
| | 2.1 Chapter Overview | 6 |
| | 2.2 Introduction | 6 |
| | 2.3 Literature Review | 6 |
| | 2.4 Innovative of Teaching | 8 |
| | 2.5 Role of Innovative | 11 |
| | 2.6 Technique of Innovative in Teaching | 14 |
| | 2.7 Challenges of Innovative Teaching | 18 |
| | 2.7.1 Environment | 19 |
| | 2.7.2 Students | 19 |
| | 2.7.3 Learning Strategies | 20 |
| | 2.8 Summary | 20 |

| | |
|---|-----------|
| CHAPTER 3 RESEARCH METHODOLOGY | 21 |
| 3.1 Introduction | 21 |
| 3.2 Research Design | 21 |
| 3.3 Methodological Choices | 22 |
| 3.4 Time Horizons | 23 |
| 3.5 Research Strategy | 23 |
| 3.5.1 Questionnaire Design | 24 |
| 3.5.2 Samplings Design | 25 |
| 3.5.3 NVivo | 25 |
| 3.6 Data Collection Method | 25 |
| 3.6.1 Primary Data | 25 |
| 3.6.2 Secondary Data | 26 |
| 3.7 Summary | 26 |
| CHAPTER 4 ANALYSIS OF DATA FINDINGS | 27 |
| 4.1 Introduction | 27 |
| 4.2 Respondent Background | 28 |
| 4.3 Findings | 29 |
| 4.4 Effective Techniques of Innovative Teaching | 29 |
| 4.4.1 Video & audio recording | 30 |
| 4.4.2 Mind Map | 30 |
| 4.4.3 YouTube Channel | 30 |
| 4.4.4 System reward | 32 |
| 4.4.5 UTeM Official Learning Management System (ULearn) | 33 |
| 4.4.6 Webinar and others | 33 |
| 4.5 Challenges Of Innovation Teaching Methods | 34 |
| 4.5.1 Technologies | 35 |
| 4.5.2 Learning Strategies | 36 |
| 4.5.3 Instruction | 36 |
| 4.5.4 Environment | 37 |

| | |
|--|-----------|
| 4.6 Alternative learning approaches impact students. | 38 |
| 4.6.1 Video Presentation | 38 |
| 4.6.2 Exhibit extra-role activities and programs | 38 |
| 4.6.3 Variety of assessment question | 39 |
| 4.7 Summary of Findings | 41 |
| CHAPTER 5 CONCLUSION AND RECOMMENDATIONS | 43 |
| 5.1 Introduction | 43 |
| 5.2 Summary of Findings | 44 |
| 5.3 Theoretical Implication | 45 |
| 5.4 Contribution of Research | 46 |
| 5.5 Limitation | 50 |
| 5.6 Recommendation of Research Future | 50 |
| 5.7 Conclusion | 52 |
| REFERENCES | 53 |
| APPENDIX | 57 |



| APPENDIX | TITLE | PAGES |
|-----------------|-------------------------|--------------|
| 1 | Gantt Chart for PSM 1 | 53 |
| 2 | Gant Chart for PSM 2 | 54 |
| 3 | Interview Questionnaire | 55 |
| 4 | Interview Transcript | 57 |



CHAPTER 1

INTRODUCTION

1.1 Introduction

The researcher's topic is the application of teaching innovation, and this chapter offers information on background studies. Similarly, researchers debate the difficulties of teaching innovation in higher education. According to the researchers, this chapter is the start of a dialogue that will lead to a significant study. The researcher then addresses the problem statement, the research problem, the research purpose, the study's scope, limitations, and essential assumptions, as well as the study's impact.

