Educators' Needs And Perceived Readiness For Teaching In A Pandemic Emergency

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Abstract: The Covid-19 outbreak has forced teachers in Malaysia to abruptly shift from face-to-face teaching to online teaching. To teach online and to ensure lesson learning outcomes were met, it is vital for the teachers to be prepared with online teaching competencies. Due to this scenario, the objectives of this study are: (1) To investigate teacher's readiness in online teaching based on their online teaching competencies, (2) To identify demographic factors that are related to teacher readiness in online teaching, and (3) To determine what are the teachers' needs for them to be ready with online teaching competencies. There are 4 dimensions of online teaching competencies which are (1) Instructional Design, (2) Communication, (3) Time Management, (4) Technology Proficiency. The demographic factors that were identified in this research are (1) Gender, (2) Academic Rank, (3) Education Level, (4) Years of Teaching. This research used a quantitative approach involving a sample of 226 primary school academics in the district of Kuala Selangor, Selangor where they were asked to complete a questionnaire. The findings revealed that teachers have a high level of readiness in online teaching resulting in a mean value of (mean=3.67). However, it was also found that despite their high level of online teaching readiness, the teachers feel that they could achieve better outcomes if they have gone through techno-pedagogy related trainings, and if they are provided with better internet connectivity.

Keywords: Online teaching competencies, Online teaching readiness

INTRODUCTION

The immergence of the Covid-19 pandemic and the closure of schools in March 2020 nationwide caused major disruptions to the educational experience of all students (Leonard, 2020). In the period of movement restrictions were implemented due to Covid-19, online teaching and learning is no longer an option but a necessity (The Malaysian Insight, 2020). This caused a shift in the mode of education and resulted in an extraordinary rise of online teaching and learning as the teaching and learning activities were conducted in distance via digital platforms. Many believed that the unplanned and rapid move to online learning – with no training, insufficient bandwidth, and little preparation – will result in a poor learning experience that is unconducive to sustained growth (Cathy, 2020).

Online teaching is quite different as compared to teaching in a physical classroom. Not all teachers, parents and schools are prepared for online teaching and learning (Bangkok Post, 2021). In a survey conducted by Class Tag Cooperation (2020), early education teachers are not ready to teach online. More than half of the teachers (56.7%) said that they were not prepared to deliver online lessons. Furthermore, the survey also shown that (42.8%) of the teachers said they are solely responsible for deciding on the selection of online tools to be used and they do not have access to the proper tools needed at that moment (Zura, 2020) which results in a bleak picture (Newton, 2020).

Even though the conduct of online classes is much required, most students and teachers think that online teaching and learning are not as effective when compared to face-to-face instruction. Students and parents believe that many educators lack in competencies, preparation and the tools required to make online learning a success (Arumugam, 2020). Teachers in Malaysia are still having a lack of competencies in advanced ICT skills including the graphics, animation, and multimedia production (Irfan Naufal Umar, 2014). However, teacher-made videos could be a good method to assist all students, especially the 1 in 5 students who learn and think differently. When teachers make their own videos, they can customize the instruction to the needs of their students. Teachers can also bring personal connection to the online learning environment (Vierstra, 2020). Hence, it is important for teachers to have online teaching competencies for effective learning to

take place.

According to Irfan Naufal (2014) male teachers use ICT in the classroom more frequently than their female colleagues. It may be due to the reason that female teachers are struggling to conduct online teaching or that they are not familiar with online teaching competencies. It was also reported that older teachers continue to struggle with online teaching tools as their schools have not organized any training sessions to help them make a seamless transition from physical to online classes (Magzter, 2020). Hence, it raises the question whether demographic backgrounds could influence teacher readiness in online teaching. If so, which group will need more support for them to be ready with online teaching competencies?

Not much research has been done locally to study the teachers' needs to be equipped with online teaching competencies. Experts states that teachers should receive several days, weeks or better, months of intensive training before beginning an online learning program. The training offered to teachers should include strategies to make the instruction engaging and ample time should be given to the teachers to practice using the technologies before going live (Adams, 2020). Hence, it is a need to identify the teachers' needs and the type of support required for them to be ready in online teaching so that teachers could conduct online teaching effectively.

RESEARCH QUESTIONS

The research is conducted to answer following questions:

1) What are the teacher's readiness in online teaching based on their online teaching competencies?
2) What are demographic factors that are related to teacher readiness in online teaching?
3) What are the teachers' needs for them to be ready with online teaching competencies?

