STUDENTS' PREFERENCE ON USE OF IN-PRINT AND ON-SCREEN ESL READING MATERIALS: A CASE STUDY IN ODL SESSION AMONG UITM KELANTAN UNDERGRADUATES

Raja Nur Hidayah Raja Yacob
Universiti Teknologi MARA Cawangan Kelantan
hidayah795@uitm.edu.my

Anis Idayu Aziz
Universiti Teknologi MARA Cawangan Kelantan
anis818@uitm.edu.my

Amanina Abdul Razak @ Mohamed
Pusat Asasi Universiti Teknologi MARA
amanina81@uitm.edu.my

Abstract: This study reports the descriptive statistical findings of a survey of academic reading format preferences used in Open and Distance Learning sessions involving 149 undergraduates from UiTM Kelantan. This study is mainly conducted to examine the preferred format of ESL reading materials among the students, whether they prefer to have their reading materials in-print or on-screen. It is also aimed to investigate the factors that impacted on the preference. The sample was taken from a simple random sampling technique and the data were gathered through a set of questionnaires adapted from the Academic Reading Format International Study (ARFIS) by Mizrachi et al. (2018). The majority of the respondents preferred to read the reading materials in-print over on-screen due to several significant factors including having better focus and retention when reading in-print. This study also showed that the students still prefer to make printed copies of the materials even though they can always read them on-screen.

Keywords: In-print, on-screen, ODL, reading materials, students' preference, undergraduates

1.   Introduction

Open and Distance Learning (ODL) is defined as a learning process that happens not in face-to-face classrooms and students do not have to be present physically as the learning process is facilitated with the use of technology (Sadeghi, 2019). ODL is previously popular among adult learners who are part-time students, where it serves life-long learning due to its flexibility in terms of learning time. However, ODL becomes a new norm in the global educational field due to Covid-19 pandemic that has caused high-risk of infection and a rapid fatality rate among the patients. This global health crisis has urged the Ministry of Higher Education (2020) to announce all higher learning institutions including kindergarten and schools to be closed since March 2020. Since the condition is uncertain and the outbreak of the pandemic is still going on to an uncertain time, it is believed that the ideal solution would be to opt for teaching and learning via online as it is safer and sustainable (Khair Anwar, Omar, Mohd Isa & Samsudin, 2020). Thus, classes are all going to be completely online until further notice to safeguard the continuity of the teaching and learning process.

Traditional face-to-face learning is now officially transformed into online learning that requires a lot of determination and commitment among the educators in order to learn multiple new skills including technology and multimedia. The implementation of ODL has become a challenge for the educators to make online class as effective as the traditional one. Webinars are conducted and organized vigorously to train the educators to master various techniques from developing interesting and lively online lecture video to demonstrating online marking using various annotation tools. A lot of free online learning and user-friendly platforms, such as Google Meet, Google Classroom, Telegram, YouTube channel, are used intensively for ODL purposes (Chung, Noor & Mathew, 2020). These are all done to ensure the students' engagement during the online class.

Apart from enriching the skills among the educators, students' perspectives on ODL should also be considered. Studies have also been done to identify challenges faced by the students while studying

online. According to Chung, Subramaniam and Dass (2020), among the challenges of ODL are the internet connectivity issues, limited broadband data, inefficient personal laptop or devices, difficulties to focus due to distractions from surrounding, lack of technical skills and lack of motivation due to absence of face-to-face contact with friends and lecturers. The similar findings were also reported by Sadeghi (2019) where the students stated the high chances of distractions, the difficulty to stay in contact with the instructors, the complexity of technology and the lack of social interaction happened during distance learning.

This paper explores the scene behind the Open and Distance Learning (ODL) session where the students worldwide shifted from the physical class to online class. There are numerous areas of education which have been impacted by the pandemic. This paper examines the choice of materials used in learning; especially in ESL reading courses. Since all classes are conducted via online, it is presumed that the learning materials for all courses are given online. The students can opt to access the given materials on certain platforms, either to download or read them on the screen. Abundance of online materials for all subjects tends to make them exhausted to continue their reading and this has caused some setbacks. Some students are reluctant to hand in their tasks or keep on delaying the submission as they need more time to study the online materials. These are resulted from having too many online materials to be read at one time. Hence, there is a need for the educators to investigate in detail the preferred materials needed by the students. This is important to avoid any pre-determined decisions which may jeopardize university teaching and learning.

