

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

It is undeniably true that since the emergence of the Covid-19 global pandemic in early 2020, teaching and learning in schools, colleges, and universities have been disrupted throughout the world, and the E-learning system has been tested to the fullest, as face-to-face education was halted in many countries (Mohan et al. 2020). This study aims to assess the relationship between the mental health states among IKTBN Alor Gajah students, in coping with hybrid learning during the pandemic. From this study, the term mental health states employ the level depression, anxiety and stress encountered by the students throughout the hybrid learning during the pandemic of Covid-19. As a result of less restricted movement control imposed by the government due to worldwide vaccination program and downward trend in Covis-19 cases in Malaysia, hybrid learning approach has been introduced in most of the higher educational institutions, on top of online learning that has been the main mode of learning throughout the pandemic.

For many developing countries, e-learning is considered a solution to the increasing demand for higher education (Anchalee Ngampornchai et al., 2016). In Pakistan, online education is promoted as “education for all” as it aims to reach out to students living too far from the cities and unable to afford the cost of conventional higher education (Iqbal & Ahmad, 2010). In Botswana, e-learning solves the problems of large classrooms, increasing enrolment, and limited staff (Ikpe, 2011). Hybrid learning was put to the test in 2021 and early 2022. We have seen how effective the online learning during the pandemic and prior to the opening of

the whole economic activities. Schools and higher education institutions quickly adapted to new methods of education. As such, they swiftly take advantage of the benefits of the hybrid learning.

2.2 Suitability of the hybrid learning to the courses offered in IKTBN

To assess the effectiveness of the online methods, a survey of students and academics were carried out in several Malaysian universities offering the Wood Science and Technology (WST) program in 2020 (Ratnasingam et al. (2021). The survey revealed that students were mostly challenged by the problems related to access to internet, computer hardware, and lack of communication. Furthermore, the student-centred learning method was largely preferred, while non-technical courses were the most suited for online teaching and learning. In face-to-face classrooms, academics and students are physically and temporally co-present. In contrast, in online learning the students are usually not only physically distant, but also temporally distant, through the use of text messaging, pre-recorded video and etc. Inevitably, it is important to ensure that the students' learning experience is not weakened through the non-presence of the academic or instructor and limited communication of the lecturers.

2.3 The Challenges of Hybrid Learning

The development of E-learning or online learning has come a long way since the middle of the last century (MacDonald and Thompson 2005). It first started via correspondence, later using radio, television, and CD-ROM. With the use of CD-ROMs, computer-based E-learning started, which evolved into online and

real-time lectures, as seen today. In fact, E-learning has transformed education into learning at any time, at any place, and at any pace (Menchaca and Bekele 2008). It must be recognized that E-learning has transformed education for the masses, and consequently it also has contributed to improving the literacy rate among the world population. Malaysian students were faced primarily with an infrastructure problem, especially those related to access to internet and WIFI. Other interferences included poorly designed content of courses, lack of peer interaction, and the overwhelming subject-matter [Ratnasingam, J. (2021)]. This finding is also supported by a report by the Malaysian Technology Development Corporation (MTDC) (2020), who showed that the access to the internet and limited computer and hardware were often cited as the main challenges faced by students residing in the rural areas.

Studies have shown that students who noted that their teachers were supportive and care about their success were more likely to be engaged in the classroom and performed well academically (Heller et al., 2003). Hybrid learning presents the opportunities to engage the students in their environment using live video conferencing platform features like polls, quizzes, interactive virtual games and a blend of conventional and non-conventional learning method.

2.4 Factors affecting the students' readiness and perception towards embracing online learning

Regarding students' readiness to embrace the digital platform, a study found that self-competence, comfort with e-Learning, uncertainty avoidance, financial ability, and technological facilitating conditions are factors that significantly affect student's perceived readiness (Lintang Matahari Hasani et al., 2020). In a study done

by a group of researchers on the students' readiness to online learning revealed that, the aspects of online learning readiness significantly determine how ready the students responded in terms of availability of technology, use of technology, self-confidence, acceptance, self-directed learning, and training (Zulaikha Khairuddin & Zurina Khairuddin, 2020). It can also be concluded that most of students seemed to be unsure whether they were ready to experience online learning in the aspects of the availability of technology and their acceptance to learn through online learning and hybrid learning. It is also suggested that students should possess online learning readiness prior to being in an online class and later into the hybrid mode to gain benefit from this learning environment to prevent from being outpaced by their fellow classmates.

