Effective Practices for Educators to Increase Online Interaction Quality

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ABSTRACT

Amidst the Covid-19 Pandemic is still with us, the teaching and learning process has undergone a revolution towards teaching and learning norms. Educators doubt whether large online classes are effective because virtual classrooms hinder good communication as learners do not interact meaningfully with class lectures. This study aims to examine the ways that self-efficacy can help to enhance online interaction in terms of student-content, student-student, student-teacher, and student-medium and to investigate whether these interaction types are influential in the moderating effect of the perceived harm of getting COVID-19. This is a cross-sectional study that employs quantitative methods using a questionnaire that is designed based on the Social Capital Theory and consists of two domains. A sample of 641 learners who have experienced Online Distance Learning whether, in secondary school, foundation, diploma, or degree program reported their virtual learning experience. This study reveals that the developed constructs namely student-content interaction, student-student interaction, and student-teacher interaction attain a high level of mean which is greater than 3.66. It reveals that most participants agree with the components that contribute to the effectiveness in online learning. It also shows that female students are able to interact more in online learning as compared to male students; content-interaction [F=.511, p<0.05], Student-interaction [F=.204, p<0.05], as well as teacher-interaction [F=1.635, p<0.05]. These research findings encourage proactive interactions from all parties involved and the call for more relevant classroom activities and material that could ensure the success of virtual academia.

1. Introduction

Due to the current pandemic period of COVID-19, to minimize the spread of the deadly virus, Higher-Educational Institutions have opted to start making an educational paradigm shift with the advancement of information technologies. The fact that the task of shifting is equally challenging for both the educators and the learners to move from the physical classroom teaching and learning to virtual classrooms and to ensure effective interaction among parties involved (Aleksander et al., 2021). These challenges were associated with the separation between educators and their learners as opposed to the conventional classroom teaching (Moore 2014) and/or the teaching design that the teacher brings to the class (Leidl et al., 2020). It is widely accepted that online networks are used as learning platforms that are widely spread, more flexible and accessible, and, most importantly, perpetually open. This type of learning is labeled as open learning and is defined by UNESCO (2015) as:

"[...] a philosophy founded on the principle of flexibility concerning when, where and how the

learner studies. This approach is especially relevant for learners who are physically and/or geographically challenged. Distance education is the use of specific instructional techniques, resources and media to facilitate learning and teaching between learners and teachers who are separated by time or place. Techniques, resources, and media are dependent on factors such as: subject matter; student needs and context; teacher skills and experience; instructional goals; available technologies; and institutional capacity. Despite the proliferation of technologies in education, distance education in developing economies is still heavily reliant on printed materials".

Having the notion that understanding of how important it is for this type of learning to be conducted at this crucial time will ensure that educational needs are met. Some of the important qualities of such learning are presentation of lesson contents that are enriched with multimedia tools in a user-friendly online learning environment, the use of

online communication tools, as well of serving learners independent time and space. Huang et al. (2020) suggested that there were three challenges faced by the educators in e-learning during this pandemic, lack of preparation time, teacher/student isolation (first time for classroom learning), and the need for effective pedagogical approaches. Overcoming these challenges is never an easy task especially when the educators are to conduct large online classes and to suit educators' materials that cater to all learning types. The educators are expected to portray their intelligence in displaying effective communication besides encouraging proactive personality in such educational context.

One of the impacts of COVID-19 in the educational sector is the requirement for educators to adapt to the online teaching environment. Thus, self-efficacy has a big role in academic activities, including online education (Pumptow and Brahm, 2020). Self-efficacy in all forms, influences our thoughts, emotions, actions, motivation and operates mainly through the cognitive and affective channels and plays a crucial role in shaping our perception of life experiences (Chowdhury, 2020). Therefore, self-efficacy is deemed to be vital because people with high self-efficacy will be more prone to make improvements in the working environment and will know how to react when facing unexpected challenges in life. It is observed that students with a high level of self-efficacy will be significantly able to make their own psychological adjustment (Mesidor & Sly, 2016), able to perform better academically, display more confidence, and be better engaged in a learning environment and the most important thing is to be happy with that and who they are today. Meanwhile, educators who have this attribute will construct their teaching-learning activities to cater to changes in the learning environment. It is important to ensure educators are able to carry out good teaching practice, be satisfied with their job as well as to integrate technology into their teaching especially in a large online class successfully. Thus, self-efficacy is viewed as an important psychological factor in online learning environments.

