

LEARNERS' PERCEPTION TOWARDS PREREQUISITES AND PRIVILEGES OF E-MODE OF EXAMINATIONS

Dr. Kavitha, G.

Assistant Professor & Head, PG Department of Commerce, Government Arts and Science College, Mullipuram,
Kangeyam – 638 108

<https://doi.org/10.54922/IJEHSS.2022.0400>

ABSTRACT

Online education and e-mode of examination is one of the positive outcomes of pandemic caused by Covid-19. The educators wanted to find an alternative solution for the continuance of education and assessment of students during the lockdown. Higher educational institutions in developing countries are not familiar with online mode. However, it is inevitable to adapt to the changes in the education system. Initially the teachers and students were unable to follow this new mode of education. It is to be examined whether the students have understood the pre requisites and privileges of e-mode of examinations. Therefore, the present study is undertaken with the objective of analyzing the perception of the college students. The study has been conducted among 300 students of colleges affiliated to Bharathiar University, Coimbatore. The data required for the study have been collected through Google forms. Male and female students of first year, second year and third year of study have been included as the sample respondents. The type of colleges in which they are studying has been classified as government colleges, government aided colleges and self financing colleges. The students of all these types of colleges have been included in the sampling frame. The results showed that the students have understood well the pre requisites like need for smart phone, internet connectivity, restriction to communicate with others and prohibition of using printed or electronic materials during the examination time. The perception of students regarding pre requisites of e-mode of examinations varied in accordance with gender and class while the perception of students towards privileges of e-mode of examinations was influenced by their class.

Key Words: E-mode Of Examination; Learners; Perception; Pre Requisites; Privileges.

1. INTRODUCTION

Pandemic caused by Covid-19 at the end of 2019 was an unprecedented one. It has affected the health of the people across the globe. The government has been taking various initiatives to protect the people. Accordingly lockdown was imposed in all the countries and India is also not an exception. Government and Private Offices, shops, industrial units, educational institutions were closed during the lockdown. Only the essential commodities and services were permitted. One of the sectors most affected by the lockdown was educational sector. However, the government wants not to take initiatives to continue the education. In this regard, online education and examination was found to be the best alternative. Hence, the educational institutions have started to migrate to the online mode of teaching and examination. The educational institutions, teachers and students were new to the online education in the Indian context. The online education needs smart phones / laptops for effective learning. The rural students were not affordable for buying these devices. Internet connectivity in rural areas was not at par with the urban areas. Moreover

lack of digital literacy was another major concern for adopting online education. Since the transformation into online mode was unpredicted and unplanned, the teachers and students were not given training in the online mode of education and examination. However, they have started learning gradually the ways and means of implementing online education. When the online education and examination are successfully implemented, the teachers and students will be more benefited.

2. REVIEW OF LITERATURE

The previous studies have been reviewed in order to have conceptual understanding. In this regard, various studies relating to online examinations have been reviewed and presented.

Khan, M.A.; Vivek, V.; Khojah, M.; Nabi, M.K.; Paul, M.; Minaj, S.M. (2021) observed that learners have agreed that they could get immediate feedback in online examinations and cutting-edge technology is used. These factors helped the learners to understand the concepts easily and deeply. They have further perceived that the online examination can be conducted for all subjects irrespective of discipline. The learners have further opined that their examination stress and anxiety have been reduced in the online examinations. The students have further revealed that online examinations are more accessible than the conventional mode of examinations. **Aburumman, M.F. (2021)** explained that there are several tools used for e-assessment including Google Forms, Google Classroom, Kahoot and Moodle. According to him, certain challenges are faced while conducting e-assessment. One of the major challenges faced by the instructors is selection of assessment technique. Posing the appropriate queries is another issue in front of the instructors. Despite the challenges, online assessment provides various advantages also. It includes reliable measurement and positive feedback. At the same time, it has been mentioned that reading a material on the screen of device used is more difficult than reading a printed material in conventional mode of examinations. **Almeida, F. & Monterio, J. (2021)** pointed out that at the early stage, all the teachers were not suddenly prepared at the same level. The transmission of conventional assessment into online assessment was made mandatory due to pandemic. Therefore, no prior planning and training could be made for the teachers and students. They have expressed that more emphasis was given on summative assessment at that stage. Immediate migration created anxiety among the teachers and students. **Chinyere, E.N. (2021)** developed an instrument for collection of data and named it Digital Literacy Test (DLT). The questionnaire prepared for this purpose was shared among the respondents through telegram-x. He has asked the respondents to give their responses through Google forms. The teachers stated that lack of internet connectivity in rural places, lack of digital literacy and lack of academic integrity were the major challenges faced in online assessment. He has recommended the school authorities to provide adequate training for students and teachers towards online education and assessment.