This paper is specifically aimed to examine the preferred format of materials that UiTMCK undergraduate students prefer most for their ESL reading materials, whether they prefer to read in-print or on-screen. In addition, it is also to investigate the factors for such preference. This is crucial for the educators to plan the best on their teaching part for the upcoming ODL semester. The research questions of this study are:

a) What type of materials do UiTMCK undergraduate students prefer most for their ESL reading materials; to read in-print or on-screen?
b) What factors impacted their preference on ESL reading materials?

This study is significant for the researchers and educators as no studies have been done to report thoroughly on students' preferences for their reading materials in ODL session especially for English courses. Most research papers nowadays only focus on challenges faced by the students during ODL, and if there is any, it would be on the students' preferred platform used in ODL; whether the students prefer synchronous or asynchronous online class. Other previous studies on materials selection are generally conducted in a normal classroom setting where face-to-face classes are able to be executed and it is aimed to integrate blended learning function into the traditional class. Nonetheless, our current situation is no longer to introduce new technological skills among the students but to apply them all in everyday class. Thus, this study will benefit the educators to consider and select the ESL reading materials according to students' preferences to ease the teaching and learning process and finally, to maximise students' learning outcomes.

2. Literature Review

Studying the students' preferred format becomes an area of interest among researchers of higher learning institutions not only in Malaysia but also across the globe. It is crucial as the data needs to be sought as to better plan for lessons, especially for online learning. A recent local study done by Ag-Ahmad (2020) found that most of Malaysian students spent 4 to 9 hours per day for online learning. Based on this data, the students are assumed to be comfortable reading their academic materials electronically rather than in-print. However, there are studies that show this is not necessarily to be true.

Mizrachi, Salaz, Kurbanoglu and Boustany (2018) proved that majority of students worldwide preferred to read their academic materials in-print format. In the same study, the students were also found to learn and focus better on printed materials. Moreover, Mizrachi et al. (2018) stated that this perception among students was consistent to other previous studies which also showed print format is better for in-depth understanding among students. Earlier, Mizrachi (2015) examined the undergraduates' format preferences between print and electronic sources of academic readings at the University of California in the US, and found that 67.7 percent of the respondents preferred print over electronic format for all courses. According to Mizrachi (2015), this was due to the reason that the

learners would achieve deeper learning outcome when they read in-print. The rest of the respondents who chose electronic version to read their reading materials were based on the factors such as faster, easier to read and more convenient accessibility to electronic material.

Another study was conducted by Mizrachi, Boustani, Kurbanoglu and Dogan (2016) to investigate the Academic Reading Format International Study (ARFIS) involving students around the world, the respondents were drawn from 19 countries of four continents. There were two-third out of 9,279 respondents reported strong preferences for print over electronic materials. The similar study using the ARFIS was also done by Amaya and Secker (2016) in the United Kingdom. The study found that 42 percent of the respondents preferred to have their reading materials in-print format. Amaya and Secker (2016) also revealed further finding of the study that the diffusion of electronic sources were remained low even though UK was a developed country, and the students still opt for printed version in spite of huge availability of electronic resources.

Pesut and Zizkovic (2016) found that 82 percent of respondents in a survey on students' academic reading format preferences in Croatia did not prefer to read their course materials on the screen. Reading in-print was the best format for them. Aharony and Bar-Ilans (2018) carried out a study to students in Israel and found that the students' preferred academic reading format was also on printed materials over electronic ones.

Samzugi (2019) conducted a study on information users' preferences in the use of in-print and e-resources in Tanzania's universities. It was reported that half of the respondents (50.6%) opted for print format over on-screen materials. The finding also suggested the libraries should maintain and continue providing round information services in-print format to support teaching, learning and research agendas. A hybrid environment of the library which offered both print and e-resources was believed to complement one another to cater best for the interest of information users in the universities.