2.5 Demographic characteristics of the students

Research has shown that online learners' performance to have a strong association with their demographic characteristics, such as regional belonging, socio-economic standing, education level, age, gender, and disability status (Rizvi, 2019). A study on the effect of demographic factors had shown that that age, program of study and level of education has significant effect on the effectiveness of E-learning (Md. Islam et al., 2011). Several studies have reported the effect of learners' demographic backgrounds on online learning outcomes (Gašević et al., 2016). Numerous studies have explored the impact of gender (e.g. Boyte-Eckis et al., 2018) and educational levels (e.g. Diep et al., 2016) on online learning outcomes. Educational levels could greatly predict online learning outcomes (Huang & Fang, 2013), while the effect of gender on online learning outcomes is controversial.

2.6 Mental health issues among students

The inventive and resourceful platform of E-learning does post some drawbacks to the users. This is where you can distinctively see in in the increase rate of mental health issues among heavy users, especially students. Mental health is commonly defined as a dynamic state of internal equilibrium, entailing the ability to cope with life's challenges to function in social roles (Galderisi et al. 2015). Good mental health is related to higher functioning and achievement, while poor mental health is related to lower productivity and poorer attainment (Royal College of Psychiatrists 2011). Poor mental health of students of higher education institutions has been reported in many countries, commonly recording high rates of depression, anxiety, and high stress (Brown 2018; Mey and Yin 2015).

2.7 Emotional States of students

Depression, anxiety, and stress are mental illnesses that increase the vulnerability of students and increases the susceptibility to minor and sometimes severe mental illnesses. According to Hassan Mohamed (2016), depression, anxiety, and stress start at an early developmental stage of an adolescent. They are the most common psychological illnesses among the student population, and they consequently reduce mental health (Sherina MS et al., 2004). Depression, anxiety, and stress can be reduced or worsen by the coping strategy adopted by an individual (Brougham RR et al., 2009). Seaward BL (1999) had published that student have been reported to encounter a lot of stressors which can lead to psychological

problems, especially during their academic work. This is usually coupled with other factors of transition of developmental from a stage of early adolescent to a stage of adulthood as stated by Ong B and Cheong KC in their study, Sources of Stress among College Students - The Case of a Credit Transfer Program (2009). The rate of Malaysian students who suffer from mental health problems doubled in less than a decade, which was 10% in 2011 to 20% in 2016, (Hezmi 2018), for example approximately 30% of medical students in Malaysia reported high prevalence of stress (Yusoff et al. 2010), associated with depression and anxiety (Rosal et al. 1997; Shapiro et al. 2000).

In Malaysia, by 2020, mental health conditions are expected to be the second biggest health problem affecting Malaysians after heart diseases. A national survey by the Ministry of Health found that one in three Malaysian adults aged 16 years and above (29.2 per cent) have a mental health condition, nearly triple from 11.2 per cent in 2006. The states of Sabah, Kelantan, Kuala Lumpur and Sarawak have the highest prevalence of mental health conditions. Amongst Malaysian youth aged 13 to 17, one in five have depression, two in five have anxiety and one in 10 has stress. An alarming 10.1 per cent of youths have also attempted to take their lives. There are four psychiatric mental hospitals providing mental health and psychiatric services throughout Malaysia. There are currently 410 psychiatrists in the public and private sectors, or 1.27 psychiatrist for every 100,000 residents which is ridiculously inadequate to comply with the urgent need of the current psychiatric cases.

