

Exploring Learner's Readiness for MOOCs in Indian Higher Education: A Case Study

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Abstract

Introduction: Massive Open Online Courses have become a transformative force in the rapidly changing higher education landscape, providing unheard-of learning opportunities to a broad audience. To best integrate digital learning resources, it is essential to conduct research on comprehensive understanding the levels of readiness for MOOCs among students in India, a nation with a burgeoning higher education market, is crucial as the popularity of MOOCs rises.

Objectives: The primary objective of this study was to investigate the readiness levels of higher education learners for MOOCs in India. Additionally, it aimed to explore how socio-communication skills, technical proficiency, self-confidence, and self-directed learning influence students' readiness for MOOCs in the context of higher education. It also sought to analyze differences in learners' readiness for MOOCs concerning factors such as gender, place of residence, family type, prior online course experience, age, and education level.

Methods: A descriptive survey method was used to carry out the study. In the present study a sample of 200 graduate learners was selected using a simple random sampling technique. The study was limited only to the learner's pursuing courses at Tezpur University, Assam.

Results: The study's results indicate that learners have a high level of readiness for MOOCs, and its evident socio-communication competency, technical competency, self-efficacy and self-directedness all exert a clear influence on their readiness. Furthermore, the study found no significant differences in learners' readiness for MOOCs based on gender, place of residence, type of family, prior experience with online courses, age or education level.

Conclusion: This research is essential for tailoring MOOC offerings to Indian students' varied needs and abilities, ensuring equal access to education. It also has a significant impact on identifying and eliminating potential obstacles to MOOC adoption, which ultimately encourages more efficient and inclusive online learning. The outcomes of such research also enable institutions to make knowledgeable choices regarding the distribution of resources and the provision of student support services, ultimately raising the standard and accessibility of higher education in India.

Key Words: MOOCs Readiness, Social-Communication, Technical, Self-Efficacy, Self-Directedness

1. Introduction

Education is one of the keys to the success of a country's development. Over the years, after the introduction of learner centered teaching methods and the advantage of modern technologies in the education system the way of delivery has changed. But at the same time there is an immense need in society for creative and innovative minds to adapt new knowledge for survival of self and nation's development. For promoting such minds, the opportunity should be provided to explore the unknown and unrevealed areas of different fields by setting up productive learning spaces which cuts the barriers for learning.

One of the major innovations in the teaching learning field is Massive Open Online Courses (MOOCs). It is open to everyone across the globe cutting the barriers of time, place, infrastructure facilities and background. It allows the learner to learn at their own pace and on their own schedule. It is a new approach that uses the Internet to make courses available to hundreds and thousands of individuals (Gyles, 2013). MOOCs are

online distance learning courses that are open to every learner. One MOOC course might include thousands of learners (Gameel & Wilkins, 2019). This innovative educational approach can provide learners with access to high quality educational materials from anywhere in the world. MOOCs are an ideal solution for learners who cannot attend traditional classroom-based education for various reasons including financial, geographical and time constraints.

Massive Open Online Courses (MOOCs) offer an option for learners to access knowledge at a very low cost providing a huge number of subjects. In addition, MOOCs are able to attract student involvement in online classes (Liyanagunawardena, 2013; Bate, 2014); attention of educators who desire to extend higher education to learners around the globe (Gameel, 2016) and allow them to meet new people (Zheng, 2014).

With a population of more than 1.3 billion people, India boasts a diverse population and geography, with 22 official languages and a significant rural populace. Education is a critical area for India's development, with a literacy rate of 74.04% in 2011. However, access to quality education is still a challenge in many parts of the country, especially in rural areas. The Indian government has made significant efforts to improve access to education through several initiatives, including the Right to Education Act, the Sarva Shiksha Abhiyan program, and National Education Policy 2020.