However, an opposite finding was reported by Singer and Alexander (2017) where the students were found prefer to read materials on the screen. This preference was outstanding where the texts are shorter, and they read for leisure or casual information input. This was also supported by Wang and Bai (2016) where the undergraduates tended to use e-books for their leisure reading and not for academic studies. Furthermore, Singer and Alexander (2017) presented that students preferred to read in-print where the processing and recall of more detailed, granular information was concerned, and when they dealt with lengthier texts.

To explain about the theoretical framework across the previous studies, Mizrachi (2015) suggested Zipf's Principle of Least Effort (1949) in order to understand how and why learners report different format preferences in relation to different reading tasks and types of materials. This principle states that a learner will prefer the path of least effort he could do in order to achieve minimally acceptable results. In this context, the learner would balance the ease, cost and convenience of on-screen reading with the time and effort required to extract enough information for the task at hand. If the reading purpose is to read for leisure, for example reading a pulp fiction novel, a learner might prefer an inexpensive, lightweight electronic version. However, if the learner must fully concentrate to learn in depth and need to recall granular levels of detail from a text, as in constructing a literature review for a thesis, they might prefer printed materials for less effortful to learn and accomplish the task. Mizrachi (2018) reported that this principle has been used to predict and explain a wide range of human behaviours across the fields, but it lacks in the specificity needed to account for the nuances of format preferences in different context.

Most of the findings presented in past studies were mainly found in normal classroom setting, where the researchers did not consider ODL classroom setting as ODL requires almost of everything to appear in electronic form. There is no specific study done in ODL setting to investigate on students' preference format. Therefore, this study presents data from the first iteration of the Academic Reading Format International Study (ARFIS) especially in Malaysian context. The data provides an insight into what students believe about their own learning from reading in-print or on-screen and what factors may influence their preferences.

3.   Research Methodology

This research is categorized as a descriptive research design. According to Awang (2013), this research design is meant to collect data and create data structures that describe preference of a target

population. This research seeks to determine students' preference on the use of in-print and on-screen ESL reading materials.

3.1 Population and sample

The sample size was selected by using Krejcie and Morgan (1970) table. According to the table, a total sample size of three one hundred and forty nine (149) students were selected from the total population of three hundred and seventy two (372) students who enrolled English for Critical Academic Reading (ELC501) course during 2019/2020 semester. This course requires students to develop their ability to read analytically and think critically. The difference as compared to previous semester is that this course is conducted virtually due to the outbreak of Coronavirus Disease (COVID-19). Hence, it is crucial to identify students' preferences on the use of in-print and on-screen ESL reading materials. The total number of samples was taken from both UiTM Machang and Kota Bharu campuses.

3.2 Sampling method and method of data collection

Probability sampling method was chosen as the sampling technique and simple random sampling was used as the sampling method in this research. As for data collection method, the questionnaire was constructed and distributed to 149 undergraduate students who enrolled in ELC501 course during 2019/2020 semester. This set of questionnaire consisted of two sections; Section A: Demographic Information and section B: Academic reading preferences, which were adapted from the Academic Reading Format International Study (ARFIS) by Mizrachi et al. (2018). A quantitative method was adopted for the data collection, and Statistical Package of Social Science (SPSS) 23.0 was used to analyse the data. Descriptive statistics are used to describe the mean of the data in this study. In order to ensure the reliability and validity of the instrument, pilot test was conducted before proceeding to the final data collection.

4. Research Findings and Discussion

4.1 Normality test

In statistics, normality test is used to determine whether a data set is normally distributed. This study uses skewness to measure asymmetry of the probability distribution of a random variable about its mean. The skewness value can be positive or negative, or even undefined. An acceptable range data to be normally distributed is within -1 to 1 (Garson, 2012).

Table 1: Skewness Result

Skewness value	
Skewness	0.117

Since the measure of skewness in table 1 is 0.117 and it falls within the range of -1.0 and 1.0, this study can conclude that the data distribution is normally distributed.

4.2 Reliability test

The reliability analysis was conducted by computing the Cronbach's Alpha for each section of independent and dependent variables. The closer Cronbach's alpha coefficient is to 1.0, the higher the internal consistency of items in the scale (Goforth, 2015). Table 2 below shows the internal consistency between ODL preference items. The Cronbach's Alpha values are 0.650. These values indicate excellent level of Cronbach's alpha; thus, representing a good reliability and internal consistency.