RESEARCH DESIGN

This research used a quantitative design to answer the research questions and a questionnaire is adapted from the study conducted by Florence (2019) to collect data from the sample. The items in the questionnaire were modified from its original higher education context to the primary school context so that it is in accordance with the purpose of the study. The questionnaire consists of 3 sections which are section A, B and C. The first section of the questionnaire (section A) serves to answer the first research question which regards to demographic background of the respondents. Respondents were required to answer a total of 4 demographics background questions which includes Gender, Academic Rank, Education Level and Years of Teaching. The second section of the questionnaire (section B) serves to answer the second research question which regards to teachers' online teaching competencies. The questionnaire adapted a Likert scale which consists of a 5 points scale, 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree) and 5 (strongly agree). There are a total of 20 items in the questionnaire to assess teacher readiness in online teaching based on online teaching competencies. The items in the instrument are arranged into 4 categories of online teaching competencies: Instructional Design (5 items), Communication (5 items), Time Management (5 items) and Technology Proficiency (5 items). The third section of the questionnaire (section C) serves to answer the third research question which regards to teachers' needs. This section consists of two open-ended questions to determine the teachers' needs to be ready with online teaching competencies. A pilot test was conducted to ensure the validity and reliability of the findings. The language of the questionnaire is in 'Bahasa Melayu' as the population in this research are able to comprehend 'Bahasa Melayu' better as it is their first language. This was also taken as a pre-cautionary step to avoid threatening data validity.

3.1 Sampling

Sampling technique that used for the research was a simple random sampling procedure. This study was directed to the group of interest which are primary school teachers. The population of this research are 550 primary school teachers from the district of Kuala Selangor. The research sample is a subset of the population mentioned previously. The sample size was determined based on the size of the population,

degree of error the tolerance as well as by referring to Krejcie and Morgan's sample size determination table to control type I error. Based on the table, it is recommended that if the population is (N) 550, then the number of sample (n) should be around 226. Hence, out of 550 teachers in the population, 226 teachers were chosen randomly as the subjects and were asked to answer the questionnaire.

3.2 Demographic Data

Table 3. Respondents' Demographic Data

		Frequency	Percent (%)
1.	**Respondents' Gender**		
	Male	57	25.2
	Female	169	74.8
	Total	**226**	**100.0**
2.	**Respondents' Academic Rank**		
	Headmaster	15	6.60
	Senior Assistant	25	11.10
	Head of Panel	23	10.20
	Academic Teacher	163	72.10
	Total	**226**	**100.0**
3.	**Respondents' Education Level**		
	Diploma	29	12.80
	Bachelor	185	81.90
	Master	12	5.30
	Total	**226**	**100.00**
4.	**Respondents' Years of Teaching**		
	0-2 Years	4	1.80
	3-5 Years	7	3.10
	6-8 Years	12	5.30
	9-11 Years	25	11.10
	12-14 Years	31	13.70
	15-17 Years	24	10.60
	18-20 Years	21	9.30
	More than 20 Years	102	45.10
	Total	**226**	**100.00**

The demographic factors of respondents were entailed composition by Gender, Academic Rank, Education Level and Years of Teaching. Based on Table 3, the gender of the respondents are mostly females as there were a total of 57 (25.20 %) male respondents and 169 (74.80%) are females in the sample.

In terms of Academic Rank, 15 (6.60%) respondents hold of the position as the Headmaster, 25 respondents (11.10%) hold the post

as Senior Assistant, 23 (10.20%) and majority of the respondents are Academic Teachers 163 (72.10%).

In terms of Educational Level, 29 respondents (12.80%) are Diploma holders, 185 respondents (81.90%) are Bachelor holders while another 12 respondents (5.30%) are Master holders.

In terms of Years of Teaching, 4 respondents (1.80%) have 0-2 years of teaching experience. 7 respondents (3.10%) have 3-5 years of teaching experience, 12 respondents (5.30%) have 6-8 years of teaching experience, 25 respondents (11.10%) have 9-11 years of teaching experience, 31 respondents (13.70%) have 12-14 years of teaching experience, 24 respondents (10.60%) have 15-17 years of teaching experience and 21 respondents (9.30%) have 18-20 years of teaching experience. The highest frequency is more than 20 years of teaching with 102 respondents (45.10%).