Understanding the dearth need of promoting education for all by cutting all the barriers is the need of hour. At present most of the learners can use technology easily because they are considered digital natives (Yilmaz, 2017) and experiencing the benefits of virtual learning. The government's emphasis on digital technology and e-learning by taking several initiatives has led to a significant increase in online education platforms in the country. Government of India felt the implementation of MOOCs courses in India is a comprehensive path-breaking venture in the field of education system.

The Indian government launched in 2002 the first online learning platform National Programme on Technology Enabled Learning (NPTEL). It is followed by the National Mission on Education through Information and Communication Technology (NMEICT) and the Indian government's own MOOCs portal SWAYAM (2016) is launched. As per UGC guidelines (2016) "no university shall refuse any learners for credit mobility through MOOCs and equal credit weightage for the credits earned through SWAYAM platform (Yadav & Ganie, 2019). As per UGC's "Credit Framework for Online Learning Courses" SWAYAM Regulations, 2021 has allowed universities and colleges across the country to offer 40 % of all courses in a semester online via the SWAYAM platform. Earlier the UGC has also issued a guideline to all universities and other institutions of Higher Education to offer 20% online courses (MOOCs) either available on SWAYAM or other platforms (Agha, 2021). Also, UGC recommends that the higher education institutions should be encouraged, through funding and other support mechanisms, to put some of their best courses online.

Not only that, one of the vital goals of the National Education Policy (NEP) 2020 is to bring "flexibility in higher education". Providing learners with the freedom to pursue their preferred courses according to their own convenience - in terms of timing, duration, and institution choice - can help foster a culture of continuous learning. Additionally, during the first-year commemoration event of the National Education Policy (NEP), the Indian government launched the National Digital Education Architecture (NDEAR) and the National Education Technology Forum (NETF). Both of these initiatives are expected to play a significant role in promoting technology in Indian education and expanding its reach across different geographies and timeframes. Globally, after the United States, India is leading the second position with the largest learners attending MOOCs courses.

After COVID-19 pandemic, online learning has taken place and has gained much popularity among the students. Though increased learners' enrollment in MOOCs shows the participants gaining various potential benefits on the one hand, on the other hand the low completion rates of less than 10% raises a question about the effectiveness of MOOCs. (Agha, 2021; Yadav et al, 2021; Reich & Valiente, 2019; Rodriguez, Montoya, & Gonzalez, 2019; Lyu, Chan, & Yeung, 2019; Kruchinin, 2019; Liu, He, & Cai, 2018). Kilgore & Lowenthal, (2014) in their study mentioned that while MOOCs learners felt isolated, lonely and not connected. However, it indicates drastic advancements learners are responsible for their study while learning through MOOCs.

While MOOCs offer many benefits, learners may face several challenges when participating in MOOCs. These challenges include a lack of structure, isolation, and high dropout rates. Despite its rapid growth there are some uncertainties still existing and unanswered. This shows there is a need for academic research to deepen understanding about MOOCs' nature, attributes, inherent features, challenges, potential readiness among the learners for MOOCs and the support system for promoting the MOOCs effectively in future.

1.1 Learners Readiness for MOOCs

According to UNICEF, (2012) conceptual framework report “readiness for learning is a holistic way of looking at the learners’ preparedness to learn and it embraces the interrelationships between skills and behaviors across domains of development and learning. Readiness for MOOCs refers to the skills, abilities and attitudes that learners require succeeding in the learning experiences and implies being prepared to succeed in MOOCs, knowing that it is completely different from the traditional classroom system (Wilson, & Guzdial, 2010). According to Ayotola & Morenikeji, (2011) defined “readiness includes preparedness, awareness, knowledge of use, attitude and skills to use technology are associated with preparedness as well”.

The readiness of learners for success in MOOCs involves several factors that may impact a learner's ability to successfully participate in and complete the course. These factors include prior knowledge, socio-communication competency, self-efficacy, self-directed learning, motivation, time management skills, access to technology and language proficiency. Prior knowledge is a crucial factor in determining whether a learner is ready for MOOCs. MOOCs are often designed for learners with some level of prior knowledge or experience in the subject matter. Learners with little to no prior knowledge may struggle to keep up with the pace of the course or understand the concepts being taught. MOOCs may assume some prior knowledge of the subject matter or academic skills. Learners should assess their own knowledge and skills and determine if they need to brush up on any prerequisites before starting the course.