Besides understanding how self-efficacy influences the success of online classes, it is also prevalent for educators that are in doubt about the effectiveness of large online classes to know how to communicate effectively in an online learning environment. Students' participation is always linked to the concept of interaction in which they are expected to be cooperating and communicating with each other as well as with educators and content directly in any online group discussion activities (Ke & Kwak, 2013). Interaction is of crucial importance for success in e-learning courses and for learners' motivation for their own learning process. This study is significant in sharing the nature of having a good quality of interaction to conduct effective communication in a large online class.

This study is also aimed to study the impact of proactive personality on social capital in an educational context. Social capital is known to be important as contributing to the success of Higher Education Institutions learners. Ellison et al., (2011) view social capital to be the most adapted construct in studying the effect of distinctive factors on some educational issues. A suitable framework that considers the resources owned by individuals, as well as the social relationships, is found to be the major reason why most researchers adapted social capital theory in their studies. Learners who are successful in their studies are found to be getting the support and be able to access tangible resources and are more ready for any type of learning environment and at any time. Upskilling learners with proactivity are the best to ensure that they can overcome technological limitations and enhance the quality of interaction with others in the context of online learning environments.

Over the years, many evaluation reports on the autonomy and freedom for learners to explore materials given and the objective of the lesson usually revolves around asynchronous e-learning. However, in this study, the researchers try to analyze feedback from students during synchronous learning as it deems relevant to measure the interaction quality developed during the live sessions. The finding is crucial to develop an instructional design for online learning as most of the education institutions shift to fully online mode during the Covid-19 endemic.

2. Literature Review

2.1 Internet-based Social Capital

Even though there are some challenges in conducting online classes, educators and learners understand that it is the only possible way as the Covid-19 pandemic has impacted our social activities (Zheng et al., 2020). Therefore, it is crucial to understand the nature of having a good quality of interaction in a virtual classroom so that both educators and learners can employ suitable approaches in this newly ventured platform. According to Zheng et al. (2020), having a good quality of interactions is perceived when the learners are able to interact virtually with others and able to develop an established network, rather than the existing relationships. Furthermore, interactions are not only to consider during the lessons but it is extended up until the learners act out their roles as a good family members and another social role too (Lu Yang & Yu, 2013).

In achieving the aim of nurturing good quality of interactions, there are some aspects that need to be addressed. They include understanding certain personality traits that are beneficial to serve for the betterment of social capital as the aim of education is

not only focusing on hard skills, but it is to promote lifelong learning. Grenfell's (2009) view is social capital should be integrated into education as it has to be nurtured in individuals starting at an early age. He further asserts that the theory can be utilized by the policymakers and the researchers by considering the logic of practice of Bourdieu's field story (Grenfell, 2009).

On the other hand, the current study tackles the issues faced during the pandemic. As such, social capital is seen as internet-based. Internet-based social capital can be conceptualized into three different approaches, namely the Internet transforms social capital, the Internet diminishes social capital and the Internet supplements social capital (Quan-Haase & Wellman, 2002). The third approach, Internet supplements social capital is evidently found in the study by Lu, Yang and Yu (2013) that hypothesised group student project scores are affected by the quality of interaction among learners during the online lessons, whether they are conducted in synchronous or asynchronous sessions. Online interaction using suitable media enhanced learning performance of the students as they are able to collaborate meaningfully in accomplishing the task.

In order to facilitate civic engagement and socialisation, it is incredibly true that life these days blends with the Internet. People need the Internet to be involved in social contacts and many other internet-based social networks (Quan-Haase , Wellman, Chen & Boase, 2002). A study in Tanzania reported that 92% of the respondents from a study believed that social networks accelerate collaboration and sharing information as the students use the platform for tutorial and discussion among students form different departments (Shembilu, 2013). Therefore, the current study incorporates the element of measuring the internet-based social capital in the questionnaire items to measure its contribution to humanising higher education as it deems as an important contributor in achieving the goal of holistic education (Acar, 2011). How and why social capital generate value in achieving the business benefit have been explained in a rich manner (Ahmed, Kumar, Kumar & Elyilmaz, 2019) and this finding guides the current study to explore social capital and ICT intervention in the context of online education.