Research Gap

The previous studies have been undertaken about online assessment in various countries. There have been very little studies in the Indian context. Most of the other studies have been focusing on online education or online teaching and not on the online examination. Online education or assessment is discussed in certain studies from the point of view of teachers. Their challenges, advantages and disadvantages have been discussed in the previous studies. However, little attention was paid on the learners' perception towards the online education.

Problem Definition

E-mode of examination was the only alternative available for the teachers to assess the learning of the students during the Pandemic. Since this was an immediate arrangement there were certain difficulties. However, the students were asked prepare themselves for e-mode of examinations. It is a big question whether the students have understood the pre requisites and privileges of e-mode of examinations. Hence, the present study is undertaken to examine the perception of learners towards pre requisites and privileges of e-mode of examinations.

Objectives

The present study has been undertaken with the following objectives:

1. To examine the perception of students towards the pre requisites of e-mode of examinations and
2. To investigate the perceived privileges of e-mode of examinations for the students.

Scope Of The Study

The present study aims at providing the various pre requisites and privileges of e-mode of examinations and the perception of students of higher education towards pre requisites and privileges. In this regard, the students pursuing their bachelor degree courses in the affiliated colleges of Bhrathiar University, Coimbatore, Tamil Nadu were asked to provide data required for the study. The affiliated colleges include government, government aided and private colleges. Both male and female students were contacted through social media for data collection.

3. METHODOLOGY

The current study is a descriptive and explorative study. The researcher has drafted a questionnaire for collection of data. The questionnaire was shared among the students of government, government aided and self financing colleges affiliated to Bhrathiar University, Coimbatore. The students were contacted through social media and Google forms were used for collection of data. In this regard, 300 responses were collected from the sample respondents. The data collected were tabulated and analyzed using percentage analysis, chi square test, t test and ANOVA.

Analysis And Interpretation

The analysis made in this study has been divided into three sections. The first section deals with the profile of the students – gender, class or year of study and type of college. In the second section, the perception of the learners towards the pre requisites of e-mode of examination has been analyzed. The privileges of e-mode of examinations from the perspective of students have been discussed in the third section of the analysis.

TABLE 1: GENDER WISE INSTITUTIONAL PROFILE

Institutional Profile	Groups	Frequency	Gender		Total
			Male	Female	
College	Government	N	38	36	74
		%	51.40%	48.60%	100.00%
	Government Aided	N	40	39	79
		%	50.60%	49.40%	100.00%
	Self-financing	N	80	67	147
		%	54.40%	45.60%	100.00%
Class	First Year	N	44	51	95
		%	46.30%	53.70%	100.00%
	Second Year	N	79	67	146
		%	54.10%	45.90%	100.00%
	Third Year	N	35	24	59
		%	59.30%	40.70%	100.00%
Total		N	158	142	300
		%	52.70%	47.30%	100.00%

Source: Computed from primary data

The gender wise institutional profile reveals that out of 74 students of government colleges, 51.4 per cent of them were male students and 48.6 per cent of them were female students. In the case of government aided colleges, 50.6 per cent of the students were male students and 49.4 per cent of them were female students. Among 147 students of self financing colleges, 54.4 per cent of the students were male students and 45.6 per cent of the students were female students. It denotes that in all the types of colleges, the proportion of male students was greater than the proportion of female students.