Socio-communication competency refers to the ability to communicate effectively with others in various social contexts. It involves the use of both verbal and non-verbal communication skills, as well as an understanding of social norms and cultural differences. In the context of MOOCs, socio-communication competency is important because learners must be able to effectively communicate with their instructors and fellow classmates, despite the fact that they may be located in different parts of the world and come from different cultural backgrounds. This includes the ability to write clearly and effectively in online forums and to engage in productive discussions with other students. Overall, developing socio-communication competency is an important aspect of participating in a MOOC, as it can help learners to engage more effectively with the course content and with other students, leading to a more enriching and rewarding learning experience. Lack of social interaction is often considered a factor that compromises learning experiences and outcomes in MOOCs (Wise & Cui, 2018).

MOOCs typically require learners to have access to a computer or mobile device, a reliable internet connection, and basic computer skills. Learners should make sure they have the necessary equipment and know how to use it before enrolling in a MOOC. Access to technology is an essential skill completing MOOCs successfully. MOOCs require additional sets of digital skills beyond the ones needed for taking courses online. They require online facilitation and collaboration skills (Chattopadhyay; 2014).

Self-efficacy refers to an individual's belief in their ability to successfully perform a particular task or accomplish a specific goal. In the context of MOOC learning, self-efficacy plays a crucial role in determining the success or failure of learners in their academic pursuits and it can impact learners' motivation, engagement, and persistence in the course. Learners who have high levels of self-efficacy tend to be more motivated to complete the course, engage more actively in the learning process, and persist in the face of challenges and setbacks. On the other hand, learners with low self-efficacy may struggle with motivation, become disengaged, and drop out of the course altogether.

As highlighted by Mackness, et. al., (2010) a learner taking responsibility for his or her own learning includes everything from identifying the learning need, to locating the appropriate resources and to self-evaluating one's

progress". MOOCs are typically self-paced and require a high degree of self-motivation and self-discipline. Learners who thrive in traditional classroom settings may find it difficult to adapt to the more independent and self-directed learning style required for MOOCs. Learners must be able to prioritize their coursework and dedicate sufficient time to completing the assignments and assessments. Motivation is another crucial factor in determining learner readiness for MOOCs. Learners must be motivated to complete the course and stay engaged with the material. Without motivation, learners may quickly lose interest in the course and struggle to keep up with the workload. MOOCs require learners to manage their time effectively, as they are typically self-paced and have no set schedule. Finally, Learners must have a reliable internet connection and access to a computer or mobile device to participate in the course.

With the growing demands of educational technology several educational institutions have adopted technology in learning. Also found suitable in this generation of social media and YouTube MOOCs can fit the trending phenomenon in the higher education system. Though MOOCs have become increasingly popular in recent years, they offer flexible and affordable ways for learners to access education, open and free access to educational content around the globe. However, not all learners may be ready to take on the challenges of MOOCs. In India though the status of MOOC enrolment in India is more than 3 crores, the completion rate is 1 to 5% (The Times of India; 2023). As Ayotola & Morenikeji (2011) highlights that as MOOCs are implemented and used by universities then the students' readiness for MOOCs should be assessed for success of the approach. In this study keeping the above in concern the following influence of the four factors Socio-Communication Competency, Technical Competency, Self-Efficacy and Self-Direction on Readiness for MOOCs are researched.

