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**Evaluation of Post Graduate Students' Online Learning  
Experience during COVID 19 Pandemic Situation****Dr. P.R.K.A. Vitharana**

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**Abstract**

*With the outbreak of COVID 19, the learning mode in the Sri Lankan universities was changed into online learning. The aim of this study was to evaluate the post graduate students' online learning experience during the COVID 19 pandemic. The model of strategic e-learning was used as the theoretical framework of the study. The survey design was used in this study with the students those who follow Postgraduate Diploma in Education (PGDE) programme. When considering perceived skills domain, it was evident that 80.57% of students possess internet skills to manage online learning and 84.11% of the sample were self-confident in using online tools. The results indicated that the majority of students were well aware of the nature of online learning. Results of the study further revealed that students use number of cognitive strategies for better understanding in online learning. The mean values of all statements related to the affection domain were above 3.7 indicating that majority of students have positive attitudes towards online learning. The greatest benefit of online learning was given as saving time by majority of students (80.21%) in the sample. However, one fourth of the sample (25.8%) stated that they face difficulties in contributing in class discussions and a significant number of students (44.04%) agreed that they lack direct contact with other students. The findings of the study highlighted that the online learning experience gained by the students of Post Graduate Diploma in Education as an alternative during the period of COVID 19 was successful.*

**Key Words:** Online learning, Post Graduate, Evaluation, Covid 19, Pandemic

## Introduction

The World Health Organization declared the outbreak of new corona virus, COVID-19 in January 2020. Later on, within a short period, the virus spread worldwide creating an unprecedented scenario. The outbreak of COVID-19 pandemic across the world has greatly affected almost all aspects of human life including education (Rasmitadila, et al., 2020<sup>1</sup>). This situation brought tremendous destruction to the education systems throughout the world due to the closure of schools and higher education institutions. According to United Nations (2020<sup>2</sup>), the COVID-19 pandemic has created the largest disruption of education systems in the history affecting nearly 1.6 billion learners in more than 190 countries and all continents. The temporary closure of educational institutions during the corona virus disease has abruptly transformed the global education in favor of distance education (United Nations, 2020).

Gunawardena and Mclsaac (2004<sup>3</sup>) defines distance education as one in which the teacher and learner are separated from each other and involve in a two-way interaction using technology to mediate the necessary communication. In line with the global trend in distance education, Sri Lanka education institutes changed its mode of delivery from face to face to online learning. According to Hayashi et al., (2020<sup>4</sup>) in June 2020, all faculties for both state and non-state higher education institutions in Sri Lanka adopted online education. Online learning is a type of delivery method used in distance education that allows the synchronous and asynchronous exchange of resources over a communication network. (Khan, 1998<sup>5</sup>). Synchronous learning is a form of learning with direct interaction between students and teachers while simultaneously using online forms such as conferences and online chat. Meanwhile, asynchronous learning is a form of learning indirectly (not at the same time) using an independent learning approach (Rasmitadila, et al., 2020. P.91).

Literature reveals that online learning has its own potential over face to face learning (Nguyan, 2015<sup>6</sup>; Suryawanshi and Suryawanshi, 2015<sup>7</sup>). Reports on 'Evaluation of evidence-based practices in online learning: A meta analysis and review of online learning studies published by the U.S. Department of Education (2020, p. 1<sup>8</sup>) highlights that, "*online learning has become popular because of its potential for providing more flexible access to content and instruction at any time, from any place*". Therefore, it has become popular in the global arena. The accessibility of the internet and flexibility of online courses have made online education as an integral part of the higher education (Li & Irby, 2008<sup>9</sup>; Luyt, 2013<sup>10</sup>; Lyons, 2004<sup>11</sup> as cited by Kebritchi et al., 2017<sup>12</sup>).