2.2 Proactive personality and Student-content interaction

The psychological impact of the pandemic has affected different personality traits (Zheng et al, 2020). Individuals learn to cope with the changes at their own pace, some are able to adapt with the new normal in a short time but some others require a relatively longer time. Students with a proactive personality are more motivated to advance their technology skills and stimulate their digital learning (Zheng et al, 2020). The drive to have a positive outlook accelerates their

goal to upskill the Internet self-efficacy. When students and learners are aware on the crucial need of mastering the Internet skill, they can cope with the psychological distress and become more autonomous in enhancing their social networks. The important role of proactivity is also found in the work of Spitzmuller et al. (2015) that sees a continuous development of proactive potential should be established in organisations. This belief is also relatable in academia which asserts that the role of educators is to prepare learners with self-efficacy to perform proactively in academic performance and eventually maintain proactivity when entering the workforce. A study on the relationship of the Job Characteristics Model and career construction theory revealed internship students with proactive personality are more likely be employed as they managed to adapt themselves in searching for job (Pan, Wu, Guan, Zhu, Fu & Yu, 2018). Thus, the current study aims at empowering the quality of proactive behaviour in online classroom among students in preparing students for their future career development.

As impacted communities, learners and educators with proactive behaviour quickly opt for opportunities even if they are in curtailed situations. Thus, a variety of digital devices such as phone, chat, email and social media are seen as useful modes of communication (Pitas & Ehmer, 2020). The reliance of these devices reinforce teaching and learning too. Individuals with proactive behaviour utilise the internet-connected devices fully to ensure that they can engage in the e-learning process so that the learning outcomes can be achieved. Thus, teacher-learner collaboration as well as the availability of meaningful online resources are vital components in virtual academia in achieving the intended learning objectives. Even though the pedagogy has not established conclusively and it seems there is a lack of handful tools accessible by teachers to be employed in classroom, online teaching practices can be improved through granular and constructive feedback (Kim, Raza & Seidman, 2019) as the social quality can be measured in a more contextualised manner.

2.3 Proactive personality and Student-teacher/Student-student interaction

A sense of intimacy to certain groups and perceived social support has been widely acknowledged to be impactful in enhancing both the quality of learning and the motivation to study (Andrews & Haythorntwaite, 2011). Both educators and learners require emotional support to deal with the online classes so that they can sense the engagement and are able to collaborate successfully. Thus, the challenges of interaction in online learning especially during the pandemic can be improved by enhancing the quality of online interaction (Rapanta et al., 2020).

In a study by Salmi (2013), an extensive discussion of relevant criteria is suggested to resolve the problem of engaging the students with online interaction. First, she proposes that instructors establish an online presence in e-learning. This can be possibly done by making the photographs of both teacher and learners available online. She further illustrates that during the presentations, students need to upload their photos in presentation slides or posters. Secondly, she suggests that activities and assignments should be designed as teamwork rather than assigning them as individual tasks. Furthermore, one other important criterion is learners need to have good infrastructure when doing collaborative tasks. This includes having suitable platforms and tools for discussion and accomplishment of tasks.

In addition, blogs, peer assessment and virtual group sessions are emphasised in accelerating the quality of online interaction (Salmi, 2013). These platforms function not only as the medium for communicating, but in getting the feedback and guidance from peers and also, instructors. Thus, having proper social support and adequate tools for an online learning environment can manifest effective teaching and learning.

The said criteria are relevant if the higher learning institutions have prepared exclusively for online learning. On the contrary, the value of online learning diminishes if the problems are not addressed properly. They include technical issue, teacher's lack of knowledge in using the technology, improper teaching style and lack of interactions with teacher and classmates (Coman, Tiru, Mesesan-Schmitz, Stanciu & Bularca, 2020).

3. Method

3.1 Instruments

For the determination of sample size, the current study utilizes the G-power formula (Green, 1991). In terms of sampling techniques, this study uses purposive sampling technique to select participants that suit the purpose of the current research (Ilker et al, 2016). The sample consists of university students from foundation programme, diploma and undergraduates from year one until year four. This is due to the fact that the current study tries to identify challenges that they face when learning is in online mode. Thus, it is hoped that the study caters all levels of students in investigating their challenges with the online learning environment.

After reviewing previous literature, the current study employs a quantitative method and cross-sectional survey technique to obtain data from selected respondents. Additionally, the items are measured using seven-point Likert since it is the most efficient point measurement scale (Abdullahi & Haim, 2016).

Besides, the items of the research instrument are designed in simple language to avoid vague and leading questions (Kabir, 2016). The number of items developed for each construct was based on the elements that should be measured by each domain in the current study (Gavin & Dainne, 2013). The items are also selected from a suitable theme constructed based on social capital theory. Face validity has also been done to ensure whether the items are sensible, relevant and appropriate to be used in the developed questionnaire (Connell et al., 2018).