1.2 Literature Review

Al-Harathi and Ani (2022) found the learners of Onami higher education institutions possess a high level of MOOC readiness and readiness of the learners to take MOOCs was conceptualized with the help of three sets of skills: technological, metacognitive, and motivational. Comfort with eLearning was found to be the best predictor for future participation in MOOCs. The male and urban residential learners have better MOOCs readiness than the other counterparts. A study conducted by Lazarus and Suryasen (2022) showed that the setup of the current library is not suitable to accommodate MOOC services for users of the library. For understanding MOOCs and delivering MOOC services, the professionals of the library are not provided with adequate training facilities. A study conducted by Vijila and Thiyagu (2022) found 904 post graduate learners of Kerala showed high level of readiness for MOOC. Al-Adwan and Khmour (2020) revealed that social competency, communication competency, and technical competency had positive influences on the student readiness to MOOCs. Birzina and Cedere (2020) found a relationship among self-directedness, socio-communication competencies, self-efficacy, and student's readiness for MOOCs.

According to Bakogianni, et. al., (2020) revealed that the teachers in general show quite a high level of readiness to use MOOCs. Alshammari in 2022 found that technological competency and communication competency had a positive effect on the learners' readiness to use MOOCs. But social competency doesn't have a significant effect on learners' readiness to use MOOCs. A study conducted by Yusoff, et. al., in the year 2019 found that in general postgraduate learners have excellent readiness for MOOC in terms of technology access, online communication skills, independent learning, online content delivery, online discussion and awareness. Zulkifli in 2019 showed clearly that learners in the polytechnic are ready to use MOOC in their teaching and learning process. According to Subramaniam in 2019 self-efficacy was found to be significant for MOOC readiness. He also stated that technical competency did not have any significance on MOOC readiness. Yadav and Ganie (2019) showed that there is a lack of readiness among learners towards successful learning of MOOCs. Tahiru and Kamalludeen (2018) revealed that a majority of postgraduate learners were not aware of MOOCs. A study conducted by Fadzil, et. al., (2016) found the postgraduate learners studying in Malaysian higher education institutions had a higher level of MOOCs readiness. Self-efficacy and self-directedness were found to be significant for MOOCs readiness. Male respondents were found more ready than female respondents to use MOOCs. Fook (2017) revealed that students' readiness for MOOCs was at a moderate level. Yu and Richardson (2015) revealed that learners had a high level of communication and technical competencies. Rajabi and Virkus (2013) indicated that both learners and academic staff of TLU had a positive attitude towards MOOC readiness. The studies cited in the prompt provide some

insights into the factors that influence MOOC readiness, but they are limited in scope. A more comprehensive study would be able to identify additional factors that influence MOOC readiness and to better understand the relationships between these factors.

The scant research on MOOCs readiness draws attention to the need for researchers to prioritize understanding learner readiness, as it is the minimum essential requirement for successful completion of any activity. Keeping this in mind, this study aims to determine the degree of learners' readiness for MOOCs in Indian higher education. In this study, we investigate the influence of the following four factors on readiness for MOOCs: socio-communication competency, technical competency, self-efficacy, and self-direction.

2. Objectives of the Study

- To explore the learner's levels of readiness for MOOCs in higher education.
- To study the significant relationship between learner's readiness for MOOCs in higher education and socio-communication competency, technical competency, self-efficacy and self-directedness.
- To find out the significant influence of socio-communication competency, technical competency, self-efficacy, self-directedness on learner's readiness for MOOCs in higher education.
- To find out the difference in the learner's level of readiness for MOOCs in higher education with respect to gender, place of residence, family type, prior experience on online courses, age and level of education.

2.1 Hypotheses of the Study

- The learner's do not possess the higher level of readiness for MOOCs in higher education.
- There is no significant relationship between learner's readiness for MOOCs in higher education and socio-communication competency, technical competency, self-efficacy, self-directedness.
- There is no significant influence of socio-communication competency, technical competency, self-efficacy, self-directedness on learner's readiness for MOOCs in higher education.
- There is no significant difference among the learner's readiness for MOOCs in higher education with respect to gender, place of residence, family type, prior experience on online courses, age and level of education.