A sudden transition from face-to-face learning to online learning due to the outbreak of COVID-19 was quite a big challenge to teachers and students in any learning environment and Sri Lanka has not been an exception to this reality. Therefore, it is worthwhile to study the success of this transition in order to minimize the weaknesses in future efforts in online learning. A considerable number of research have been conducted globally during the period of COVID-19 pandemic to examine the quality of online learning from various aspects (Kaur, et al., 2020<sup>13</sup>; Shahzad, 2020<sup>14</sup>; Hayashi, et al., 2020; Rasmitadila et al., 2020). However, in Sri Lanka only a limited number of research have been conducted especially focusing on post graduate students' online learning.

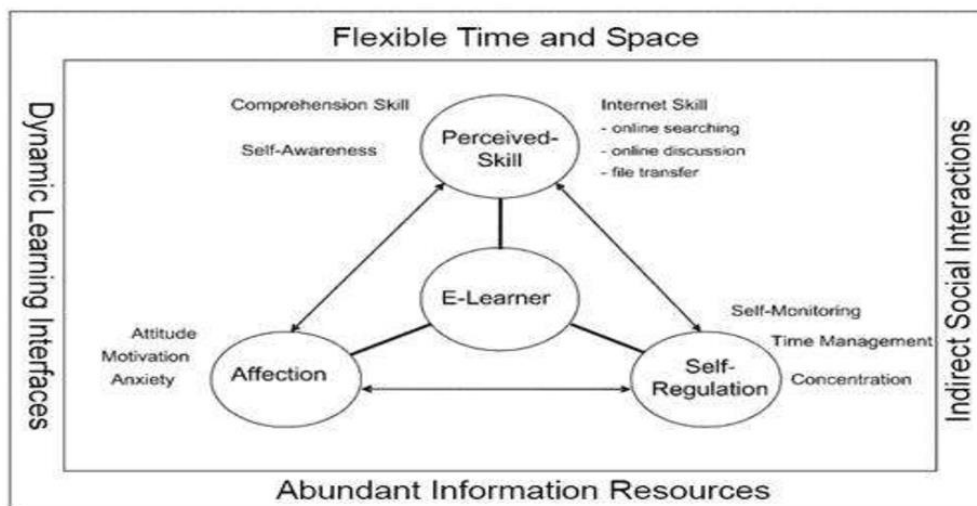
The Department of Education initiated online teaching for students in the Post Graduate Diploma in Education (PGDE) programme on 20<sup>th</sup> of May 2020. Therefore, the aim of the research was to evaluate students' online learning in Post graduate Diploma in Education (PGDE) programme in 2019/2020 academic year with the use of strategic e-learning model. The study was planned in order to achieve three objectives as to examine the perceived skills used in online learning, to find out the attitudes towards online learning and how they regulate themselves to face the new experience of online learning.

PGDE programme is planned to implement in two semesters and the first semester is basically focusing on the theoretical foundation of education through the compulsory subjects such as Educational Psychology, Educational administration and so on. The second semester is especially planned to enhance teachers' pedagogical knowledge through the subject specific teaching methods and teaching practice. In addition,

number of co-curricular activities are implemented to develop the generic skills of teachers. This study was aimed at the online learning took place synchronous and asynchronous modes through Google classrooms and Google meet during first semester.

### Theoretical Framework

The theoretical framework used to evaluate students' online learning is based on the model of strategic e-learning presented by Tsai (2009<sup>15</sup>) as given in Figure 1. According to this model learner at its core and three interactive components around the core which effects successful learning. The Strategic e-Learning model explains and evaluates student e-learning from metacognitive perspectives. The model framework is constructed and illustrated by four dimensions of characteristics of e-learning environments and three core domains (perceived-skill, affection and self-regulation) of student e-learning strategies (Suryawanshi & Suryawanshi, 2015, p.109). The corresponding elements within each domain strategies are listed aside the three core domain. Furthermore, bi-directional arrows exist between each pair of domains demonstrating the existence of interactions among three domain strategies (Tsai, 2009).