The results indicate that 53.7 per cent of the first students were female students and 46.3 per cent of them were male students. Out of 146 second year students, 54.1 per cent of them were male students and 45.9 per cent of them were male students. In the case of third year students, the proportions of male students and female students were 59.3 per cent and 40.7 per cent respectively. It implies that there were more female students in the first year than the male students while more male students were studying in the second and the third year classes than female students.

Pre-requisites

The respondents were asked to state their level of agreement to the statements given relating to the pre requisites of e-mode of examinations. The levels of agreement were strongly agree; agree; neutral; disagree; and strongly disagree. The following are the statements given:

1. I need a smart phone / laptop (PRR 1)
2. I need at least medium speed internet connection (PRR 2)
3. I need a calm and conducive location (PRR 3)
4. I am restricted to communicate with other students (PRR 4)
5. I should not refer to any printed / electronic materials (PRR 5)
6. I must keep the device video switched on (PRR 6)
7. I should not leave the examination platform unless permitted (PRR 7)
8. I should join the examination platform on-time (PRR 8)
9. I am prohibited to eat or drink any eatables during exam time (PRR 9)
10. I should stop writing the answers at once the time is over (PRR 10)

TABLE 2: PRE-REQUISITES OF E-MODE OF EXAMINATIONS

Pre requisites	SA	A	N	DA	SDA	Total
PRR 1	97 (32.3)	108 (36)	45 (15)	19 (6.3)	31 (10.3)	300
PRR 2	127 (42.3)	67 (22.3)	32 (10.7)	45 (15)	29 (9.7)	300
PRR 3	52 (17.3)	43 (14.3)	44 (14.7)	49 (16.3)	112 (37.3)	300
PRR 4	26 (8.7)	42 (14)	32 (10.7)	95 (31.7)	105 (35)	300
PRR 5	80 (26.7)	54 (18)	36 (12)	94 (31.3)	36 (12)	300
PRR 6	9 (3)	55 (18.3)	34 (11.3)	81 (27)	121 (40.3)	300
PRR 7	42 (14)	51 (17)	79 (26.3)	85 (28.3)	43 (14.3)	300
PRR 8	69 (23)	42 (14)	46 (15.3)	84 (28)	59 (19.7)	300
PRR 9	32 (10.7)	41 (13.7)	39 (13)	51 (17)	137 (45.7)	300
PRR 10	37 (12.3)	30 (10)	55 (18.3)	106 (35.3)	72 (24)	300

Source: Computed from primary data Figures in the parentheses represent percentages

Table 2 proclaims that that 36 per cent of the respondents have agreed and 32.3 per cent of the respondents have strongly agreed that smart phone / laptop is needed for attending e-mode of examinations while 6.3 per cent of them have disagreed. The majority of 42.3 per cent of the respondents have strongly agreed that at least medium speed of internet connection is necessary while 9.7 per cent of them have strongly disagreed. It could be observed that 37.3 per cent of the respondents have strongly disagreed that calm and conducive location is required to attend the e-mode of examination while 14.3 per cent of them have agreed. Restriction to communication with other students during examination time is strongly disagreed by 35 per cent of the respondents and strongly agreed by 8.7 per cent of the respondents. Great majority of 26.7 per cent of the respondents have strongly agreed that they should not communicate with others during the examination time whereas 12 per cent of the respondents have strongly disagreed. However, 40.3 per cent of the respondents have strongly disagreed that they should keep the video switched on at the time of examination. It was strongly agreed by just 3 per cent of the respondents. The

proportion of respondents disagreed that they should not leave the examination portal without permission was found to be 28.3 per cent and that of respondents who have strongly agreed to this pre requisite was 14 per cent. Joining the examination platform on right time has been agreed by 14 per cent of the respondents while disagreed by 28 per cent of the respondents. Prohibition to eat or drink eatables during the examination time was strongly disagreed by 45.7 per cent of the respondents while it was strongly agreed by 10.7 per cent of the respondents. There was a disagreement among 35.3 per cent of the respondents regarding the stop writing answers at once the time is over whereas 10 per cent of the respondents have agreed.