Table 2: Cronbach's Alpha Values

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.870	0.650	15

4.3   Descriptive statistics

The descriptive analysis of this research comprises the respondents' gender, hours spent online, reading material preference and device preference. Table 3 below shows percentages of distribution of frequency for the item gender. Total number of samples is 149 and 81.2 percent (121) of the respondents are females while the balance 18.8 percent (28) are males.

Table 3: Gender

Gender	Frequency	Percent
Male	28	18.8
Female	121	81.2
Total	360	100

Table 4 below shows percentages of distribution of frequency for the item hours spent online and device preference, respectively. Majority of students spent their time online more than 5 hours daily according to table 4 below. In addition, the most common devices used by students are laptop (54.4%) and smartphone (43.0%).

Table 4: Distributions based on Demographics

No.	Hours spent online	Frequency	Percentage
1	1-2 hours	4	2.7
2	3-4 hours	43	28.9
3	5-6 hours	69	46.3
4	Over 6 hours	33	22.1
	Total	149	100
No.	Device Preference	Frequency	Percentage
1	Laptop	81	54.4
2	Smartphone	64	43.0
3	Desktop	2	1.3
4	Tablet	2	1.3
	Total	149	100

4.4   Users' preferences on use of print and electronic resources

Responses to questions on user's preference on use of in-print and on-screen reading resources were clustered because the information sought was related. Responses are summed up in table 5 below.

Table 5: Students' reading format preference

Do you prefer to read online rather than printed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	51	34.2	34.2	34.2
	no	98	65.8	65.8	100.0
	Total	149	100.0	100.0	

According to table 5, the majority (98 or 65.8%) of the respondents prefer to read in-print rather than to read on-screen. There are only 51 respondents (34.2%) who prefer on-screen reading. This is to mark the most important finding for this study as it is to answer the research question. Generally, it is documented that UiTM undergraduate students prefer to read in-print over on-screen version for their ESL reading materials. This supports the findings of previous studies as stated in Samzugi (2019), Mizrachi (2018) and Amaya and Secker (2016) in which the most preferable reading format is still the printed reading materials.

4.5   *Type of reading format preferred the most [in-print or on-screen] based on factors*

Students from both campuses were asked to indicate the type of reading materials they preferred the most either in-print or on-screen reading materials and to provide reasons for such preference. Table 6 onwards illustrates the result of students' reading format preference based on various reasons.

Table 6: Can remember information well

I remember information from my course readings best when I read them from printed pages

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	5	3.4	3.4	3.4
	disagree	4	2.7	2.7	6.0
	neutral	37	24.8	24.8	30.9
	agree	74	49.7	49.7	80.5
	strongly agree	29	19.5	19.5	100.0
	Total	149	100.0	100.0	

Based on the result above, it is clearly stated that the students could remember information better from printed pages with 49.7% of them agree and 19.5% stated strongly agree upon the question asked. It is noted that the students preferred to read printed sources rather than online as the table shows only 2.7% (disagree) and 3.4% (strongly disagree) with the statement respectively.

This finding is similar to the one stated in Amaya and Secker (2016) where the students in the United Kingdom also strongly agreed (42%) as they can remember the information better when they read in-print materials.

Table 7: Convenience

It is more convenient to read my assigned readings electronically than to read them in-print

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	5	3.4	3.4	3.4
	disagree	34	22.8	22.8	26.2
	neutral	77	51.7	51.7	77.9
	agree	31	20.8	20.8	98.7
	strongly agree	2	1.3	1.3	100.0
	Total	149	100.0	100.0	

Meanwhile, in terms of convenient factor, only 22.1% of the students agree and strongly agree that reading electronically is convenient rather than to read the assigned readings in-print. However, 51.7% of them consider both formats are sharing the same value. The students are more likely to feel more convenient in terms of retrieving and accessing electronic material but with reference to the result in table 6, it is reported that students in both campuses prefer to read printed reading materials. Based on the answers 'disagree' (22.8%) and 'strongly disagree' (3.4%) to the question asked, there is a bigger percentage of students (26.2%) who prefer to read in-print materials.