1.2 Background of the study

We must first define "**Innovative Teaching**" as a prelude to this study. Innovative teaching implies that the instructor is the creator, but this does not always imply that the students are the creators. Innovation is about thinking of new methods to better a product, a process, or an idea, not merely doing something new. What can Tyler and other instructors do to help students become better innovators? We believe that three critical changes to lesson preparation can help them: teach declarative knowledge so that it sticks, explicitly teach thinking abilities, and use technology to increase access to information (Jane E. Pollock et al., 2021)

Innovative teachers in the modern era are instinctively aware of student issues such as a lack of understanding, a loss of attention, low engagement, or demotivation. They are always looking for innovative ways to keep kids focused, urge them to perform their best, and encourage them to achieve success. Innovative teaching occurs when good teachers are inventive and creative, constantly discovering and devising new techniques and content to guarantee that students have the best possible learning experiences. However, keep in mind that invention and innovation are not synonymous. Invention necessitates the presence of a

creative individual, whereas innovation necessitates the presence of a brave community (See Rogers' Diffusion of Innovation Theory, 2003). As a result, innovative teachers must have the confidence to implement new methods and content, especially if it contradicts the culture in which they operate.

Experts in higher education in the United States believe that strict adherence to policies can ensure the best possible learning environment for a varied group of pupils (Gurin, Dey, Hurtado, & Gurin, 2002). It's impossible to effectively teach these pupils from all walks of life while adhering to a set of precise courses and syllabus. Similarly, a teacher who uses the same lesson plans for all of his students will not be able to fulfill the goal of an effective learning process, and his students would suffer greatly. A teacher's intellect must be adaptable and innovative in order to keep kids from suffering. Students are requesting more freedom from their educational institutions (McDonald & Reushle, 2002). Flexibility is essential for meeting the various learning needs of diverse student cohorts (Yorke & Thomas, 2003).

Before diving into research on innovative of teaching approaches, I'd want to share some findings from a recent Covid-19 season study. During the epidemic, online teaching has been the subject of intense debate for everyone in university education, as many university staff experiences the extreme stress and workload associated with online mobile teaching, and a number of students complain about the quality of their learning experiences. The lack of pandemic warnings is one of the factors that makes online teaching so difficult. The teaching staff was suddenly and unexpectedly required to prepare and conduct online classes from home, posing a number of practical and technical challenges that many still confront today (Benjamin Skuse, 2021)

To summarise, some scholars have already begun or are planning to do this type of topic research, although Malaysia has a rich history of innovative teaching. As we all know, the internet is becoming more widely available, which means that people in Malaysia should be able to take advantage of online learning opportunities. It is preferable to do a straightforward study that is unquestionably new. Online instruction is becoming increasingly popular among university students.

1.3 Problem Statement

Innovation is an element that is difficult to categorize. Almost every “new” technique, program, resource or idea that deviates from the norm may be considered “creative” by some. On the other hand, some believe that only the most revolutionary, transformative or disruptive processes or materials are true “innovations”. (Thomas Hatch, 2016). Many lecturers noted that the structure and curriculum of the courses they taught hindered their ability to use new teaching methods. “There are too many issues to deal with,” said one of the lecturers. (Cachia et al. 2010) discuss how curricula are often cluttered with content, limiting opportunities for creative and innovative ways of learning in practice.

Furthermore, lecturers' efforts to reflect their teaching techniques to see if they meet the wants and needs of students. Personal efforts, teaching beliefs, teaching dedication, and personal expertise are among the characteristics that influence innovative and creative teaching, according to (Hamed et al, 2016). According to (Nicolaidis, 2012), education is a powerful tool for social change and transformation, and innovative teaching practice is the only method to improve educational quality. The impact of technology on the education industry should be used to influence not only how education is provided, but also how students view education (Marshall, 2002).

However, there are several issues that lecturers can notice with centralizing different innovations in learning. One of these is the shift from in-person to online learning practices brought forth by the Covid-19 pandemic. This forces lecturers to develop a variety of learning strategies that are appropriate for the circumstance. The university quickly rushed to switch several courses and programs from physical transmission mode to online during the entire Covid-19 academic year, canceling campus events includes conferences, workshops, sports, and other programs (Gewin, 2020). Students who learn online become distracted, and some of them become so out of control that it affects their mental health.