3. Methodology of the Study

A descriptive survey research design was adopted by the researcher to conduct the study. The population of the study comprises all the learner's pursuing courses in higher education institutions of Assam. In this study researchers adopted a simple random sampling technique to select 200 graduates pursuing courses in higher education institutions of Assam. In this study learners' readiness for MOOCs is the dependent variable, socio, communication competencies, technical competencies, self-efficacy and self-directedness are independent variables. In addition to that the influence of demographic variables namely gender, age, educational qualification, place of residence and family type respondents belong too are researched. The study was limited only to the learner's pursuing courses at Tezpur University, Assam.

3.1 Research Instrument used for the Study

In the present study "Massive Open Online Course Readiness Star Rating Scale" constructed and standardized by Vijila and Thiyagu has been adopted by the researcher. The tool has ensured both content and constructs validity. The reliability of the tool was established by constructors by using Cronbach alpha method (0.796) and Split half correlation method (0.736) which indicates this tool has a high level of internal consistency. This tool covers four factors: Socio- Communication Competency – 10 items; Technical Competency – 9 items; Self- Efficacy – 8 items; Self- Directness – 5 items. All the four factors are taken for research and no separate tools used for scaling the four factors separately. The scale has 32 items with 3-star rating scale. The scoring procedure was done by considering 3 to 1 for positive statements and the score ranges from 32 to 96. The score ranges from 1 and up to 32 is considered to have low level of MOOCs readiness; 33 to 64 is considered to have moderate level of MOOCs readiness; and 65 and above is considered to have high level of MOOCs readiness.

4. Data Analysis and Interpretation

For analysis of the obtained data statistical package for the social sciences software program application version 25, is used. The data are tested using descriptive analysis, correlation, t-test, F-test and regression. Results are presented below according to the hypotheses of this study.

4.1 Demographic Profile of the respondents

In this study totally 200 respondents participated, out of which 27.5% learners are male and the remaining 72.5% are female. In this study 57.5% of respondents are from urban areas and 42.5% in rural areas. The age group of the respondents ranges between 20 - 30 years, in that 32.5% accounts for age group greater than 18 and less than 22, while the age group greater than 22 and less than 26 years accounts for 25.5% and the remaining learners age group greater than 26 and less than 30 accounts for 42%. Again 50.5% of the learners belong to joint families and 49.05% of the learners belong to nuclear families. Then the education level group of the respondents who belong to undergraduate category is 32.5%, learners who belong to postgraduate category is 24.5% and learners who belong to PhD category is 43%. The learners who are having prior experience in online course participation is 33.5% and 66.5% learners are not having prior experience in online course participation.

Table 1. Shows the demographic profile of the learners

Demographics		N	%	Demographics		N	%
Gender	Male	55	27.5	Type of family	Joint	101	50.5
	Female	145	72.5		Nuclear	99	49.5
Age	>18 and <22	65	32.5	Education Level	Undergraduate	65	32.5
	>22 and <26	51	25.5		Postgraduate	49	24.5
	>26 and <30	84	42		PhD	86	43
Place of Residence	Urban	115	57.5	Prior experience in online course participation	Yes	67	33.5
	Rural	85	42.5		No	133	66.5

4.2. Hypothesis Testing

Hypothesis 1: The learner's do not possess the higher level of readiness for MOOCs in higher education

Table 2: Descriptive statistics showing the dimension wise learners' readiness for MOOCs

Factors	Percentage (%)			Mean	S. D.
	High	Moderate	Low		
Social- Communication	32	50.5	17.5	23.15	4.251
Technical	28	53	19	21.68	3.669
Self-Efficacy	55.5	28	16.5	19.53	2.830
Self- Directedness	27.5	56	16.5	11.49	2.635
Overall MOOC Readiness	74	26	Nil	75.68	11.30

The analysis of the results, shown in Table 2, provides descriptive statistics of the various levels of learners' readiness for MOOCs across dimensions. The analysis reveals that 74% learners were having high levels of readiness for MOOCs, 26% were having moderate levels of readiness for MOOCs. The overall mean score of

readiness for MOOCs is found to be 75.68 with S.D 11.30. These findings indicate that the respondents showed a high level of readiness for MOOCs.