RESULTS AND DISCUSSION

4.1 Teachers' Readiness in Online Teaching Based on Their Online Teaching Competencies

Table 4. Descriptive for Teacher Readiness

	N	Mean	Std. Deviation
Instructional Design			
I can create instructional videos. (e.g. Video tutorials, demonstrations, teaching)	226	3.34	.97
I can run online quizzes using different platforms. (e.g. Quizizz, Google Form, Kahoot)	226	3.75	.93
I can design learning activities that increase students' chances of interacting. (eg: Discussions, forums, Questions and answers)	226	3.35	.97
I can use a variety of online teaching techniques. (e.g. Discussions, video reflections, online games)	226	3.43	.97
I can design measurable learning objectives.	226	3.55	.87
Total	**226**	**3.49**	**.79**
Communication			
I can send announcements / reminders to students.	226	4.04	.68
I can respond to student questions immediately.	226	3.75	.81
I can provide feedback on students' work.	226	3.96	.71
I can conduct discussion sessions with the students.	226	3.53	.82
I can use a synchronous web conferencing tool. (e.g. Google Meet, Webex, Skype)	226	3.45	.90
Total	**226**	**3.75**	**.62**
Time Management			
I can schedule weekly hours for online teaching.	226	4.04	.658
I can schedule weekly hours to evaluate student work.	226	3.89	.691
I can allocate time to learn about new teaching strategies.	226	3.80	.706
I can use an online platform to facilitate grading student work. (e.g. Google Classroom, Quizizz, Google Form)	226	3.87	.770
I can conduct classes according to pre-determined time table	226	3.98	.680
Total	**226**	**3.92**	**.59**
Technology Efficiency			
I can perform basic computer operations. (e.g. editing documents, managing files and folders)	226	3.73	.93
I can use video editing software. (Movie Maker, Movavi, Filmora)	226	3.23	.97
I can use online collaboration tools. (e.g. Google Drive, Dropbox)	226	3.59	.916
I can share open educational resources. (e.g. Learning websites, Web resources, games and simulations)	226	3.46	.89
I use learning management system. (e.g. Google Classroom, Edmodo, VLE Frog)	226	3.64	.83
Total	**226**	**3.53**	**.76**
Total Overall (Readiness)	**226**	**3.67**	**.58**

The descriptive analysis shown in Table 4 shows that the highest mean score (mean=3.75, SD=.93) for the item in instructional design is "I can run online quizzes using different platforms (e.g. Quizizz, Google

Form, Kahoot)". Meanwhile, the item with the lowest mean score is "I can create instructional videos. (e.g. Video tutorials, demonstrations, teaching)" (mean=3.34, SD=.97). The overall total mean score for all the items in instructional design is (mean=3.49, SD=7.9). This shows that the teachers are ready with instructional design online teaching competencies. According to Florence (2019), designing learning activities and creating online course orientation were competencies that the respondents rated as very important in online course design. From the findings, it also revealed that most of the teachers can use different platforms to run online quizzes since the mean score was the highest. The integration of quizzes with other instructional activities in a teaching strategy has been very favourable (Lorenzo, 2012). However, the data above also indicates that most teachers do not have the ability to create instructional videos. This needs to be improved as instructional video is often the main information-delivery mechanism for online courses (Brame, 2016).

Next, for items in the Communication dimension, the item with the highest mean score is "I can send announcements / reminders to students" (mean=4.04, SD=.658) while the item with the lowest mean score is "I can use synchronous web conferencing tools. (e.g. Google Meet, Webex, Skype)" (mean=3.45, SD= .90). The total mean score for all items in communication is (mean=3.75, SD=.62). As the communication dimension has a high mean value, it indicates that most teachers can communicate well with their students via online teaching. The findings also revealed that most teachers agreed that they were able to send announcements/ reminders to students as it has the highest mean value. This finding is coherent to a study conducted by Florence (2019) where the respondents rated that they were able to communicate well with their students via emails and other communication tools. However, there is a variation on agreement on teachers' usage on synchronous web conferencing tools. Results in Table 4 also shows that not many teachers claimed that they are well-versed with synchronous web conferencing tools. This finding is quite alarming because synchronous meetings with the teacher will motivate learning to take place and create a meaningful learning experience for the students (Karal, 2011).

The item that scored the highest mean score for the Time Management dimension is "I can schedule weekly hours for online teaching" (mean=4.04, SD=.65). Meanwhile, the item that scored the lowest mean score was "I can allocate time to learn about new teaching strategies" (mean=3.80, SD=.70). The total mean score is (mean=3.92, SD=.59). Time management was rated as the highest mean value among all 4 variables. It shows that most teachers can manage their time well in online teaching. The results contradict to a report by Seller (2020) which states that one of the biggest issues that impacts online teachers is poor time management as the findings above indicate that most teachers had no problem in scheduling weekly hours for online teaching which resulted a lower mean score for the item "to allocate time to learn about new teaching strategies". As teachers are able to identify the different available learning methods, it will enable them to develop the right strategies to deal with their target group (Armstrong, 2020).