This evaluation has been analysed and endorsed by experts in certain areas of the research subject (Oladimeji, 2016). This process is important to obtain the accuracy of wordings of instruments as well as prevent from getting any item error prior to the distribution towards respondents. The questionnaire is then distributed among university students from several selected universities in Malaysia.

3.2 Data Collection

For the process of data collection, it has been distributed in June 2021 using Google Form. The respondents consist of Universiti Malaysia Kelantan (UMK) students as well as learners from Universiti Teknologi MARA (UiTM) who are from both urban and rural areas. Likewise, they are among Diploma and Degree students which are about 641 altogether.

3.3 Data Collection and Sample

In the current study, sample has been selected using purposive sampling method because this study tries to identify students who come from specific background such as Foundation, Diploma and Degree students and their age ranged from 18-20 and above. These requirements are necessary in order to have an intentional selection of specific individual. Additionally, the sample also could provide information that cannot be accessed from any channel (Padgett, 2017).

3.3 Data Analysis

The data was then analyzed using SPSS 23.0 to identify the outcome of respondents' answer. These techniques deem relevant as they explore the difference between sample types, as well as get to know whether the produced results are meaningful or not. Additionally, this statistical process also assists the current study to find the effectiveness of particular method of online teaching and learning.

4. Findings

In Table 1, detail of respondents' was analyzed

Table 1: Demographic Profile of Respondents

Demographic Variable	N	%
Level of Studies		
Foundation	618	96.4%
Degree	23	3.6%
Hometown		
City/Town	451	70.4%
Rural/Suburban	190	29.6%
Age		
Less than 20 Years Old	618	96.4%
Above 20 Years Old	23	3.6%
Gender		
Female	417	65.1%
Male	224	34.9%
Items	**Yes**	**No**
Assessing the internet	639	2
Using online materials	634	7
Joining online classes	641	0
Using Google Meet as a platform for online classes	628	13 (Others)

Table 1 illustrates the demographic profile of participants, and it shows the majority of respondents are female. It is agreed that there are more female students enrolled in government institution in Malaysia (Hirschmann, 2021). Regarding the age, most of students that participated in this study are 18 years old. This is because the related questionnaire has been distributed mostly to the Foundation students. Besides, it is about more than half of the respondents who live in rural area, and they also could assess the internet for online learning. Other than that, students were able to use online materials and they also obtained experience in participating online class. Students were also required to engage with Google Meet platform during online learning. It shows that students need to prepare several items such as possessing gadget in good quality, using extensive coverage and an ability to use online material in order to secure an excellent online learning quality.

In assessing the construct to measure student-content interaction, there are several elements that have not has been included, for example, the conditions of online material. This component is important to ensure students obtain a quality learning resources, since previous study states that online learning material are more effective because of its flexibility and students can access it any available time (Arias et al., 2018). Several related items are listed in Table 2 as follows: (to explain Table 2)

Table 2. Level of Agreements for Each Constructs

Constructs	Poor	Average	Good
Student-content interaction	8	254	379
Student-student Interaction	37	286	318
Student-teacher Interaction	15	277	349

Table 2 depicts the level of respondents' agreement for each domain. From the table, it was revealed that most of the participants agree with every statement in each construct. It shows that students apply positive impression towards online learning. Additionally, it is understood that the components of content interaction, student interaction, teacher interaction and medium interaction contribute to a positive environment of virtual lesson. On the other hand, it is important to identify that those aspects can be well-adapted well by students regardless of where they are, either in rural or urban area. Additionally, previous study also mentions that the factors of effective online learning include parental learning support, background attributes as well as a good adaptability in online lesson, and it positively relates to the higher level of online learning self-efficacy (Andrew et al., 2021).

Table 3. Items for Student-content interaction

Items	Mean	Standard Deviation
1. The online materials of the lesson able to instil learners with good qualities	5.27	1.129
2. The online materials shared by the educators are attractive	5.51	1.090
3. The online materials can deepen the understanding of the learners to the subject matter	5.17	1.259
4. The online materials meet the learning outcome of the lesson	5.39	1.168
5. The contents of the materials are relatable with learners' background knowledge	5.33	1.121

Table 3 shows the responses of students with content interaction. From the results, it shows that most of the learning contents are able to instil good qualities. It shows that the level of mean is high and it indicates that most of the participants agree with the statements. However, it is found that 15% of students claimed that they did not experience meaningful learning in online environment. This might be because of the insufficient structured contents as well as abundance of online learning materials (Fernando et al., 2020). Thus, it is proposed that the contents should be organized in more systematic way to lessen this issue.