From the above Table 2, it can also be seen that, in social-communication competency 32% of respondents have fallen in high, 50.5% have moderate and 17.5% have low level of readiness for MOOCs with mean score 23.15 and the standard deviation 4.251. In Technical competency, 28% of respondents have fallen in high, 53% have moderate and 19% have low readiness for MOOCs with mean score 21.68 and the standard deviation 3.669. In self-efficacy, 55.5% of respondents have fallen in high, 28% have moderate and 16.5% have low readiness for MOOCs with mean score 19.53 and the standard deviation 2.830. In self-directedness, 27.5% have high, 56% have moderate and 16.5% have low readiness for MOOCs with mean score 11.49 and the standard deviation is 2.635.

Results in Table 2 revealed the highest mean score is 23.15 in the respondent's socio-communication competencies, followed by a mean score of 21.68 in technical competencies, and by a mean score of 19.53 in self-efficacy for learners' readiness for MOOCs. The lowest mean score is 11.49 in the respondent's self-directedness factor. The graduates believe they have the socio communication competencies. It is worth exploring because it is the most important factor for retention of learners in MOOCs. However, the low mean score in learners' self-directedness indicates there is a need for encouraging strategies to facilitate learners' self-management, self-evaluation, study strategy and motivation; which are considered as crucial characteristics like persistence, independence and initiative make individuals to complete the task successfully.

Hypothesis 2: There is no significant relationship between socio-communication competency, technical competency, self-efficacy, self-directedness and learner's readiness for MOOCs in higher education

Pearson correlation is used to determine the relationship between readiness for MOOCs and socio-communication competency, technical competency, self-efficacy, self-directedness.

Table 3. Showing the dimension wise learners' readiness for MOOCs

Factors	Socio-Communication	Technical	Self-Efficacy	Self-Directedness	MOOCs Readiness
Socio-Communication	1	0.051**	-	-	0.321**
Technical	0.051**	1	0.184**	0.039**	0.011
Self-Efficacy	-	0.184**	1	-	0.379**
Self-Directedness	-	0.039*	-	1	0.323**
** indicates correlation is significant at the 0.05 level (2-tailed)					

The obtained correlation value indicates readiness for MOOC among learners is found to be significantly correlated with social-communication competencies, self-efficacy and self-directedness. But no correlation was found among the technical competency and readiness for MOOCs among the learners. The highest correlation exists among readiness for MOOCs and self-efficacy ($r=0.379$), followed by self-directedness ($r=0.323$) and socio communication competency ($r=0.321$).

Hypothesis 3: There is no significant influence of socio-communication competency, technical competency, self-efficacy, self-directedness on learner's readiness for MOOCs in higher education

To investigate whether there is any significant influence of socio-communication, technical competencies, self-efficacy and self-directedness on readiness for MOOCs the multiple regression analysis is used and the results are shown in **Table 4**.

Table 4. Multiple Regression Analysis results on learners' readiness for MOOCs

Model Summary shows: R =0.395; R Square = 0.156 : Adjusted R Square =0.138					
ANOVA ^a	Sum of Squares	df	Mean Square	F	Sig.
Regression	3962.803	4	990.701	8.992	0.001
Residual	21484.352	195	110.176		
Total	25447.155	199			
Competency		Standardized Beta coefficient		t-test	Sig.
Social-Communication		0.395		5.647	0.001
Technical		0.008		0.120	0.001
Self-Efficacy		0.044		0.603	0.049
Self-Directedness		0.221		2.936	0.004

The result in Table 4, shows that the four predictors explain 15.6% of the variance {R² =0.156, F (4.195) =8.992, P =0.001 <0.05}. The result clearly indicates that the socio-communication competency { $\beta = 0.395$, t (4.195) = 5.647, p= 0.001<0.05} significantly influences learners' readiness for MOOCs.