**Figure 1: The Model of Strategic e- learning (Source; Tsai, 2009)**

The three components of the successful online learning; affection, perceived skills and self-regulation were considered in constructing data collection instruments.

### Methodology

#### Research Design

In order to evaluate the post graduate students' online learning cross-sectional survey design was used in this study. Survey research is probably the best method available to the social researchers who is interested in collecting original data for describing population too large to observe directly (Babbie, 2004, p.243<sup>16</sup>). According to Creswell (2012<sup>17</sup>) in conducting a survey, researcher can collect data using questionnaire and structured or semi structured interviews. Therefore, in this study questionnaire and semi-structured interviews were used as data collection methods.

#### Participants

Participants of the study were students those who were studying at the first-semester in the full time and weekend Post Graduate Diploma in Education (PGDE) programme at the Department of Education. PGDE programme is mainly conducted for graduate teachers in order to make them professionally qualified teachers.

Descriptive data of demographic characteristics including gender, age and teaching experience are presented in Table 1.

**Table 1: Profile of Participants**

<b>Demographic Information</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Gender		
Male	23	8.3
Female	254	91.7
Age range		
25-30 years	96	34.4
31 -35 years	116	42.0
36-40 years	42	15.2
41-45 years	17	6.0
Over 45 years	6	2.1
Teaching experience		
1-5 years		
6-10 years	216	77.9
11-15 years	39	14.1
16-20 years	15	5.4
Over 20 years	4	1.4
	3	1.1

### **Data Collection**

Data collection was conducted in two stages. The first stage was administering a questionnaire and the second was the semi-structured interviews.

### **Questionnaire**

Questionnaire was administered to the entire population of 550 PGDE students through Google form and the link was shared with the students through their WhatsApp group. When the questionnaire was administered to PGDE full time and weekend students they have completed four months and two months of online lecturers respectively.

The questionnaire consisted of three sections. The first section contained questions about demographic and general characteristics of the sample such as gender, age and teaching experience, distance from home, mode of accessing the Google classroom, and the availability of internet connection at home. The second section consisted of 21 items prepared according to 5-point Likert Scale. The third section was five open-ended questions. The survey was carried out three weeks from 18<sup>th</sup> September to 12<sup>th</sup> October 2020. From the total number of PGDE students 279 responded the questionnaire. Data obtained from questionnaire were analyzed using computer-based data analysis package.

### **Interviews**

The second stage of the data collection was conducted using semi-structured interviews with 25 post graduate students who responded the survey questionnaire. One to one personal interviews were conducted through Zoom meetings. According to Fraenkel, Wallen and Hyun (2012<sup>18</sup>) there are many advantages in personal interviews such as maintaining rapport, clarifying questions and the possibility of follow up unclear and incomplete responses. Interview schedule was prepared based on the three domains and elements of each domain suggested by Tasi (2009) in the strategic e-learning model as stated in Table 2.

**Table 2: Interview Schedule**

Domain	Element	Interview questions
Perceived skill	Comprehension	When you engaged in online learning, what did you do to enhance your understanding? Have you find any problems in online learning? What did you do when you encountered problems in online learning? What are the strategies that you used to comprehend the learning materials?
	Internet Skill	How long have you been using the Internet? What are the Internet skills that every online learner should learn before taking an online course? What skills you used in online learning? What skills that you need to improve in order to continue online learning?
	Self-Awareness	According to your opinion, is there any difference between online and face to face learning? If yes, what are the differences? What roles do students play in both methods?
Affection	Attitude	What do you like and dislike in online learning? What are the reasons?
	Motivation	Would you like to continue PGDE as an online programme? Why? Would you think is it appropriate for you to continue your higher studies through online mode? Why or why not? .
	Anxiety	How did you feel the transition from face-to-face learning to online learning? Did it make any doubt or stress to you?
Self-regulation	Self-monitoring	What approaches did you use to manage your online learning? Did you make plans for online learning?
	Concentration	What techniques did you adopt in concentrating online learning? Have you found any difficulties in concentrating online learning? What were the distractions for your online learning?  How did you manage your time for effective online learning?
	Time Management	

All interviews were recorded and interview transcripts were prepared for each interview. Data obtained from interviews were used to triangulate the data in order to enhance the validity of findings of survey questionnaire.