Apart from that, educators should acknowledge that learning materials given via online platform are attractive. The current study reveals that most of respondents mentioned that they enjoyed engaging learning material in e-learning platform. This is in line with the findings of (Thomas & Rogers, 2020; Mukhtar et al., 2020; Verawardina et al., 2020) who mentioned that interactive learning material is imperative to enhance students' motivation. This implies that educators should prepare an interactive learning material to boost students' interest to engage in online lesson. Additionally, there are a lot of learning tools that can be implemented in online lesson such as Moodle, Youtube Wiz Iq, Padlet, Kahoot and other related learning aids to assist educators to deliver the lesson smoothly especially during the pandemic of COVID-19.

In contrast, item 3: "The online materials can deepen the understanding of the learners to the subject matter" revealed quite discontented response. Towards achieving a higher level of effective online learning, another study can be conducted to focus on the issues of the comprehension of the content. This is because there are some problems either from educators, learning material or the online system hinder the process of understanding. It is agreed that the lack of social and cognitive presence between teachers and students are one of learning challenges in online learning (Fernando et al., 2020). Furthermore, it is also understood that students learned independently and they struggled to understand the context. Hence, it is also proposed that students should involve in some related skills related to e-learning, as well as good interaction from educators to increase students' comprehension (Samir et al., 2014).

Item 4 also measures the quality of online materials that fulfil learning outcome. It is proven that most of learning sources fit the learning outcome since students are able to internalise the e-learning material. However, there were a few respondents who encountered problems regarding this issue. This might be due to the lack of organized structured learning content and goals (Fernando et al., 2020). In addition, the background of respondents also contributes to the answer pattern in this study. The participants who came from the rural area might encounter problems regarding e-learning such as the difficulty to access the Internet sources as well as the having the financial constraints especially to pay for the Internet plan or mobile data. This is supported by (Outhwaite, 2020; Bol, 2020; Thomas et al., 2020; Doyle, 2020) who discussed the problems of socioeconomic inequality. They argued that this issue highly contributes to the students' challenge especially insufficient learning resources, accessing to educational platform and the internet.

Besides that, this study also identifies that the contents of learning materials are relatable with learners' background knowledge. The role of passion determines learners' motivation as well as the effectiveness of learning process (Hamdi, 2017). From this finding, it seems that it is imperative for students to enrol with courses of their interest. Other than that, it is suggested that students should do early revision or research about the topic in order to get general comprehension of the subject. This effort could avoid from misunderstanding and assist students to assimilate with the topic. Ultimately, learners will find the topic to be very interesting because they have done quick revision prior to learning session.

Table 4. Items for Student-student Interaction

Items	Mean	Standard Deviation
1. I can interact well with other classmates during online lesson	4.81	1.433
2. I am able to collaborate with fellow classmates to complete any task given by the educator	5.32	1.237
3. I can share problem related to lesson with my classmates	4.76	1.505
4. I am able to assist my classmates when they have issues on the lesson	5.14	1.244
5. I develop new relationship rather than the existing one during online learning	5.27	1.387

From table 4, it is noted that the level of mean is high and it is indicated that most of the respondents agree with the elements relating to student interaction. In addition, if the mean is greater than 3.66, it means that the level of respondents' perception about certain aspect is high (Najihah et al., 2018). From the table, it is understood that students can interact well using synchronous and asynchronous platform of e-learning such as e-mail, videoconference and chats (Marinori et al., 2020; Anwar & Adnan, 2020). However, it should be notified that some students faced difficulty to interact to each other during the 'panicgogy'. This might be because virtual learning limits the physical communication among students.

Other factors that relate to difficulties in online learning are connectivity, accessibility, insufficient devices, and other social issues such as communication and interaction with educators and learners (Aboagye et al., 2020). This problem should be reduced in order to prevent students to feel isolated and decrease the level of learning motivation (Dhull et al., 2017). Other than that, it is stated that one of the drawbacks of online learning is that students are in poor physical health since they are restrained for outdoor activities (Nazarlou, 2013). Thus, it is important to guide students to have a synergetic interaction among them to avoid related problems such as mental health, depression and anxiety.