According to Education Minister Dr. Mazlee Malik, lecturers should be dynamic and adapt to numerous developments while maintaining the essential ideals of higher education, as said at the Education Minister's Special Award Ceremony: Innovative Curriculum Design and Delivery 2018 (AKRI 2018). This shows that instructors should be more innovative while entering the field of education; further, the younger generation is increasingly interested in advanced technology and gadgets.

The problems that have been listed must be addressed in a variety of ways. One of the reasons why educators should be appreciated by the environment is because educators have a strong desire to have a clear voice in policymaking, which should not be overlooked. Teachers are highly trained, respected, and trusted professionals who deserve more say in policy decisions that affect their job and, in many cases, personal lives (Anna Mogato,2020). According to the Society for Human Resource Management 2020 (SHRM), continuous overtime may result in an overtime-dependent workforce, increased absenteeism, and poorer productivity.

1.4 Research Question

1. What are the most cutting-edge and effective educational systems and techniques available to students?
2. Do lecturers face challenges in implementing new learning techniques?
3. What is the most significant impact of the application of this new teaching technique to lecturers?

1.5 Research Objectives

1. To identify the most effective techniques in an innovative teaching approach that can improve and draw students' attention.
2. To explore the challenges that arise from the adoption of innovative teaching methods in higher education institutions.
3. To discover the extent to which alternative learning approaches impact students at the institute.

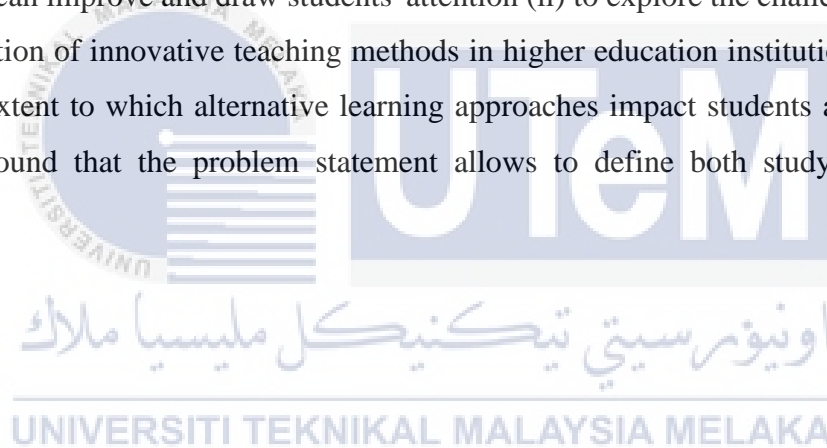
1.6 Scope and Limitation of Study

The purpose of this research is to look at the methods and barriers to bringing teaching innovation to the tertiary level. The focus of this study is on Malaysian lecturers who teach management courses. The disadvantage of this study is that it only covers lecturers who teach at Public Institutes of Higher Learning (IPTA), especially the lecturers at the Faculty of

Technology Management and Entrepreneurship at UTeM . herefore, the findings of the study can be used in every state in Malaysia. The basic assumption is that the researcher expects all respondents to be honest, truthful, and knowledgeable about the study issue.

1.7 Summary

In this chapter, the researcher discusses the background of the study and the problem statement. The purpose of this study is to examine the challenges in innovative teaching to tertiary education approaches. In this study, the researcher chose lecturers who teach in management majors in higher education because it is to get more accurate information. In addition, most in higher education there are challenges to be aware of. Therefore, the objective of the study in the study is (i) to identify the most effective techniques in an innovative teaching approach that can improve and draw students' attention (ii) to explore the challenges that arise from the adoption of innovative teaching methods in higher education institutions and (iii) to discover the extent to which alternative learning approaches impact students at the institute. Researchers found that the problem statement allows to define both study and research questions



CHAPTER 2

LITERATURE REVIEW

2.1 Chapter Overview

There are several sections in this essay. We begin by providing an overview of the techniques that lecturers can use to deliver sophisticated teaching methods. Next, review some of the responsibilities involved in teaching students the correct method. Next, consider how serious the challenges will be faced by lecturers especially in the field of management in emphasizing online learning strategies. Analyze the impact of COVID-19 on teaching and higher education innovation, to completion. Discuss the consequences, strategies, and issues actually experienced by the lecturers at the end of this study.