In this study, an attempt has been made to check whether there is any difference in the opinion of the students with regard to the pre requisites of e-mode of examinations.

TABLE 3: PRE REQUISITES OF E-MODE OF EXAMINATIONS

Pre requisites	Gender			Class			College		
	Chi square value	p value	Result	Chi square value	p value	Result	Chi square value	p value	Result
PRR 1	14.10	0.007	**	17.752	0.023	*	9.655	0.290	NS
PRR 2	20.14	0.000	**	20.566	0.008	**	12.408	0.134	NS
PRR 3	19.99	0.001	**	129.493	0.000	**	10.039	0.262	NS
PRR 4	24.66	0.000	**	98.418	0.000	**	19.581	0.012	*
PRR 5	42.84	0.000	**	35.186	0.000	**	11.606	0.170	NS
PRR 6	19.76	0.001	**	47.994	0.000	**	8.641	0.374	NS
PRR 7	25.39	0.000	**	27.378	0.001	**	8.291	0.406	NS
PRR 8	29.56	0.000	**	42.902	0.000	**	14.091	0.079	NS
PRR 9	34.94	0.000	**	17.120	0.029	*	7.080	0.528	NS
PRR 10	13.84	0.008	**	83.800	0.000	**	12.744	0.121	NS

Source: Computed from primary data

** Significant @ 1% * Significant @ 5% NS – Not Significant

Gender And Pre Requisites

The influence of gender on the opinion of the students about pre requisites of e-mode of examinations has been tested with the following hypotheses:

Null Hypothesis H₀: Opinion of the students about pre requisites of e-mode of examinations is not influenced by gender

Alternative Hypothesis H₁: Opinion of the students about pre requisites of e-mode of examinations is influenced by gender

Class And Pre Requisites

The influence of class on the opinion of the students about pre requisites of e-mode of examinations has been tested with the following hypotheses:

Null Hypothesis H₀: Opinion of the students about pre requisites of e-mode of examinations is not influenced by class

Alternative Hypothesis H₁: Opinion of the students about pre requisites of e-mode of examinations is influenced by class

College And Pre Requisites

The influence of college on the opinion of the students about pre requisites of e-mode of examinations has been tested with the following hypotheses:

Null Hypothesis H₀: Opinion of the students about pre requisites of e-mode of examinations is not influenced by college

Alternative Hypothesis H₁: Opinion of the students about pre requisites of e-mode of examinations is influenced by college

The opinion of the students about the requirement of smart phone / laptop for attending e-mode of examinations has been influenced by gender and class while there was no significant influence of college on their opinion on the requirement of smart phone/laptop. It could be understood that the need of at least medium speed internet connection significantly varied in accordance with gender and class but not according to college. There is a significant influence of gender and class on the opinion of the students towards requirement of calm and conducive location for e-mode of examinations. However, college type has no significant influence on location requirements. The results showed that gender, class and college type have made significant impact on the opinion of students towards restriction to communicate with other students during the examination. It is well understood that the opinion of the students on the prohibition of use of printed / electronic materials at the time of examination varied according to gender and class whereas the college type has no significant influence on their opinion towards prohibition of use of printed / electronic materials.

Gender and class of the students have significantly influenced their opinion on the instruction to keep the device video switched on for invigilation purposes. On the other hand, college type has made no significant among the students regarding their opinion about keeping the video switched on. It is revealed from the analysis that the opinion of the students on the restriction to leave the online platform during the examination without permission is significantly different in accordance with gender and class and not significantly different according to the college type. The opinion of students regarding the requirement to join the examination platform on time is significantly influenced by gender and class and not by college type. There exists a significant difference in the opinion of the students with regard to the prohibition to eat or drink any eatable during examination time with reference to gender and class and no significant different exists among the students about their opinion on prohibition of eatables in accordance with their college type. Significant difference is observed in the opinion of students towards the condition to stop writing at once the time is over with reference to gender and class.