The other variable technical competency { $\beta = 0.008$, t(4.195) = 0.120 , p= 0.001 <0.05} significantly influences readiness for MOOCs among the learners. While for self-efficacy { $\beta = 0.044$, t (4.195) = 0.603, p= 0.04<0.05} significantly influences learners' readiness for MOOCs. For self-directedness { $\beta = 0.221$, t(4.195) = 2.936 , p= 0.004<0.05} significantly influences learners' readiness for MOOCs. In other words, the four predictor's socio-communication competencies, technical competencies, self-efficacy and self-directedness directly influence learners' readiness for MOOCs.

Hypothesis 4: There is no significant difference among the learner's readiness for MOOCs in higher education with respect to gender, place of residence, family type and prior experience on online courses. age and level of education.

To determine the impact of demographic variables: gender, place of residence, family type and prior experience on learners' readiness for MOOCs t-tests is used and for exploring impact of age, level of education on learners' readiness for MOOCs F-test is carried out. The analysis is presented in Table 5.

Table 5. Shows T-test and F-test of learner's readiness for MOOC based on demographic variables

Demographic Variables		N	Mean	S. D.	t-value	Level of Significance
Gender	Male	55	73.38	12.230	1.855 (df=198)	0.175 (p>0.05)
	Female	145	75.80	10.981		
Place of residence	Urban	115	75.40	11.197	0.080 (df=198)	0.777 (p>0.05)
	Rural	85	76.07	11.512		

Type of Family	Joint	101	74.64	11.402	0.582 (df=198)	0.446 (p>0.05)
	Nuclear	99	76.75	11.169		
Prior experience on online courses	Having	67	76.47	11.192	1.393 (df=198)	0.165 (p>0.05)
	Not having	133	74.12	11.326		
Demographic Variables		N	Mean	S. D.	F-value	Level of Significance
Age group	>18 and< 22	65	74.05	11.382	0.961 (df=1,199)	0.384 (p>0.05)
	> 22 and <26	51	73.82	10.870		
	>26 and < 30	84	76.54	11.514		
Education Level	Undergraduate	65	74.05	11.382	0.830 (df=1,199)	0.437 (p>0.05)
	Postgraduate	49	73.90	10.966		
	Doctorate	86	76.43	11.464		

As it can be discerned from Table 5, the result of the t-test indicates that there is no statistically significant difference in the learners' level of readiness for MOOCs based on gender {t(198)=1.855, p=0.0175 >0.05}, place of residence {t(198)=1.855, p=0.175>0.05}, family type {t 198=0.582, p=0.446>0.05}, prior experience on online courses {t(198)=1.393, p=0.165 (p>0.05)}, age {F(1,199) =0.961, p=0.384>0.05}, level of education {F(1,199) = 0.830, p=0.437>0.05}. Therefore, the null hypothesis is accepted. Hence it can be concluded “there is no significant difference among the learner’s readiness for MOOCs in higher education with respect to gender, place of residence, family type, prior experience on online courses. age and level of education. In other words, none of the six variables gender, place of residence, family type, prior experience on online courses, age and level of education showed significant differences in the learners’ levels of readiness for MOOCs in higher education.

4.3. Findings and Discussion

In order to succeed in MOOCs, higher education learners need to possess a certain set of competencies. Social-communication competency, technical competency, self-efficacy and self-directedness acted as facilitators of student readiness to MOOCs. These factors influence the level of readiness for MOOC among the students.