2.2 Introduction

The researcher focuses on the definition of instructional innovation in this chapter. Besides that, the researcher explains the process to students by introducing learning innovations. After that, the issue is to put innovation into practice, which is one of the subjects covered in this chapter. Finally, the study produced a theoretical framework for associating independent variables. It aids in the development of a clear set of ideas and a better direction and understanding of previous work relevant to the research question and the study's objectives throughout the review literature.

2.3 Literature Review

Many students are left behind by an education system that some consider to be in crisis, (John Dunlosky et al., 2013). Improving educational outcomes will necessitate efforts in a variety of areas, but the underlying premise of this strategy is that one part of the solution is to

assist students in better regulating their learning through the application of effective learning techniques. Summarization, highlighting, the keyword mnemonic, imagery use for text learning, and rereading all obtained a low utility rating. For a variety of reasons, these strategies were deemed to be of limited benefit (Katherine A. Rawson & Elizabeth J. Marsh, 2013). As a reason, employing new techniques to bring students closer to learning in an innovative way is key, as this can improve their learning to some level.

Active learning techniques, a teaching technique that improves student participation in everyday classes, place students at the center of the classroom. Active learning advocate (James Ballencia, 2021) claims that the practice can benefit teachers just as much as students. According to research by the (Gates Foundation,2021), when used to augment math class, individualized learning can increase test scores. Over the last two years, students attending [personalized learning schools] achieved much better increases in math and reading than a virtual control group made up of identical students from comparable institutions. Teachers should demonstrate how to use their gadgets during the instruction or new material portion of a session, rather than using them just for guided or independent practice, according to the i5 approach (Laura J. Tolone,2021).

As the coronavirus takes a toll on education around the world, more and more teachers are being compelled to instruct their kids from home. There are significant hurdles and methods you'll need to successfully manage distant teaching. Challenges using online teaching tools due to technical issues. Distance teaching has become a lot less intimidating as a result of advances in EdTech over the last decade, but there are still some concerns to be aware of (Jackson Best, 2020). Before you begin, be sure your students have reliable access to technology. Online teaching, unless well created with deliberate instructional design decisions, can, unfortunately, turn students into passive learners. According to (Karen Quevillon, 2021) Students must be involved in the quality, breadth, and depth of their learning in order for it to be truly effective.

VARK is an abbreviation that stands for Visual, Auditory, Reading/Writing Preference, and Kinesthetic learning styles. VARK's primary concepts are detailed in Learning Styles. Again: Up the right tree, VARK! (Fleming & Baume, 2006). Identifying your students' learning styles, your overall curriculum with these styles will benefit the entire classroom. Someone who prefers visual learning enjoys looking at and observing items such as photos, diagrams, written instructions, and more (Callie Malvik, 2020). This learning technique is also known as "spatial" learning. Aural learners are affected by sound, music, records, rhymes, and rhythms,

among other things. They have a good memory for dialogues, and music elicits an emotional response in them (Rasool Somji, 2018). As an example, recommend that they go through the content while listening to music.

The classic five teaching styles, expert, formal authority, personal model, facilitator, and delegator, were developed by the late Anthony F. Grasha, a distinguished professor of psychology at the University of Cincinnati. To achieve learning objectives, the delegator organises group learning, watches students, provides guidance, and fosters interaction between groups and individuals. (Eric Gill, 2020). The delegator method of teaching delegated much of the learning responsibilities to the students, who are encouraged to collaborate on projects related to the lesson subjects (think science labs, debates, etc.). The teacher is an active observer in this technique, guiding students in the appropriate way (Joseph Lathan, 2020).