Privileges

In order to fulfill the third objective of the study, the respondents were asked to record their responses to the following statements relating to privileges in a five-point scale.

1. It reduces stress and examination anxiety
2. It is comfortable than conventional mode of examination
3. Enough time is available for reading the questions
4. Question papers reach all the students at a time
5. It saves time, money and energy

6. It keeps the students in relaxed state of mind
7. It avoids traveling difficulty
8. It is more secured
9. It sets a new examination trend
10. Results are announced early

TABLE 4: PRIVILEGES OF E-MODE OF EXAMINATIONS

Privileges	SA	A	N	DA	SDA	Total
PRV 1	25 (8.3)	134 (44.7)	36 (12)	56 (18.7)	49 (16.3)	300
PRV 2	28 (9.3)	37 (12.3)	77 (25.7)	37 (12.3)	121 (40.3)	300
PRV 3	77 (25.7)	141 (47)	14 (4.7)	32 (10.7)	36 (12)	300
PRV 4	45 (15)	121 (40.3)	51 (17)	52 (17.3)	31 (10.3)	300
PRV 5	108 (36)	55 (18.3)	30 (10)	69 (23)	38 (12.7)	300
PRV 6	52 (17.3)	26 (8.7)	72 (24)	53 (17.7)	97 (32.3)	300
PRV 7	53 (17.7)	45 (15)	17 (5.7)	121 (40.3)	64 (21.3)	300
PRV 8	74 (24.7)	58 (19.3)	44 (14.7)	79 (26.3)	45 (15)	300
PRV 9	39 (13)	94 (31.3)	36 (12)	54 (18)	77 (25.7)	300
PRV 10	65 (21.7)	65 (21.7)	25 (8.3)	88 (29.3)	57 (19)	300

Source: Computed from primary data Figures in the parentheses represent percentages

It is proclaimed from the results furnished above that 44.7 per cent of the respondents have agreed and 8.3 per cent of the respondents have strongly agreed that e-mode of examinations has reduced the stress and examination anxiety among the students. It is observed that 40.3 per cent of the respondents argued that they were not comfortable with e-mode of examination like conventional mode of examinations. It is accepted by 47 per cent of the respondents that enough time was available for the students to read the questions. The majority of 40.3 per cent of the respondents have agreed that the question papers have reached all the students at a time. It was strongly agreed by 36 per cent of the respondents that e-mode of examinations has saved time, money and energy. It was further observed that 32.3 per cent of the respondents have strongly disagreed that e-mode of examination has the students were in relaxed state of mind during e-mode of examinations. Disagreement was found among 40.3 per cent of the respondents that travelling difficulty was avoided due to e-mode of examination. The majority of 26.3 per cent of the respondents have disagreed that the e-mode of examination was secured. It is implied that 31.3 per cent of the respondents have agreed that e-mode of examination has set a new trend in the examination pattern. It was not agreed by 29.3 per cent of the respondents that the results are announced early.

The responses were assigned scores as 5 for strongly agree; 4 for agree; 3 for neutral; 2 for disagree; and 1 for strongly disagree. The scores assigned to all the ten statements have been summed up to arrive at the total score of each respondent. The mean score and standard deviation for each group of gender, class and college type have been ascertained.

In a further attempt, to examine if there is any variation in the opinion of the students with regard to the privileges of e-mode of examinations t test and ANOVA have been used.

Gender And Privileges

The influence of gender on the opinion of the students about privileges of e-mode of examinations has been tested with the following hypotheses:

Null Hypothesis H_0 : There is no significant difference in the opinion of the students about privileges of e-mode of examinations with reference to gender

Alternative Hypothesis H_1 : There is a significant difference in the opinion of the students about privileges of e-mode of examinations with reference to gender

TABLE 5: GENDER AND PRIVILEGES

Gender	N	Mean	S.D.	t value	p value	Result
Male	158	29.65	5.252	-1.734	0.084	NS
Female	142	30.65	4.829			

Source: Computed from primary data NS – Not Significant

From the mean scores of privileges, it could be understood that the female students have enjoyed more privileges (Mean Score 30.65) than the male students (Mean Score 29.65) from the e-mode of examinations. There is a meager difference between the mean scores of male and female students. The p value of 0.084 ($p > 0.05$) reveals that there exists no significant difference in the opinion of the students towards the privileges of e-mode of examinations according to their gender.