Moreover, the next item measures the ability to collaborate in a team work. It shows that most of them were able to cooperate in completing any tasks, and this will lead students to achieve an effective online learning. This is advocated by previous findings who mention that the required elements to obtain an effective online lesson are strengthening the relationship between students and faculty, designing collaborative learning process, receiving quick response, experiencing active learning and getting ample time to complete certain task (Cheung, 2017). Nevertheless, educators also should guide students to empower the collaboration between them. Other than that, this concept also will train students to perform,

support and motivate their team, hence they will obtain a greater return from the tasks that had been provided (Pilar & Joan, 2015).

Meanwhile, item 3 relates to the aspect of sharing problems among students. It shows this item possess the lowest mean value compared to other items. It shows that there are some respondents claim that they could not share problems related to lesson with friends. This element is closely related to psychological issue because students who have positive impression and mind will share their problems with their friends. Additionally, it is mentioned that sharing problem is one of online socialization processes (Raspopovic et al., 2017). In terms of educational impact of sharing problem, it assists students to develop critical thinking and educate them to solve problem wisely (González-González & Jiménez-Zarco, 2015). Thus, it is recommended that educators could encourage students to have discussion about the tasks, problems and questions to develop learners' interaction (Wan Nur Tasnim et al., 2019). Additionally, some students also claim that they face difficulties during online learning such as poor internet connection, technological accessibility as well as unconducive learning environments (Anas & Ahmad, 2021). If they can share problems with friends, this will ease their burden because they will try to help other friends in need.

Item 4; "I am able to assist my classmates when they have issues on the lesson" is related to item 3, since it revealed how students interact and help each other. Thus, it is important to practice a healthy virtual connection among friends and family members, as well as indulge in any activity they enjoy (Fransen et al., 2015). This could avoid the problem of social isolation, depression and anxiety especially during the pandemic of COVID-19.

For item 5, it analyses on how students develop new relationship with new friends rather than the existing one during online learning. It reveals that

most of students are able to develop new friendship and this practice can be formed from creating new group discussion among them. It is agreed that students may facilitate conceptual comprehension as well as developing inter-personal skills (Senior et al., 2014). Other than that, new relationship entails building social skills in which it is essential skill for learners (Carl & Chris, 2014). Additionally, it is proven that social interaction contributes to a positive learning outcomes and students' satisfaction (Mete & Eunbae, 2016). Other than that, it shows the significance of social relationship in promoting students' well-being.

Table 5. Items for Student-teacher Interaction

Items	Mean	Standard Deviation
1.I communicate with the educators privately when I face difficulty in learning	4.77	1.483
2.I can understand the content of the lesson during the lecture	4.89	1.171
3.I am willing to share my opinion with the educator during the online lesson	4.63	1.318
4.I obtain useful information from the educator during the lesson	5.73	1.017
5.I am properly guided by the course educator during the lesson	5.72	1.073

Table 5 depicts the role of educators to guide and assist student during online learning. All of the mean values are higher than 3.66, which proves that the items possess high positive feedback from the students. In contrast, item 1 shows lower value of mean, and it is proven that there are some students who face difficulties to interact with teachers. This finding is in line with recent study who mention that educators also encounter problems during online learning such as adapting to online teaching, a balance communication with learners as well as assisting students' development and learning (Sokal et al, 2020). Additionally, item 2 analyses the level of comprehension among students with online learning material. It is important to make sure that teachers could give explanations about the material so that students could digest the content of certain topic. It is agreed that positive attitude among educators as well as their comprehension about learning content contribute students' understanding of learning content. Likewise, students' participation and commitment also lead to the increase of understanding of learning content among students (Che Nidzam et al., 2017).

Meanwhile, item 3 identifies students share idea with the educator during lesson. This item possesses the lowest value of mean, thus it is understood that several students face problems regarding sharing ideas with educators during online learning. This might be because learners feel reluctant and they are overshadowed by other members to openly share their ideas. Additionally, this faceless situation contributes to misunderstanding about certain issues during virtual learning (Mohammad Alawamleh et al., 2020). Hence, it is proposed that educators also should encourage students to engage well during virtual session and this also will increase their communication skill. It is paramount for students to understand the guideline of virtual communication which includes the element of exchange written or oral information (Velentzas and Borni, 2014). It will assist students to be prominent in class and develop proactive behaviour in class This characteristic trait allows educators to facilitate the interaction and consult their students during online lecture.