Lockdown and social distancing measures imposed in response to the COVID-19 epidemic have resulted in the closure of schools, training institutions, and higher education facilities in most countries, according to an essay by (Sumitra Pokhel, Rashan Chhetri, 2022). Through numerous online platforms, educators are delivering high-quality education in a new way. During the pandemic, e-learning tools were critical in assisting schools and universities in facilitating student learning during the shutdown of universities and schools (Subedi et al., 2020). As a result, there exist a wide range of subjects with diverse requirements. Various disciplines and age groups necessitate various ways to online learning (Doucet et al., 2020). Students with physical limitations can also benefit from online learning because it allows them to participate in learning in a virtual environment that requires less movement (Basilaia & Kvavadze, 2020).

2.4 Innovative of teaching

Experiential learning stimulates critical thinking and creativity (Enaksi Sengupta, Patrick Blessinger, 2022), which is one of the teaching innovations. Educators frequently forget that they have a duty to dream and create spaces where everyone has the opportunity to be creative and bring out the best in themselves in their efforts to prepare students for real-world occupations and difficulties as well as equip them with 21st-century skills. The purpose of this program is to strengthen educators' and teachers' confidence and understanding in employing various innovations and methods in the classroom to inspire students to be more creative and

develop their critical thinking and problem-solving skills. Instructors will be able to manage the ever-changing realities in which they will successfully apply their 21st-century abilities to address difficult and open-ended challenges in this way, and will be excellent managers and directors of the future.

Moreover, half of the countries that create expert panels and peer panels use consensual innovation evaluation techniques (Vijaya Sherry Chand, Samvet Kuril, Ketan Satish Deshmukh and Rukmini Manasa Avadhanam, 2020). There are several roles that can be taken in teacher innovative behavior (TIB) in addressing student demands as well problems faced by universities (Thurlings et al., 2015; Andiliou and Murphy, 2010; Chand, 2014). Among its roles are conducting teacher-driven innovation assessments and assessing the differences between expert assessments and peer assessments. Through reviews of TIB, Thurlings et al. (2015) define TIB as “self-initiated, three-stage processes namely (1) deliberate generation of ideas, (2) promotion of ideas, and (3) realization of ideas. Like understanding incorporates not only ideational conditions but also “execution” in the creativity – innovation continuum (Fullan, 2011). Therefore, educators need to focus on the output of the innovation process, defining it as a self-developed educational action that has “produced achievement of specific educational goals and incorporating novel or unique response to student problems or needs.

Next, make the individual a correlation to the innovation of the instructor. In a review of innovative behaviour, Thurlings et al. (2015) provide a comprehensive list of things that can influence the innovative behaviour of an instructor under three streams namely demographics, individual factors and organizational factors. Demographic trends are known to be a weak correlation to workplace innovation in general (Hammond et al., 2011). Through this, the focus is on the public school system, where organizational factors such as supervisory processes and resources are common. Therefore, it focuses on individual factors, among which Thurlings et al. (2015) identified self-efficacy as very important to educators, Liu et al. (2016) stated the role of creative self -efficacy i.e. the ability to be creative in the workplace especially (Tierney and Farmer, 2002), as an educator who needs to prioritize innovation in learning. Closely related to this is intrinsic motivation, identified by Hammond et al. (2011) as a key factor in individual workplace innovation, and contributes to the state of creativity. Two other innovations, “learning orientation” and “proactive personality,” are also cited in the same literature as key factors influencing other individual factors that contribute to instructor innovation.