## Results and Discussion

In this study total number of 279 post graduate students studying in Post Graduate Diploma in Education programme participated the survey questionnaire. Out of 279 students, 92% were female and 8% were male.

In considering age range most of them (91.6%) were in between 25-40 years of age. The majority of students (78%) had 1-5 years of teaching experience. Out of 279 students, 65.57% of them had internet/Wi-Fi connection at their homes. It was also found that 87% of students use their mobile phones to access to Google classroom or Google meet.

Findings from the survey questionnaire related to perceived skills is presented in Table 3. The table displays the level of confidence, frequency of responses and the percentages and mean scores.

**Table 3: Students' confidence levels for the statements in the questionnaire – Perceived Skills Domain**

No.	Statement	Confidence Level	Responses		Mean (X)
			Frequency	%	
1	I have sufficient equipment and facilities(Mobile phone, Computer/ laptop /internet / software)	Strongly Agree	66	23.65	3.97
		Agree	159	56.98	
		Neutral	41	14.69	
		Disagree	7	2.50	
		Strongly Disagree	6	2.15	
2	I have sufficient computer knowledge and ICT skills to manage online learning	Strongly Agree	51	18.34	3.95
		Agree	173	62.23	
		Neutral	47	16.90	
		Disagree	4	1.43	
		Strongly Disagree	3	1.07	
3	I can use online tools easily.	Strongly Agree	62	22.38	4.07
		Agree	171	61.73	
		Neutral	34	12.27	
		Disagree	6	2.19	
		Strongly Disagree	4	1.46	
4	I got the help of friends when encountered a problem in online learning	Strongly Agree	62	22.30	4.03
		Agree	175	62.94	
		Neutral	35	12.58	
		Disagree	4	1.43	
		Strongly Disagree	2	0.71	
5	I have facilities to ask question or clear doubts during online lectures.	Strongly Agree	67	24.01	4.01
		Agree	157	56.27	
		Neutral	43	15.41	
		Disagree	11	3.94	
		Strongly Disagree	1	0.35	
6	Flexible in participating online lectures compared with face-to-face learning	Strongly Agree	72	25.99	4.11
		Agree	160	57.76	
		Neutral	38	13.71	
		Disagree	4	1.44	

		Strongly Disagree	3	1.08	
7	Lack of direct contact with other students comparing with face-to-face learning.	Strongly Agree	20	7.22	2.70
		Agree	102	36.82	
		Neutral	103	37.18	
		Disagree	49	17.68	
		Strongly Disagree	3	1.08	
8	Poor contact and communication with the lectures when considering with face-to-face learning.	Strongly Agree	10	3.58	3.21
		Agree	62	22.22	
		Neutral	83	29.74	
		Disagree	108	38.70	
		Strongly Disagree	16	5.73	

The results in the Table 3 show that nearly 80% of students have sufficient equipment and facilities as well as Computer knowledge and ICT skills to manage online learning. The mean score of these two factors (3.97 & 3.95) show that majority have required facilities and skills to accomplish online learning. This was further evident from the next statement related to use of online tools. According to the results 84.11% of the sample were quite confident in using online tools. Moreover, students emphasized several ICT skills necessary for online learning and the comments given by two post graduate students are given below.

*We should know basic skills like how to open a mail because we get the link to the Google meet through a mail. As the lecturers upload materials to the Google classroom we need to know how to download PDF document and convert it to word document. (Student 1).*  
*As I think browsing the internet, knowing about software and installing application software is required for online learning. (Student 15)*

Students responded that number of other skills sharing learning materials, knowing basic functions of formal meetings, communicating through WhatsApp group and basic skills of using mobile phone and laptop computers as necessary skills for online learning. It was further revealed that students are in the view that they need to improve their internet skills if they continue on learning in future.