Besides that, item 4 explores on how students gain information from lecturer during online class. The current findings also prove that educators could provide a beneficial content for virtual class. This shows a high level of readiness among educators and they are able to guide students even during faceless session. Other than that, teachers also could apply Home based-learning Teacher readiness scale inventory in order to measure the level of readiness for virtual learning which has been developed by Mansor et al., (2021). This scale will assist educators to identify the elements that are necessary to enhance the quality of online learning and the learning objective(s) can be attained.

While the last item identifies whether or not students are properly guided during online session. It reveals that students agree that they need to be facilitated during online class. This is imperative because when they get instant response from teachers, it can assist student to solve their problems (Ayesha, 2016). Hence, it is necessary to ensure that educators should fully handle virtual class and have an effort to assist students during online session.

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Table 6. Relationship between Gender and Students' Interaction

Aspect	Gender	N	Mean	SD	F	Sig
Content_Interaction	Male	224	5.1687	.92553	.511	.001
	Female	417	5.4211	.92504		.001
Student_Interaction	Male	224	4.9125	1.18927	.204	.019
	Female	417	5.1376	1.13990		.021
Teacher_Interaction	Male	224	5.0018	1.05146	1.635	.004
	Female	417	5.2236	1.07466		.005

From the results of ANOVA, it is proven that there is significant difference between the gender with the aspect of content-interaction [F=.511, p<0.05], Student-interaction [F=.204, p<0.05], as well as teacher-interaction [F=1.635, p<0.05]. This is proven that female students are able to interact more during virtual class as compared to male students. This is due to the fact that male and female apply different ways of engagement patterns during online class. This is in line with the findings of (Annette et al., 2017) who mention that female students are more reflective and less hesitant to participate in online rather than physical learning session.

Furthermore, it is stated that female students are more ready to participate in online learning, more satisfied and obtain more experience compare to male students (Ellen et al., 2020). This is also proven in the current research which indicates that female group interact more in online lesson as compared to male learners. Nonetheless, this is contrast with the findings of (Raymond, 2016) who mention that male students are likely to participate in online learning as compared to the female group. It is understood that it is important to identify ways to improve learning quality among male students because they have their own strength which is required to train them to be at par with female students.

5. Discussion

From the above findings, it is understood that the students needed to acquire the effective skill to interact with others as well as to have some positive behaviour towards online learning. This is proven by previous related research which analyses the significance of effective skill among student is crucial in order to avoid unemployment upon the completion of studies in any institution. This is due to the fact that the necessary skills are crucial so as to better shape the individuals with independence, productivity and self-reliance (Aina & Matthew, 2018). When the learners have an optimistic view that online learning with best effective practices would enhance their learning in large online class, they would then be able to gain knowledge and could later apply them in the working world. Optimistic is a crucial element to be applied among students because during online learning, they are encouraged to think critically and extend the subject of their studies to a broader aspect of life. This is in order to instil the optimistic attitude and reduce stress level particularly in virtual learning situation (Thitipong et al., 2021). Hence, students are previewed to have positive attitude towards online learning after equipping themselves with all the necessary skills.

The survey of students' opinions has shown that the most important aspects for the majority of responding students was for students to be interacting well with others. The results strongly support McMillian's (2013) observations. The transition to the new normal is perceived as an emotional event was examined that affected students' well-being. He furtherclaimed that "Students" greatest emotional fear appeared to be that of alienation—being an outsider without friends and in this case to the usage of technology for the learning purpose. Ateerah et al. (2021) highlighted that if the students manage to overcome that fear, they could meet others virtually during lessons to sustain their emotional well-being. Thus, it is understood that educators should encourage students to develop a healthy friendship as well as to obtain a well connection with educators.

Students' level of understanding about any subject should be taken into consideration especially when more complex tasks/assignments that is categorized as "high risk" tasks being assigned to novice undergraduate students. This is because even if such strategy is underpinned by a well-planned systematic structure, including details of assessment, some of the students might not be able to fulfil the tasks/assignments as expected, as the result of unsuccessful interaction with other people and medium. Educators should be creative in order to design a good assignment so that students will comprehend what they need to do. In addition, this concept also guides learners to regulate their own creative skill as educators can explain about the next activities clearly so that they will make more preparation for the next learning session (Rapanta et al., 2020). By making an attempt in doing so, educators will lessen the fear of undergraduate students in completing any difficult tasks.