For the items in Technology Proficiency dimension, the item that scored the highest mean score is "I can perform basic computer operations. (e.g. editing documents, managing files and folders)" (mean=3.73, SD=.93). In contrast, the item with lowest mean score "I can use video editing software. (Movie Maker, Movavi, Filmora)" (mean=3.23, SD=.97). The total mean score for all items in technology proficiency scale is (mean=3.53, SD=.76). The findings reveal that technology proficiency has a high mean value which indicate that most teachers have good technology proficiency. However, technology proficiency also has the lowest mean value which indicate teachers in the population have issues in technology proficiency. Similar to a research done by Abu-Obaideh Alazzam (2012), , the findings of the study shows that a vast majority of the technical and vocational teachers involved in this study possess a moderate level of knowledge about ICT. The findings also revealed that most teachers know how to do basic computer operations but do not know much to on how to use video editing software. A study by Nwangwu (2013) revealed that computer education lecturers do not possess video editing and production skills required to edit and produce instructional videos.

In conclusion, based on the total mean score of each variable, the highest total mean score was from time management scale with a mean score of (mean=3.92, SD=.59). Meanwhile the lowest total mean score was instructional design with a mean score of (mean=3.49, SD=.79). The overall for all total mean score that indicated the teachers' readiness in online teaching was (mean=3.67, SD=.58). This can be interpreted that the readiness of teachers in online teaching based on online teaching competencies was high and most teachers are ready in online teaching with their online teaching competencies.

4.2 Demographic factors that related to teacher readiness in online teaching

The second research objective is to identify the demographic factors that related to teacher readiness in online teaching. The demographic factors used in this research are Gender, rank, education level, and years of teaching.

4.2.1 Gender

Table 4.1 Gender Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Readiness	Male	57	3.59	.72	.09
	Female	169	3.69	.53	.04

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	2.24	.13	-1.15	224	.25	-.10	.08	-.28	.07
Equal variances not assumed			-.99	77.69	.32	-.10	.10	-.31	.10

Firstly, to identify whether gender which is male and female teachers related to teacher readiness in online teaching, independent samples t-test was conducted, and the results are shown in Table 4.1 It was

found that t value = -1.15, df = 224, sig. = .25. The results indicate that there is no significant difference in the readiness in online teaching between gender. In other words, male and female teachers have similar level of readiness in online teaching. Contradicting a research by Florence (2019), that stated female attitudes were significantly higher than male attitudes about the importance of course design, course communication, and time management. Although there is no significant difference between male and female groups, the mean value for the female group is slightly higher than the male group.

4.2.2 Academic Rank

Table 4.2 Academic Rank Group Statistics

					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Headmaster	15	3.72	.41	.10	3.49	3.95	2.95	4.55
Senior	25	3.57	.66	.13	3.29	3.84	1.90	4.70
Assistant	23	3.68	.40	.08	3.51	3.86	2.85	4.65
Head of Panel	163	3.67	.61	.04	3.58	3.77	1.00	5.00
Academic	226	3.66	.58	.03	3.59	3.74	1.00	5.00

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.29	3	.10	.28	.83
Within Groups	77.44	222	.34		
Total	77.74	225			

To identify whether Academic Rank is related to teacher readiness in online teaching, teachers were grouped into 4 groups based on their current rank which are headmaster, senior assistant, head of panel, and academic teacher. ANOVA was conducted and the results are shown in table 4.2. It could be seen that F value = .28, df = 3, 222, sig. = .83. The results indicate that there was no significant difference in the readiness in online teaching between rank. In other words, regardless of their rank, they have the same level of readiness in online teaching. This finding contradicted with a study done by Martin (2019) which claimed that academic rank influences a teacher's readiness to teach online where lecturers rated course design and technical competency to be more important when compared to individuals whose academic rank is professor. This study however, found that individuals who

are of higher academic rank in this study e.g., the headmaster, have the highest readiness mean score when compared to teachers in other academic ranks. Due to the scarcity of research done in looking at the correlation between online readiness and academic ranks, there is not much comparison that can further be done by drawing from examples of previous studies.