The fourth statement was based on the comprehension element of the perceived skill domain. When it was inquired the problematic situations encountered in online learning 85.20% of students agreed that they get the help of their friends. This was apparently evident from the interviews and they all mentioned about the support received from their peers especially through their WhatsApp group. Students made the following comments regarding the strategies taken to enhance the efficacy of online learning.

*This is my first experience as a learner. I used to ask questions from lecturers whenever I do not understand the lessons. In addition, I used to listen recorded lectures (Student 5).*  
*I take the print out of the materials uploaded to the Google classroom and get ready to the lesson. Also, I read some articles related to the lessons. In addition, I take notes while the lecture is going on (Student 8).*

This shows that students have used meta-cognitive strategies to understand and to enhance their online learning. Statements 5 to 6 were related to their awareness on online learning. The mean values of the 5<sup>th</sup> and 6<sup>th</sup> statements which addressed the facilities to ask questions and flexibility in participating online learning are

above four and it shows that majority of the students agreed with the two statements. Several students shared the opinions on how online learning differs from face to face;

*When it comes to time management online learning is better. Actually, we transformed ourselves to independent learners. We were motivated when lecturers gave us presentations because we had to find out right materials and get ready for the presentations (Student 4).*

*I feel online learning is like an individual class. We can pay our attention than learning in a lecture hall. Not like in a lecture hall we can easily ask a question from a lecturer. (Student 21).*

The next two statements based on the student-student and the teacher-student interaction in online learning compared with the face to face leaning. In considering the student-student interaction, 44.04% students agreed that the it is absent in online learning compared with face-to-face learning. It is also apparent that 37.18 % were not decided as agree or disagree to the statement. Nearly one fourth of the sample (25.8%) agreed that there is less teacher-student interactions in online learning. This aspect is explained by the student below:

*In online learning we do not get an opportunity to know each other. There is no interaction among students. I do not think it is good. (Student 17).*

In analyzing the responses to the questionnaire, confidence levels related to affection domain addressed in question 9 to 20 are given in Table 4. Statements 9-17 were based on attitude element while 18- 20 based on motivation element of the affection domain.

**Table 4: Students' confidence levels for the statements in the questionnaire – Affection Domain**

No	Statement	Confidence Level	Responses		Mean (X)
			Frequency	%	
9	I am happy about online learning methods	Strongly Agree	49	17.62	4.11
		Agree	157	56.47	
		Neutral	49	17.62	
		Disagree	17	6.11	
		Strongly Disagree	6	2.15	
10	I have gained experience of learning in a new online environment.	Strongly Agree	107	38.76	4.29
		Agree	144	52.17	
		Neutral	18	6.52	
		Disagree	2	0.72	
		Strongly Disagree	5	1.79	
11	I am happy about the student teacher interaction during online lectures	Strongly Agree	49	17.56	3.83
		Agree	158	56.63	
		Neutral	49	17.56	
		Disagree	17	6.09	
		Strongly Disagree	6	2.15	
12	I can learn the same amount in an online course as in a traditional course. .	Strongly Agree	54	19.42	3.62
		Agree	123	44.24	
		Neutral	53	19.06	
		Disagree	35	12.58	
		Strongly Disagree	13	4.67	