Table 8: Focus better

I can focus on the material better when I read it in-print.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	2.0	2.0	2.0
	disagree	2	1.3	1.3	3.4
	neutral	28	18.8	18.8	22.1
	agree	83	55.7	55.7	77.9
	strongly agree	33	22.1	22.1	100.0
	Total	149	100.0	100.0	

Another factor to be considered for students' preference of using in-print and on-screen is focus. Table 8 illustrates that 77.8% of students agree and strongly agree that reading on printed materials could help them focus on the material better than reading on-screen. This is shown from the table that only 3.4% disagree and 2.0% strongly disagree respectively. When they read on printed materials, they can have more focus as compared to when they read on-screen since there is a higher chance to get distracted by other things like social media, rather than focusing on the reading material alone.

Questions in table 9 and 11 below are designed to get responses on the students' preference which are asked in different ways and separated between the factors to get a strong finding of the study.

Table 9: Reading Material Preference

I prefer to have all my course materials in-print format (e.g. book, handouts)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	2.0	2.0	2.0
	disagree	7	4.7	4.7	6.7
	neutral	45	30.2	30.2	36.9
	agree	63	42.3	42.3	79.2
	strongly agree	31	20.8	20.8	100.0
	Total	149	100.0	100.0	

Table 9 shows nearly third quarter of the students (73.1%) prefer to have their course materials in-print format. Very minimal percentage of the respondents (2% strongly disagree and 4.7% disagree) shows a rejection for reading materials of in-print format. This result reconfirms their preference for reading materials in which the students still prefer the printed materials even though all classes are conducted online.

Table 10: Length of materials

If an assigned reading is 7 pages or more, I prefer to read it in-print.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	2	1.3	1.3	1.3
	disagree	10	6.7	6.7	8.1
	neutral	31	20.8	20.8	28.9
	agree	68	45.6	45.6	74.5
	strongly agree	38	25.5	25.5	100.0
	Total	149	100.0	100.0	

Table 10 shows another factor that leads to their reading format preference. In earlier studies, Mizrachi (2015) stated that the length of the materials also affect the students' preference; printed version can be most preferred for longer readings while on-screen is preferable for shorter material. This study has shown 71.1% of the respondents prefer to read in-print if they are given lengthy pages (7 pages or more) whereas only 6.7% of them disagree and 1.3% stated strongly disagree. The other 20.8% of the respondents seem do not mind to read lengthy pages on the screen. However, this percentage is still not convincing enough to show that the students really prefer to read on-screen as there are more students who opted for printed version of the lengthy pages. Thus, this result is parallel to the findings of Mizrachi (2015).

Table 11: Reading Material Preference

I prefer to print out my course readings rather than read them electronically.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	1	.7	.7	.7
	disagree	9	6.0	6.0	6.7
	neutral	54	36.2	36.2	43.0
	agree	61	40.9	40.9	83.9
	strongly agree	24	16.1	16.1	100.0
	Total	149	100.0	100.0	

As described earlier, Table 11 is meant to reconfirm the students' preference whether they prefer to have reading materials in-print or on-screen. Again, the result gains more than half (57%) of the respondents who agree (40.9%) and strongly agree (16.1%) as they prefer to print out the course materials rather than to read on-screen. Hence, the result is announced to be equivalent with other items in this questionnaire.

Table 12: Suffer headache when read on-screen
I prefer to read in-print as I suffer headache when I read on-screen.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	2.0	2.0	2.0
	disagree	7	4.7	4.7	6.7
	neutral	40	26.8	26.8	33.6
	agree	64	43.0	43.0	76.5
	strongly agree	35	23.5	23.5	100.0
	Total	149	100.0	100.0	

Table 12 shows another consistent result is yielded for the other factor that leads to the students' preference. There is a big percentage (43%) of the respondents who agree and 23.5% of them strongly agree that they suffer headache when they read the given reading materials on the screen. This would hinder them to choose on-screen reading; therefore, they prefer to read in-print the most. This factor may cause other bad effects like having eyesight constraint due to long time spent on-screen or when there is too much on-screen reading done. Thus, this explains the reason why the students prefer to print out the materials if they are given longer reading materials as shown in Table 11.