4.2.3 Education Level

Table 4.3 Education Level Group Statistics

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Diploma	29	3.57	.45	.08	3.39	3.74	2.25	4.70
Bachelor	185	3.68	.59	.04	3.60	3.77	1.00	5.00
Master	12	3.61	.79	.22	3.11	4.11	1.40	4.50
Total	226	3.66	.58	.03	3.59	3.74	1.00	5.00

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.38	2	.19	.55	.57
Within Groups	77.36	223	.34		
Total	77.74	225			

To identify whether Education Level is related to teacher readiness in online teaching, teachers were grouped into 3 groups based on their education level which are Diploma, Bachelor, and Master. ANOVA was conducted and the result is shown in table 4.3. It could be seen that F value = .55, df = 2, 223, sig. = .57. This result indicates that there was no significant difference in the readiness in online teaching between education levels. In other words, regardless of education level they have the same level of readiness in online teaching. This contradicts with the research results of Lau & Sim (2008) as the researchers reported that the level of teachers' academic qualification does affect the level of ICT adoption. Education level determines the professional training received by teachers. Higher education level indicates the teachers received more professional training.

4.2.4 Years of teaching

Table 4.4 Years of teaching Group Statistics

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
0-2 Years	4	4.17	.45	.22	3.45	4.89	3.85	4.85
3-5 Years	7	3.96	.56	.21	3.44	4.48	3.15	4.65
6-8 Years	12	3.77	.65	.18	3.35	4.18	2.15	4.70
9-11 Years	25	3.70	.74	.14	3.39	4.01	1.00	4.90
12-14 Years	31	3.67	.73	.13	3.40	3.94	1.00	5.00
15-17 Years	24	3.69	.63	.12	3.42	3.96	1.40	4.70
18-20 Years	21	3.80	.47	.10	3.58	4.01	2.85	4.60
More than 20 Years	102	3.57	.49	.048	3.47	3.67	1.90	4.55
Total	226	3.66	.58	.03	3.59	3.74	1.00	5.00

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.07	7	.44	1.28	.25
Within Groups	74.66	218	.34		
Total	77.74	225			

To identify whether years of teaching is related to teacher readiness in online teaching, the teachers were grouped into 7 groups based on their years of teaching. ANOVA was conducted and the result are tabulated into a table (table 4.4). It could be seen that F value = 1.28, df = 7, 218, sig. = .25. This result indicates that there is no significant difference in the readiness in online teaching between years of teaching. In other words, regardless of the years of teaching, the teachers have the same level of readiness in online teaching. According to Florence (2019) found that the respondents who have more teaching experience online also have greater perceived ability to perform pedagogical competencies online. In this research, teachers who have 0-2 years and 3-5 years of teaching experience groups are among the highest mean value for readiness in online teaching. It means that younger teachers have a better readiness in online teaching and are more equipped with online teaching competencies. A report by Irish Computer Society (2019) also reported that there is a big disparity in how much newly qualified and younger teachers are using ICT, compared to those over 35 years old.

4.3 Teachers' need for them to be ready with online teaching competencies

4.3.1 Types of reinforcement training that teachers need to be better prepared with the implementation of online teaching

Table 4.5 Thematic Analysis for Types of reinforcement training that teachers need to be better prepared with the implementation of online teaching

Theme	Online teaching Competencies	Frequency
Learning materials and ways of conducting online teaching.	Instructional design	31
Module and worksheet for online teaching	Instructional design	13
Synchronous video communication training	Communication	7
Online communication skills	Communication	3
ICT and IT skills training	Technology Proficiency	49
Video making and editing	Technology Proficiency	20
Website management	Technology Proficiency	3
Online learning Application training	Technology Proficiency	20
Google Classroom management	Technology Proficiency	4
Online quizzes application skills	Technology Proficiency	37

Table 4.5 shows the thematic analysis of the first open-ended question of the questionnaire which is "What are the types of reinforcement trainings do teachers need to be better prepared with the implementation of online teaching?" Out of 226 respondents, 197 respondents gave valid responses while 29 respondents gave invalid responses. The responses of the respondents were then grouped according to the theme and the online teaching competencies such as Instructional Design, Communication, Time Management, Technology Proficiency. However, none of the responses were related to Time Management.