13	I would feel comfortable taking courses online.	Strongly Agree	98	35.12	4.14
		Agree	132	47.31	
		Neutral	36	12.90	
		Disagree	12	4.30	
		Strongly Disagree	1	0.35	
14	Online teaching methods are effective than traditional classroom lectures	Strongly Agree	53	18.99	3.70
		Agree	122	43.72	
		Neutral	63	22.58	
		Disagree	31	11.46	
		Strongly Disagree	10	3.58	
15	Online courses saves me time	Strongly Agree	164	58.99	4.51
		Agree	100	35.97	
		Neutral	5	1.79	
		Disagree	6	2.15	
		Strongly Disagree	3	1.07	
16	Difficult than face to face classroom.	Strongly Agree	11	3.94	3.32
		Agree	63	22.58	
		Neutral	60	21.50	
		Disagree	116	41.57	
		Strongly Disagree	29	10.39	
17	It is difficult to contribute to class discussions in an online class	Strongly Agree	7	2.51	3.24
		Agree	73	26.25	
		Neutral	75	26.97	
		Disagree	95	34.17	
		Strongly Disagree	28	10.07	
18	Motivation is high in participating online lectures.	Strongly Agree	47	16.84	3.68
		Agree	139	49.82	
		Neutral	61	21.86	
		Disagree	20	7.16	
		Strongly Disagree	12	4.30	
19	I like to participate the online lectures with conventional lectures after COVID-19 pandemic.	Strongly Agree	87	31.18	3.98
		Agree	127	45.51	
		Neutral	36	12.90	
		Disagree	24	8.60	
		Strongly Disagree	5	1.79	
20	I would like to have more online courses taught using the online methodology.	Strongly Agree	59	21.22	3.94
		Agree	147	52.87	
		Neutral	40	14.38	
		Disagree	27	9.71	
		Strongly Disagree	5	1.79	

As it is shown in Table 4, the mean value of all statements from 9-to 17 recorded 3.7 or above. This shows that majority of students have positive attitudes towards online learning. Out of all statements, the highest overall mean (4.51) is recorded in the statement “online courses save me time”. This indicates almost all students (94.96%) agree with the statement. This point was further highlighted in their responses to open-ended questions in the questionnaire. When they were asked the greatest benefit of online learning, 80.21% of students stated

saving time as their response. Time is a crucial factor for them because they are adults with number of personal and social commitments. In addition, nearly 92% of them are ladies and considerable number of them have extra responsibilities as mothers with small kids. The positive attitude towards online learning is further evident from the following comments made by post graduate students.

*During face-to-face lectures I left home at 3.30 in the morning to attend nine o'clock lecture but for online learning even we can get ready 5 minutes prior to the lesson. Therefore, it saves time (Student 17).*

According to the demographic and general information obtained from respondents through the questionnaire 57.34% of students are more than 25 kilometers away from the university and therefore, it takes at least one hour to travel to the university by public transport. Instead of saving time, they had favorable attitudes related with other aspects of online learning and it can be seen in the opinions of three students.

*For each and every lesson learning materials were downloaded before the lecture and therefore, we could read and get ready. Also, we got lot of lot of materials through Goolge classroom and WhatsApp group (Student 2).*

*Online learning environment is live. We can participate even having our meals (Student 18).*

*We learn lot of new things such as how to prepare a note using Google translator, how to install an application software and to use them for education while we ganging household work and looking after small kids (Student 13)*

However, mean values of two statements with negative attitudes given in 16 and 17 are lower than rest of the statements and the two values remain slightly higher than 3. This indicates there are considerable number of students who agree as well as disagree with the two negative statements. The percentages of students who agreed with the two statements “difficult than face to face classrooms” and “difficult to contribute class discussions” were 26.52% and 28.76% respectively. Although majority possessed positive attitudes they commented on certain negative aspects of online learning:

*We do not have opportunities to engage in groupwork and to discuss with group members like we practiced in the face-to-face session. Because this interaction is really important (Student 9).*

Almost all students responded in the semi-structured interviews that online learning is not suitable to develop teaching skills of the students. In fact, PGDE is a programme basically consists of two components; theory based on foundations of education and the teaching practice based on pedagogical aspect of teaching.

The next three statements from 18 to 20 are related to motivation element of the affection domain. The mean scores of all three statements are above 3.6 which shows that majority of students are motivated to learn through online learning. However, students responses to the continuation of the PGDE programme are quite amazing.