According to the American Psychiatric Association, depression is a common and serious medical illness that negatively affects how you feel, the way you think and how you act. Fortunately, it is also treatable. Depression causes feelings of sadness and or a loss of interest in activities you once enjoyed. It can lead to a variety of emotional and physical problems and can decrease your ability to function at work and at home. The symptoms can vary from mild to severe and can also include changes in appetite, trouble sleeping or sleeping too much, loss of energy or increased fatigue, having difficulty to think, concentrate or make decisions and even feeling suicidal.

2.8 Depression

Furthermore, depression affects an estimated one in 15 adults (6.7%) in any given year. And one in six people (16.6%) will experience depression at some time in their life. Depression can occur at any time, but on average, it first appears during the late teens to mid-20s. This means that students of higher education institutions age 18 to 25 are the vulnerable ones and susceptible to having depression. Depression can affect anyone, even a person who appears to live in relatively ideal circumstances. There are several factors that can contribute to depression.

1. **Biochemistry:** Differences in certain chemicals in the brain may contribute to symptoms of depression.
2. **Genetics:** Depression can run in families. For example, if one identical twin has depression, the other has a 70 percent chance of having the illness sometime in life.

3. Personality: People with low self-esteem, who are easily overwhelmed by stress, or who are generally pessimistic appear to be more likely to experience depression.
4. Environmental factors: Continuous exposure to violence, neglect, abuse or poverty may make some people more vulnerable to depression.

However, depression is among the most treatable of mental disorders. Between 80% and 90% percent of people with depression eventually respond well to treatment. Before a diagnosis or treatment, a health professional should conduct a thorough diagnostic evaluation, including an interview and a physical examination. The evaluation will identify specific symptoms and explore medical and family histories as well as cultural and environmental factors with the goal of arriving at a diagnosis and planning a course of action. Depression is a real illness and with proper diagnosis and treatment, most people with depression will overcome it. Depression is an emotional disease that is increasingly serious among teenagers today, mostly involving school students. This situation is very worrying when student depression can lead to worse incidents such as criminal behaviours, social problems, and suicide.

Depression is the most common type of mental disorder, a chronic disease [Nyarko, K & Amissah CM (2014)], it begins early in life, which is the mid to late 20s (Marcus et al. (2012) and is two times more prevalent among women than men. Studies have reported that emerging adults from the ages of 18 to 25 years have the highest prevalence of depression among any age group. Depression symptoms are common among students in higher education institutions, and it is believed the one out of seven students may suffer from this condition in their course of studies

[(Ahmed, I et al. (2009)]. It remains unclear whether depression is the result of an unhealthy behaviour or depression causes negative behavioural patterns, such as smoking, alcohol use, physical inactivity and sleep disruption.

2.9 Anxiety

While average levels of stress and worry may help to motivate students to perform well in their studies, excessive feelings will increase their level of anxiety. Anxiety, according to the Oxford Language Dictionary, is defined as a feeling of worry, nervousness, or unease about something with an uncertain outcome. According to the American Psychological Association, anxiety is an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure. People with anxiety disorders usually have recurring intrusive thoughts or concerns. They may avoid certain situations out of worry. As described by the Encyclopaedia of Psychology, anxiety is an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure.

People with anxiety disorders usually have recurring intrusive thoughts or concerns. They may avoid certain situations out of worry. They may also be seen having physical symptoms such as sweating, trembling, dizziness, or a rapid heartbeat. According to Centres for Disease Control and Prevention data, rates of anxiety and depression among U.S. adults were about 4 times higher between April 2020 and August 2021 than they were in 2019. This shows that anxiety do escalate

when faced with tremendous amount of pressure, especially during the pandemic of Covid-19.

In a study of 'The prevalence risk of anxiety and its associated factors among university students in Malaysia', the prevalence risk of anxiety in this study was recorded at 29%. The data revealed that academic year, financial support for the study, alcohol consumption, poor sleep quality, body mass index (BMI), having a good friend in the university, having doubt regarding the future, actively involved in the society, and having problems with other students and lecturers were significantly associated with risk of anxiety, with the academic year as the primary predictor. Generally, university students are at an age where a high rate of anxiety was reported. Unlike high school, the university is not only academically challenging but also requires more attention in terms of social communication, homesickness, tuition fees, and cost of living, among other things [Vitasari P. & Wahab M. (2010)]. This is justified a research by Shamsudin et al. (2014) which reported a higher rate of anxiety in students from public universities in Klang Valley, Malaysia.