Furthermore, the type of the medium chosen to conduct large online classes, in terms of both individual contributions and the overall group outcome may help or hinder the group integration inevitably affecting the progress on the assigned task. The examples above, clearly support the notion by Kemp & Grieve (2014) that for the large online groups to be effective, online material creation for blended units, looking at the nature and type of activities need to be well planned prior to taking the learners' knowledge and skills into consideration, as it was previously noted. It is also noticed that learning material is a crucial component to obtain learning objective. Akuratiya & Meddage (2020) added that some students are able to participate actively due to the interactive learning material. Nevertheless, there are also students who face difficulties in online session, thus, they prefer to become less active during e-learning (Bączek et al. (2020). Evidently, this shows that educators should have a comprehensive learning plans to make sure students could adapt well during learning session and encourage students to give constructive feedback for future lesson time.

It is worth noted that from this study, it is found that the most effective way for students to learn online is when the students perceived the learning materials to be engaging. One of the methods that can be done is the creation of learning tools is required to be occurred before actual learning session (Delipiter & Trisa, 2020). The data calls for the needs of proper planning in order to obtain more structured learning content and goals as to redefine the various types of literacies especially self-efficacy literacy. Content creators should always ensure that the learning materials should be attractive and interactive for more responses gained from the students so that students will be motivated and have a meaningful online learning experience. In order to retrieve information, the students claimed that they were required to be adapting to some strategies like making early revision or research about the topic in order to get some general comprehension of the subjects learned. By doing so, Nuh and Eralp (2020) highlighted that it is proven to have a positive effect for students' achievement. Hence, this study also reveals the significance of self-efficacy concept, and it is an imperative psychological contributor for an effective online learning.

On the notion of the students' communication via online platforms with their acquaintances, it is prominent for them to practice a healthy virtual connection among friends and family members. They asserted that they managed to interact well using both synchronous and asynchronous platform of e-learning and are able to develop new friendship, as well as to conduct successful group discussion sessions. In addition, the connection between classmates will assist learners to obtain new resources of knowledge as well as venture into new area of studies (Gherhes et al., 2021). Consequently, more engaging, and effective learning will take place as they managed to maximise those platforms for online learning purposes.

They were also observed to be able to collaborate in teamwork where most of them can cooperate to complete any tasks and achieve an effective online learning experience in this new normal. It is in contrary to the case of students to share their problems via online platforms where 31% declared that they failed to share their struggles with someone else due to the issue of trustworthiness and some other issues relating to the perceptions that are connected to some psychology. Despite this, the increased use of e-learning platforms in large online classes is now becoming mainstream in education, more students coming from different range of backgrounds are now accepting online components to be part of their university experience. In the long run, we predict that more students at the very young age would be able to learn via these online learning platforms and will no longer be hesitant or facing any issues to ensure successful online learning.

6. Conclusion

From the analysis, the findings showed that there were some effective practices in conducting large online classes that deal with internet self-efficacy and impact of proactive personality on social capital in educational context. It is highly recommended by the researchers as they noted some room for improvement as there had been limited time for conducting a more complete study. As it has been planned, the researchers would distribute the questionnaires across the country and not limited to only learners and educators from UiTM and UMK. Thus, this is one of the options that the other researcher would want to consider in the future.

The research conducted concerns with different types of interaction; namely materials, other learners, educator and medium together by getting some insights about learners' behaviour towards online learning. It is decided to only concentrate on types of interactions as many scholars have debated largely on these interactions. It is deemed to be appeared to be much concern not just from the educators, but also from the learners as well as the policy makers. Learners who were skillful in using the technology in their learning experience were successful in their studies as they managed to get the support and were able to access to more tangible resources and were ready for all types of learning environment at all times. On the other hand, students who are lacking of technology skills needs proper guidance from teacher as they are struggling not only to comprehend the subject matter but also to utilise the online platform itself. Therefore, it is important for teacher to identify students' competency in the notion of using technology for learning purpose. This can be

implemented via interview with students and distributing survey so as to obtain the feedback from them.

To conclude, several issues that need to be highlighted for future research are the strategies on how to attract male student to engage well during online class. Other than that, educators should play an important role to communicate with the students and train them to be more self-confident in sharing ideas and other issues that could nurture the proactive personality. This quality is crucial in preparing learners to be more agile and ready for challenges and hurdles, be it in their studies or when entering the workforce in the future. In addition, educators can harness the sense of positivity among students themselves so that they can have a better social engagement especially in facing the new norm of learning phase.

7. Acknowledgment

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