*According to the handbook given at the beginning of the programme, this PGDE programme has been designed to enhance the knowledge and understanding on education and the skills required for teaching through teaching practice and extra -curricular activities. Therefore, combination of face to face and online is better. (Student 19).*

*I like the whole programme to be online but there are no opportunities to develop skills (Student 15).*

Another student commented on continuation of online learning saying” *online is better for a programme only with theory*”. This study was conducted during the first-semester in which the focus was mainly on theory component. The second semester of the PGDE programme has been designed to enhance students’ pedagogical skills. Due to this reason the results obtained from questionnaire and the motivation towards continuing in the second semester is contradictory. The experience from sudden transition from face to face to online learning was described by a male student;

*This is my first experience in online learning. I have not used an application software earlier. I was bit nervous at once (Student 19).*

The results given under the perceived skills revealed that most of the students (85.24%) have gained the support of their peers especially at the beginning of transitions and gradually moved to online learning.

Results on statements of the questionnaire related to self-regulation domain is presented in Table 5.

**Table 5: Students’ confidence levels for the statements in the questionnaire – Self-regulation Domain**

No.	Statement	Confidence Level	Responses		Mean (X)
			Frequency	%	
21	Home environment is suitable for participating online lectures	Strongly Agree	60	21.58	3.79
		Agree	133	47.84	
		Neutral	45	16.18	
		Disagree	38	13.66	
		Strongly Disagree	2	0.71	
22	Possibility of distractions from other family members during online lectures.	Strongly Agree	11	3.95	3.01
		Agree	96	34.53	
		Neutral	90	32.37	
		Disagree	56	20.51	
		Strongly Disagree	25	9.15	

In relation to the concentration in online learning, results in Table 5 show that 69.42% agreed that their home environment is suitable for participating online lectures. However,38.48% responded that they have distractions from family members. The analysis of the responses given to the open-ended questions in the questionnaire revealed that connection issues and disturbances by family members as most abundant factors affecting in concentration.

The self -monitoring approaches taken by the students can be seen in the opinions of the two teachers;

*I always check the Google classroom for the materials uploaded for the lectures and WhatsApp group for the timetable. Normally I get ready for lessons before an hour (Student 6).*

*Usually, I check the WhatsApp group for any messages given by the lecturers and the Google classroom for the materials (Students 3)*

Analysis of the data obtained from semi-structured interview revealed that students have managed the time for online learning by having them a proper schedule and prior plan to get ready for the online learning.

## Conclusions and Suggestions

The study provides evidence that most of the students of Post Graduate Diploma in Education programme have sufficient equipment and materials to follow online learning. The results of the study show that after several weeks of implementing online learning postgraduate students possess required internet skills to manage online learning successfully and still, they are in the view that they should further develop their ICT skills as teachers. In considering the comprehension element of the perceived skills, students adopt various cognitive strategies such as questioning, note taking, reading learning materials to construct meaningful learning in an online learning environment. It was further revealed that students are aware of the nature of online learning and the role of students in online learning. According to the results a considerable percentage of students are in the view that there is less teacher –teacher and student- teacher interactions in online learning.

It was evident from the study that majority of postgraduate students have positive attitudes towards online learning which play an important role in willingness to use it for learning. The findings of the study showed that students are really motivated in online learning. However, majority does not agree to continue the whole programme in online as they believe that face to face learning enhances their skills especially needed for teaching practice. The results further indicated that students have successfully adjusted to the unexpected transition from face to face to online learning.

The results of the study further showed that students regulate their plans to attend online sessions. The results highlighted that a significant percentage of students face difficulties in concentrating online sessions due to disturbances of family members and the lack of high-speed internet access.

Introduction of online learning to the PGDE programme during the first semester provided students with a constructive learning experience. Therefore, blended learning is a better option for the students during the first semester in the PGDE programme as they are adults with lot of commitments.