The findings of the study show that the respondents showed a high level of readiness for MOOCs. These findings are in line with the findings of Al-Harhi & Ani (2022), Fadzil et al. (2016), Bakogianni et al. (2020). The level of readiness for MOOCs among the respondents was high in terms of socio-communication competency and low in self-directedness. This finding is in line with the findings of Fadzil et al. (2016), James & Christian (2018), Vijila & Thiyagu (2022), Yu & Richardson (2015), Zulkifli et al. (2019), Yusoff et al. (2019), Al-Harhi & Ani (2022), Bakogianni et al. (2020). As such socio-communication competency is an important aspect of learning MOOCs as it enables learners to engage in collaborative and peer-to-peer learning, build their professional networks, and stay motivated and engaged throughout the course. It is worth knowing that the majority of the respondents have high socio-communication competency which is an essential skill for successful completion of MOOCs. At the same time knowing the level of readiness for MOOCs among the respondents is low in self-directedness makes researchers sad because as pointed out by Zimmerman & Cleary (2006) self-directedness behavior helps or supports individuals to set goals in both personal and academics. So there needs to be a more careful investigation in this behavior specific to MOOCs learning environment.

The finding of the study also shows that the obtained correlation value indicates readiness for MOOC among learners is significantly correlated with social-communication competencies, self-efficacy and self-directedness. But there is no correlation among the technical competency and readiness for MOOCs among the learners. This finding is in line with the study of Fadzil et al. (2016) and contradicts with the previous studies of James &

Christian (2018), Vijila & Thiyagu (2022), Yu & Richardson (2015). This may be as rightly pointed out by Gros, et. al. (2012) that digital generation may not exist in a homogeneous way; after the COVID-19 pandemic, the learners are more acquainted with online learning facilities; as in the perspective of Fadzil et al. (2016) the present learners are relatively more exposed to digital technology and the internet world, as a result learners have not felt this factor as a main concern. But as suggested by Richardson & Yu (2015) in their Student Online Learning Readiness model technical competency is an important factor which influences the learners online learning retention, this factor also needs more exploration on MOOCs learning environment in future.

The result of the study shows that the four predictor's socio-communication competencies, technical competencies, self-efficacy and self-directedness directly influence readiness for MOOCs. The finding is in line with the findings of Rajabi & Virkus (2013), Fadzil, et. al. (2016), Birzina & Cedere (2020) and contradict with the findings of Subramaniam et al., (2019), Al-Adwan & Khdour (2020). The findings of the study concluded that none of the six variables gender, place of residence, family type, prior experience on online courses, age and level of education showed significant differences in the learners' levels of readiness for MOOCs. The level of education of learners has a noteworthy impact on their perception of the importance of various aspects of a course. Learners with a higher level of education placed significantly less importance on interaction with the teaching staff and feeling supported by other learners than learners with lower levels of education (Gameel, 2016). As Gameel (2016) highlighted learner age has significant effects on learner perception concerning the importance of several course aspects. Learners who are young or have low levels of education value the importance of interaction more than the learners who are older or have higher levels of education.

5. Conclusion

Learner readiness for MOOCs is a crucial factor in determining the success of MOOCs. Learners must have the necessary prior knowledge, learning style, motivation, time management skills, self efficacy, self directness and access to technology to effectively participate in MOOCs. Learners who are adequately prepared for MOOCs are more likely to complete the course successfully. MOOCs can be challenging, and learners who lack the necessary skills or motivation may struggle to keep up with the course or drop out altogether. MOOCs often require learners to invest significant time and effort into completing assignments, watching lectures, and participating in discussions. If learners are not ready for the demands of the course, they may not be able to fully utilize the resources provided by the MOOC platform. MOOCs are typically self-paced, which means that learners are responsible for managing their own time and progress. If learners are not prepared to effectively manage their time, they may struggle to keep up with the course content and deadlines. MOOCs often involve

collaboration and discussion with other learners. Learners who are not prepared for this aspect of the course may struggle to contribute effectively to group projects or engage in productive discussions with their peers. In summary, learners' readiness for MOOC is important because it can impact their ability to successfully complete the course, utilize the resources provided, manage their time effectively, and engage in collaborative learning with their peers. By understanding these factors and challenges before implementing MOOCs, instructors and educational institutions should better support learners in their pursuit of education through readiness for MOOCs for successful completion.

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