Technology Proficiency has the highest frequency of (n=133). The themes identified under technology proficiency are "ICT and IT Skills Training", "Video Making and Editing", "Website Management", "Online Learning Application Training", "Google Classroom Management", and "Online Quizzes Application Skills". The theme with the highest frequency is "ICT and IT Skills Training" which is (n=49). The theme with the lowest frequency is "Website Management", (n=3). The findings reveal that the respondents need training for technology proficiency, especially in ICT and IT skills. This data corresponds to the findings in "4.1 Teachers' Readiness in Online Teaching Based on Their Online Teaching Competencies." that reveals teachers have the lowest level of technology proficiency in online teaching competencies. According to Erin (2017), teachers

need have the ability to effectively use the course delivery system so that they could assist students with technology issues.

Next, Instructional Design has the second highest frequency of (n=45). The themes identified under instructional design are "Learning Materials and Ways of Conducting Online Teaching", and "Module and Worksheet for Online Teaching". The frequency for "Learning materials and ways on conducting online teaching" is (n=31) while the frequency for "Module and Worksheet for Online Teaching" is (n=13). The findings revealed that the teachers need training for instructional design especially for learning materials and ways on conducting online teaching as teachers need to be able to transform course content using effective online teaching pedagogy (Erin, 2017).

The frequency for Communication is (n=10). Two themes were identified under the Communication dimension which are "Synchronous Video Communication Training" and "Online Communication Skills". The frequency for "Synchronous Video Communication Training" is (n=7) and the frequency for "Online Communication Skills" is (n=3). This indicates that teachers also need training for communication focusing on synchronous video conference training which is parallel to the findings in "4.1 Teachers' Readiness in Online Teaching Based on Their Online Teaching Competencies." where not many teachers claimed that they are well-versed with synchronous web conferencing tools. According to Karal (2011), synchronous meeting with the teacher will motivate learning to take place and create a meaningful learning experience for the students

4.3.2 Other types of preparation that teachers need to be better prepared for online teaching implementation

Table 4.6 Thematic Analysis for Other types of preparation that teachers need to be better prepared for online teaching implementation

Theme	Frequency
Internet connection	81
Psychological preparation	14
Device/ tools for online teaching and learning	19
Technology proficiency skills	22
Time for preparation	4
Learning material	14
Video editing and making skills.	6
Student cooperation	3
Synchronous video meeting skills	4
Teaching module	7
Lesson plan	2
Parents support	3
Instructional design	9
Knowledge to conduct online teaching	8

Table 4.6 shows the thematic analysis of the second open-ended question of the questionnaire which is "What are the other types of preparation do teachers need to be better prepared for online teaching implementation?". For this section, there are total of 196 valid responses, 30 invalid responses. Hence, only 196 valid responses were analysed and grouped into themes based on the same interpretation. The themes that have been identified includes "Internet connection", "Psychological preparation", "Device/ tools for online teaching and learning", "Technology proficiency", "Time for preparation", "Learning materials", "Video editing and making skills", "Students' cooperation", "Synchronous video meeting skills", "Teaching module", "Lesson plans", "Parent's support", "Instructional design training", and "Knowledge to conduct online teaching".

The item with the highest frequency is for internet connection (n=81) which indicates that the respondents need internet connection for them to be ready with online teaching competencies. Next, the item with the second highest frequency is "Technology proficiency skills" (n=22). Next, the item with the third highest frequency is "Device/ tools for online teaching and learning" (n=19). The frequency of "Psychological preparation" and "Learning materials" are the same which is (n=14). Followed by "Instructional design", "Knowledge to conduct online

teaching", "Teaching module", "Video editing and making skills.", "Time for preparation, "Synchronous video meeting skills", "Parent's support" and "Lesson plans" with a frequency of (n=9), (n=8), (n=7), (n=6), (n=4), (n=4), (n=3), (n=2) respectively.

The findings reveal that most of the teachers need strong internet connection for themselves as well as their students. According to Nawawi (2020), many students are unable to attend online learning due to limited access to communication technology. It also reveals that the teachers need devices/ tools to implement online teaching. Other than that, the finding also highlighted that the teachers need psychological preparation in implementing online teaching.

CONCLUSION

The findings revealed that teachers have a high level of readiness in online teaching based on their online teaching with a mean value of (mean=3.67). Upon investigating the relationship between respondents' demographic factors and teacher readiness in online teaching, it was found that none of them are correlated. Further investigation revealed that the two most significant needs to prepare teachers for online teaching are professional development courses related to techno pedagogy, and sound internet connection. In conclusion, while the teachers felt that they are online-teaching ready, they are adamant that they can achieve better outcomes in teaching online when they are supplemented with good internet infrastructure and professional support system.

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