Online learning environment should be more interactive in order to ensure teacher-student and student-student interactions. Challenges faced by students should be addressed in planning online programmes in future.

## References

- [1]. Rasmitadila, Aliyyah, R. R., Rachmadtullah, R., NurtantoSamsudin, A., Syaodih, E., Nurtanto, M. & Tambunan, A.R.S. ( 2020). The perceptions of primary school teaches of online learning during the COVID -19Pademic Period: A case Study in Indonesia. *Journal of Ethnic and Cultural studies*, 7(2), 90-109.
- [2]. United Nations. (2020). Policy Brief: Education during COVID-19 and beyond. <https://reliefweb.int/report/world/policy-brief-education-during-covid-19-and-beyond-august-2020>. Accessed on 15<sup>th</sup> November 2020.
- [3]. Gunawardena, C. N., & McIsaac, M. S. (2004). Distance education. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (2nd ed.). (pp. 355–395) Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc., Publishers.
- [4]. Hayashi, R., Maddawin, A., Garcia, M., Hewagamage, K. P. (2020). Online learning in Sri Lanka's higher education institutions during the COVID-19 pandemic. *ADB Briefs*, 151.
- [5]. Khan, B. H. (1998). Web-based instruction (WBI): An introduction. *Educational Media International*, 35(2), 63–71.
- [6]. Nguyen, T. (2015). The effectiveness of online learning: Beyond no significant difference and future horizons. *Journal of Online Learning and Teaching*, 11(2), 309-319.

- [7]. Suryawanshi, V. & Suryawanshi, D. (2015). Fundamentals of E- learning models: A review. *Journal of Computer Engineering*, 107-120.
- [8]. U.S. Department of Education, Office of Planning, Evaluation, and Policy Development, Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies, Washington, D.C., 2010.
- [9]. Li, C., & Irby, B. (2008). An Overview of online education: Attractiveness, benefits, challenges, concerns, and recommendations. *College Student Journal, Part A*, 42, 449–458.
- [10]. Luyt, I. (2013). Bridging spaces: Cross-cultural perspectives on promoting positive online learning experiences. *Journal of Educational Technology Systems*, 42, 3–20.
- [11]. Lyons, J. F. (2004). Teaching U.S. history online: Problems and prospects. *The History Teacher*, 37, 447–456.
- [12]. Kebritchi, M., Lipschuetz, A & Santiago, L. (2017). Issues and Challenges for Teaching Successful Online Courses in Higher Education: A Literature Review. *Journal of Educational Technology Systems 2017, Vol. 46(1)*, 4–29.
- [13]. Kaur, N., Dwivedi, D., Arora, J. & Gandhi, A. (2020). Study of the effectiveness of e-learning to conventional teaching in medical undergraduates amid COVID -19 pandemic. *National Journal of Physiology, Pharmacy and Pharmacology*, 10(7), 563-567.
- [14]. Shahzad, A., Hassan, A., Aremu, A. Y., Hussain, A., Lodhi, R. N., (2020). Effects of COVID-19 in E-learning on higher education institution students: the group comparison between male and female Effects of COVID-19 in E-learning on higher education institution students: the group comparison between male and female | SpringerLink. Accessed on 12<sup>th</sup> November 2020.
- [15]. Tsai, M.-J. (2009). The Model of Strategic e-Learning: Understanding and Evaluating Student e-Learning from Metacognitive Perspectives. *Educational Technology & Society*, 12 (1), 34–48.
- [16]. Babbie, E. ( 2004). *The Practice of Social Research*. 10<sup>th</sup> ed. USA: Wadsworth.
- [17]. Creswell, J. W. ( 2012). *Educational Research: 4<sup>th</sup> edi. Planning, Conducting, and Evaluating*, Boston: Pearson.
- [18]. Fraenlel, J. R., Wallen, N. E. & Hyun, H. H. (2012). 8<sup>th</sup> edi. *How to Design and Evaluate Research in Education*. McGraw Hill: New York.

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