The next innovation is (Rahul Khandelwal et al. 2020) that which educators provide opportunities and space for all students with disabilities to be involved in the classroom without discrimination, and development is given incentives using Information and Communication Technology (ICT). Individual recital of every faculty affiliate is a crucial aspect in achieving quality inclusive education. Educators must expand their abilities and competencies by breaking out of their comfort zones. In order to adapt and employ technology properly, an educational institution must also provide adequate facilities to academics and students without discrimination. This is a critical strategy for supporting educators in recognising and investigating the use of this epistemology in new innovative inclusive teaching pedagogy with industry 4.0 technology.

Higher education teachers, in general, require effective pedagogical competency in order to improve inclusive education without discrimination among students and their learning outcomes, which requires student involvement (Henard and Roseveare, 2012). Academics are convinced that they must combine a superior epistemology with a superior pedagogy of learning in order to alter teaching methods in higher education. Online self-guided learning is primarily used to supplement traditional personalized classroom education. Educators also have a responsibility to promote a really resilient educational approach through the effective use of ICT in enabling the teaching of institutional organizations, students, and academics.

Exploiting the power of communication technologies and inventive ideas to encourage the development of the mechanized industry is referred to as Industry 4.0 (Tyenge and Martinsen, 2018). Industry 4.0 and the exquisite factory of reality are made possible by a combination of physical cyber systems such as the Internet of systems and things. All of these elements are required and are part of the visionary Industry 4.0 concept, which makes companies more viable and competitive in the marketplace (Zheng, 2018). Teachers must adapt to new demands and take on new roles in their classrooms. Higher organizational outcomes from the minister of education and university directors are required to give and support teachers in their new teaching behaviors in complete adaption to new technologies in the education system. Universities provide teachers with training and the opportunity to have access to technology and learn how to use it technically and correctly in didactic concepts. To establish a plan for the necessary equipment and infrastructure, a higher degree of organization is required. Any new technology used to assist teachers in the classroom must meet specific requirements and overcome deployment obstacles.

T.M. Wong (2019) higher education institutions have been hailed for their ability to respond to technological advancements as well as shifts in social and cultural norms through innovation. The types of innovations mentioned by those who can are divided into two categories: those that use technology and those that do not. There are various examples of instructional innovations that utilize new technology, most notably the internet or mobile devices. Participants underlined the importance of real-time communication. MOOCs and reverse classrooms, as two widely used examples on the internet, have grown in popularity and demonstrated their efficacy in boosting student learning outcomes. There are certain developments in which technology plays a little role. The most common one included students' active learning, followed by the use of video in classroom teaching and student interdisciplinary collaboration.

2.5 Role of innovative

Provides a supportive environment that is rich in resources, and aids exploration creating an atmosphere in which ideas can be expressed freely (Enaksi Sengupta, Patrick Blessinger, 2022). The role of teaching also focuses on the topical literature to scrutinize efficient ways to elevate the realization of all learners in an inclusive setting (Rahul Khandelwal, Ashutosh Kolte, Prafulla Pawar and Elvira Martini, 2020). Considering group and organizational factors with the attention to the self-development approach and its factors would provide more awareness-training information (Fatemeh Narenji Thani et al, 2021). Adrian V. Ely,(2018) "Experiential learning approaches in post-graduate education for sustainable development and evaluates a number of teaching and learning activities (TLAs)". Principles must focus on risk-taking, collaboration, and communication (Jayson W. Richardson et al, 2021).

Starting with the Covid-19 epidemic, instructors must make rapid decisions on course content delivery, technology options, and strategies to aid transit students better than in a face-to-face online environment. The educators are also learning how to harness new technologies and adapt materials for usage in an online setting. Start with the previous face-to-face presentation in term 1, as shifting online allows educators to create relationships with students before implementing change. The capacity to create this relationship with students is a present advantage of the shift to an online model, especially considering how swiftly modifications

have been made to adapt to a changing environment, and both staff and students are learning to adapt together. Students are also willing to provide critical comments on their new experiences to educators directly, allowing instructors to adapt as the term progresses. The teaching team and staff teaching other courses shared their knowledge. This is a vital role for educators to play in learning from setbacks and immediately adapting to give students a better learning experience.