2.10 Stress

Stress can be defined as any type of change that causes physical, emotional, or psychological strain. Stress is your body's response to anything that requires attention or action. Stress is an emotional, physical, or mental reaction that causes tension (Shiel WC.,2018). It can result from social, environmental, or psychological situations. Stress is not always easy to recognize, but there are some ways to identify some signs that you might be experiencing too much pressure. Sometimes stress can

come from an obvious source, even small daily stresses from work, school, family, and friends can take a toll on your mind and body. Stress also takes an emotional toll. While some stress may produce feelings of mild anxiety or frustration, prolonged stress can also lead to burnout, anxiety disorders, and depression.

The surge in telecommunication led people to spend more time facing screens, tablets, and smart phones. Previously, the increase in exposure to smart devices and screens has been reported to increase stress and burnout levels. During the COVID-19 outbreak, imposed lockdowns and compulsory quarantines increased levels of tension. The inability to socialize, attend gatherings and interact with others enhanced separation anxiety, boredom, and suicidal thoughts, and as such, these emotions were reported more often. Study also showed that people who spent more than 10 days in quarantine were more likely to report posttraumatic stress symptoms (Brooks et al. 2020). Research where the questions were centred on dealing with symptoms of depression, anxiety and stress coupled with experiences engaging in an online learning process was initiated in 2020 (Nalini Arumugam et al., 2021).

The results indicated that Covid-19 outbreak has increased students' levels of stress and anxiety. Moreover, the level of stress was more prevalent in both male and female students who obtained a lower GPA score. Research also revealed that there was a moderate to high level of stress indicated among students in the university at the start of the Covid-19 outbreak. This study found a significant correlation between a high level of stress and female university students (Deemah A. et al., 2020).

Researchers believe that the integration of online counselling and stress management programs would help mitigate the stress of students during distance learning especially students who reside in the rural areas where connectivity to the Internet is limited.

2.11 Coping methods

Another contributing factor to Malaysian students' mental health are poor coping strategies (Ministry of Health 2016). Coping strategies are commonly regarded as behavioural and psychological efforts to tolerate or minimise negative emotional impacts from stressful events (Taylor 1998). Studies have reported that self-compassion and emotional resilience constraint our coping skills, which could reduce mental health problems [(Kotera et al. 2019) (Muris et al. 2018; Williams 2016)]. The elevated perceived stress levels during major life events can be further deepened by disengagement from home (being away/abroad from country or family) and by using inadequate coping strategies (Szabolcs Garbóczy et al. 2021).

The Covid-19 pandemic with its high morbidity and mortality has already afflicted the psychological and physical wellbeing of humans worldwide [Tanne JH et al. (2020) and Al-Tammemi AB et al. (2020)]. During major life events, people may have to deal with more stress. Stress can negatively affect the population's well-being or function when they construe the situation as stressful, and they cannot handle the environmental stimuli (Roddenberry A.2010) Various inter-related concepts are present in such situations including stress, anxiety, and coping. According to the research by Racic (2017) under the self-perceived stress in relation

to anxiety, depression and health-related quality of life among students, perceived stress can lead to higher levels of anxiety and lower levels of health-related quality of life. Another study by G6rgen SM (2014), discovered that there were significant and consistent associations between coping strategies and the dimensions of health anxiety among people.

2.12 Conclusions

Researchers believe that the outcome of this research and results reported from the studies mentioned above can serve as the references and help with the development of specific interventions in addressing and managing the issue of mental health, particularly in Malaysia. Comparisons should be made between the effectiveness of e-learning and traditional learning methods via students' assessment after each session of lecture. It is also recommended that the institution to look into the issue of familiarity of with online learning technology amongst students before introducing the e-learning system to assess whether student is comfortable with the hybrid learning tools.