Class And Privileges

The influence of class on the opinion of the students about privileges of e-mode of examinations has been tested with the following hypotheses:

Null Hypothesis H_0 : There is no significant difference in the opinion of the students about privileges of e-mode of examinations with reference to class

Alternative Hypothesis H_1 : There is no significant difference in the opinion of the students about privileges of e-mode of examinations with reference to class

TABLE 6: CLALSS AND PRIVILEGES

Class	N	Mean	S.D.	F value	P value	Result
First Year	95	30.12	5.446	5.397	0.005	**
Second Year	146	30.86	4.766			
Third Year	59	28.32	4.812			
Total	300	30.12	5.073			

Source: Computed from primary data ** Significant @ 1%

According to the mean scores of privileges, it is implied that the second year students have enjoyed more privileges (Mean Score 30.86) than the first students (Mean Score 30.12) and the third year students (Mean Score 28.32) from the e-mode of examinations. It reveals that the second year students were the most privileged students and the third year students were the least privileged students. The p value of 0.005 ($p < 0.01$) denotes that difference in the opinion of the students towards the privileges of e-mode of examinations according to their class is highly significant.

College And Privileges

The influence of college on the opinion of the students about privileges of e-mode of examinations has been tested with the following hypotheses:

Null Hypothesis H_0 : There is no significant difference in the opinion of the students about privileges of e-mode of examinations with reference to college

Alternative Hypothesis H_1 : There is no significant difference in the opinion of the students about privileges of e-mode of examinations with reference to college

TABLE 7: COLLEGE AND PRIVILEGES

College	N	Mean	S.D.	F value	P value	Result
Government	74	30.15	5.521	1.185	0.307	NS
Government Aided	79	30.82	5.093			
Self-financing	147	29.73	4.815			
Total	300	30.12	5.073			

Source: Computed from primary data NS – Not Significant

It is evinced from the mean scores of privileges that the students of government aided colleges have enjoyed more privileges (Mean Score 30.82) than the students of government colleges (Mean Score 30.15) and self financing colleges (Mean Score 29.73) from the e-mode of examinations. It is made clear that government aided college students have enjoyed more privileges while the self financing college students enjoyed less privileges. The p value of 0.307 ($p > 0.05$) implies that there exists no significant difference in the opinion of the students towards the privileges of e-mode of examinations according to their college type.

4. FINDINGS

Male students studying in government colleges are more than female students studying in these colleges. Government aided colleges are preferred more by male students than female students. In self financing colleges also, the number of male students is greater than the number of female students.

The proportions of male students in the second year and the third year degree courses are greater than the proportions of female students. However, the proportion of female students in the first year is greater than the proportion of male students. It implies that in the latest year, the more female students have come forward to pursue higher studies in colleges.

It is implied that the students support that smart phone / laptop and internet connectivity are basic pre requisites of e-mode of examinations. Prohibition to use any kind of printed / electronic material during the examination time is accepted by the students. However, the students did not agree with the requirement of calm and conducive location and restriction to communicate with others. There was a strong opposition from the students to keep the video switched on during the examination and to avoid eatables at the time of examinations.

Gender and class of the students play vital role in influencing their opinion on all the pre requisites considered for the study. On the contrary, college type has no significant influence on the opinion of students towards the pre requisites except restriction to communicate with others during the examination time which has been significantly influenced by the college type.

It was found that the students have felt that their stress and examination anxiety was reduced in the e-mode of examinations. At the same time, many students have expressed their

discomfort in the e-mode of examinations when compared with conventional mode of examinations.