In Term 2, all classes were relocated online, and over 60% of students were enrolled. With more time to plan, instructors adopt a growth mentality, which allows them to further adapt teaching materials and approaches to the new environment. The majority of these adjustments are based on official and informal student feedback, instructor self-reflection on what is effective and what needs to be improved talks about what they find successful or not, and instructors have current experience with online learning. The biggest problem is figuring out how to form meaningful relationships with students who are far away, as well as how to stay involved with students and form a learning community in a new setting. Certainly, the teacher must play some roles in order to boost morale while maintaining consistency in online learning.

One of the roles of the teaching is a teacher is the sender or source of information in pre-tech education, instructional materials are information or messages, and students are the recipients of that information. In terms of delivery, instructors can use the "chalk-and-talk" method and overhead projector transparency to impart messages (OHP). This approach of directed instruction is based on the behavior learning perspective and is a common technique that has been employed in all learning institutions for decades as an educational strategy. In general, the teacher is in charge of the teaching process; content is delivered to the entire class, and teachers tend to stress factual knowledge. In other words, the lecture content is delivered by the teacher, and the students listen to the lecture. As a consequence, the learning mode tends to be passive, and learners have limited control over their learning. Many teachers and students at most colleges have discovered that the traditional lecture technique in the classroom is ineffective in both teaching and learning. Students take on a completely passive role in such a presentation, and their attention begins to wane after 15-20 minutes.

Moreover, in terms of art-based teaching suggests the involvement of art in teaching practice (Anugamini Priya Srivastava, Vimal Babu and Swati Krutarth Shetye, 2019). Teachers play a critical role in shaping student behavior (Srivastava, 2017). They not only lead the way for the

pupils in the present, but also in the future. Somech and Drach-Zahavy (2000) claimed that, because teaching is a humanistic profession, teachers must exhibit extra-role behavior in order to properly assist students. A teacher will not be able to properly instruct children if they confine themselves to their job's mandated behavior. Extra-role activity refers to instructors' volunteer assistance to the institution, colleagues, and students in order to benefit the institution (Srivastava, 2017). Extra-role behavior (EXB) describes instructors' discretionary behavior, which encourages them to go above and beyond their official call of duty to help the organization (Srivastava and Dhar, 2017). Teachers' extra-role behavior in terms of operations includes teachers working on making the organization effective, protecting it from potential difficulties, giving helpful ideas, and being knowledgeable of their own and others' viewpoints (Srivastava and Dhar, 2017).

To improve the student experience, promote participation, and test objective learning performance, use a variety of assessment questions (Kate L. Morgan and Wei Chen, 2020). Increased commitment and desire to undertake difficult tasks result from cultivating a growth mindset (Mrazek et al., 2018). Many pupils are more likely to have more positive outcomes when they have a growth mindset, which promotes flexible thinking and creativity (Intasao and Hao, 2018). The importance of the growth mindset in affecting student performance is studied in educational literature, and it is found that students with a growth mindset seek and respond to criticism, and their performance improves significantly (Beatson et al., 2019; Ravenscroft et al., 2012; Tseng et al., 2020).

Instructors need to increase student engagement while learning by using video and talking to lecturers using their microphones during online class sessions (Joseph Kee-Ming Sia and Adamu Abbas Adamu, 2020). "The act of engaging: the condition of being engaged," according to (Merriam-Webster, 2021) which is described as "being intensely interested." Engagement can be described as a measure of a student's participation in the learning process in the context of education. This covers how they engage with the teacher and their classmates. In short, the level of student engagement is a good indicator of the likelihood of a successful learning experience. Learning in the classroom should be interesting, not necessarily entertaining. Low student engagement leads to boredom, loneliness, and low achievement - as well as higher dropout rates (from class or university). And nowhere is more true than in distance learning throughout this Covid-19 season. Therefore, instructors should take steps to ensure that students do not get bored quickly and attend class.