It was accepted by the greatest proportion of students that they could get enough time for reading the questions in the e-mode of examinations. They have also experienced that their time, money and energy were saved in the e-mode of examinations.

However, they did not accept that the students were able to be relaxed during the e-mode of examinations. There was no agreement from the students that the results are announced early in the e-mode of examinations.

5. SUGGESTIONS

The following suggestions have been offered for enhancing the effectiveness of e-mode of examinations:

At the initial stage of introducing e-mode of examinations, the teachers as well as the students felt certain difficulties. After few experiments, they are accustomed to e-mode of examinations. The difficulties faced at the initial stage shall be eliminated by understanding the perception of the teachers and students.

The students were not in relaxed state of mind at the time of e-mode of examinations. Since they did not have any previous experience, they have expressed such a difficulty. However, due to experience in the past 2 years, they are able to follow the e-mode of examinations. They shall be given training regarding getting the question papers, method of writing examinations and submitting the answer scripts.

The examiners have to expedite the evaluation process and announce the results at the earliest. The students have to understand that they are asked to switch on the videos for invigilation purposes.

The students should follow the academic integrity. They should not interact with the other students at the time of examinations.

They should join the examination platform at the right time and should not leave the platform till the examination is over.

6. CONCLUSION

Nothing is permanent in the world except change. Changes are inevitable. The e-mode of examinations has been made mandatory due to Covid-19. However, it has given a lot of advantages for the teachers as well as students. The students have understood the pre requisites of the e-mode of examinations. They are able to enjoy the privileges of the e-mode of examinations. Therefore, they are able to combat the stress and examination anxiety. They feel that they could get more time for reading questions perform well in the examinations. Since they are in remote places, they have no disturbances from the other students. They are comfortable with the e-mode of examinations.

REFERENCES

Khan, M.A.; Vivek, V.; Khojah, M.; Nabi, M.K.; Paul, M.; Minaj, S.M. (2021). Learners' Perspective towards E-Exams during Covid-19 Outbreak: Evidence from Higher Educational Institutions of India and Saudi Arabia. *International Journal of Environmental Research and Public Health*. 18, 6534: 1-18.

- Aburumman, M.F. (2021). E-Assessment of Students' Activities during Covid-19 Pandemic: Challenges, Advantages and Disadvantages. *International Journal of Contemporary Management and Information Technology*. 2(1): 1-7.
- Almeida, F. & Monterio, J. (2021). The challenges of assessing and evaluating students at distance. *Journal of Online Higher Education*. 5(1): 3-10.
- Chinyere, E.N. (2021). Secondary School Teachers' Perceptions of the Challenges and Solutions to Online Assessment of Learning. *European Journal of Education Studies*. 8(9): 302-314.
- Perwitasari, F.; Astuti, N.B.; Atmojo, S. (2020). Online Learning and Assessment: Challenges and Opportunities during Pandemic Covid-19. *Advances in Social Science, Education and Humanities Research*. 545: 133-137.
- Kamal, T. & Illiyan, A. (2021). School Teachers' Perception and Challenges towards online teaching during Covid-19 pandemic in India: An Econometric Analysis. *Asian Association of Open Universities Journal*. 16(3): 311-325.
- Rai, R.K. & Vinod, S. (2017). An e-Examination for the Future Generation. *Indian Journal of Science and Technology*. 10(13): 1-6.
- Gangul, F.M.; Suhail, A.H.; Khalit, M.I.; Khidir, B.A. (2020). Challenges of remote assessment in higher education in the context of Covid-19: A Case study of Middle East College. *Educational Assessment, Evaluation and Accountability*. 32: 519-535.
- Sugilar, S. (2017): The Online Examinations at Universitas Terbuka: An Innovation Diffusion Viewpoint. *Asian Association of Open Universities Journal*. 12(1): 82-93.
- Kearns, L.R. (2012): Students Assessment in Online Learning: Challenges and Effective Practices. *MERLOT Journal of Online Learning and Teaching*. 8(3): 198-208.