5. Conclusion

The findings of the study is parallel with the objectives of the study. It was found that most of the students who answered the given questionnaire claimed that their preferred ESL reading materials is the one in-print over on-screen. This has given an impactful insight to all educators especially those who are still modifying their learning materials to better suit the needs of students in this new approach of teaching, Open and Distance Learning (ODL). Among the significant findings is 65.8 percent of the undergraduates prefer printed materials and only 34.2 prefer to read their given reading materials on the screen. This shows that the students still prefer to make printed copies of the materials even though they can always read them on-screen.

Meanwhile, another aspect included in the questionnaire is the factors that determine the type of materials of their choice. Firstly, more than half of the respondents feel that they remember the information best when they read in-print materials. On top of that, when they were asked about the aspect of convenience, only a small percentage of the students believed that digital reading materials are more favourable to them. In addition, the consideration is also given on the length of the materials; for lengthy materials (7 pages or more), two-third of the respondents opt for in-print materials over the on-screen materials. Last but not least, the data analysis revealed that almost 80 percent of the respondents focus better when they read in-print as opposed to the on-screen reading.

As such, one very important recommendation for educators would be to highlight the issue of reading materials preference to the students. This can be done by interviewing the students in the beginning of the ODL session on the mode of reading that they are more comfortable with. If they also share the similar view, educators can always advise students to convert the online materials to digital copies. This is evident to show that regardless of how students find comfort with technology and ample skills in using it, still it may not have a large impact on the preference of the learners to read text from the printed page (Spencer, 2006). They too can be constantly empowered to create powerful learning experiences of their own and this includes the style of reading that they prefer along with the other study tools that they need to accentuate their lessons. On the educators' side, they can consider and provide the hybrid version of materials where the students can print out the materials on their own without burdening them to spend a lot of time reading on-screen.

This study is not without the limitations. It is recommended that future studies should concentrate on students' preference on use of in-print and on-screen reading materials for other subjects and broader circles, not just the undergraduates. The study can be carried out to find the preference of reading materials of students from Diploma and Postgraduate levels to better compare the insightful findings. Other related factors like accessibility to the internet in order to access and download the materials, as well as the personal motivation and enjoyment of reading and doing task on-screen should also be considered. Another area that is worth studying is comparing the examination results between the two groups; one that prefers in-print materials and another group which opts for on-screen materials. It is hoped that these studies can gain more impactful findings that can guide the educationists to steer the

direction of Open and Distance Learning towards producing inspiring graduates that can serve for the betterment of the country and the nation as a whole.

References

Ag-Ahmad, N. (2020). Open and Distance Learning (ODL): Preferences, Issues and Challenges amidst Covid-19 Pandemic. *Journal of Creative Practices in Language Learning and Teaching (CPLT), 8*(2).

Aharony, N. and Bar-Ilan, J. (2018). Students' academic reading preferences: An exploratory study. *Journal of Librarianship and Information Science, 50*(1), 3-15.

Amaya, J. R. & Secker, J. (2016). Choosing between print and electronic… Or keeping both? *Academic Reading Format International Study (ARFIS) UK Report*. Learning Technology and Innovation (LTI), London, UK. http://eprints.lse.ac.uk/67028

Awang, Z. (2012). *Research Methodology and Data Analysis*. UiTM Press.

Chung, E., Noor, N. M., & Mathew, V. N. (2020). Are You Ready? An Assessment of Online Learning Readiness among University Students. *International Journal of Academic Research in Progressive Education and Development. 9*(1), 301–317.

Chung, E., Subramaniam, G., & Dass, L.C. (2020). Online Readiness among University Students in Malaysia amidst of Covid-19. *Asian Journal of University Education, 16*(2), 46-58.

Khair Anwar, I., Omar, N., Mohd Isa, N., & Shamsuddin, S. (2020). Students' Acceptance and Readiness towards Distance Learning During Covid-19 Pandemic. *International Journal of Education and Pedagogy, 2*(4), 39-50.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*, 607-610.

Malaysian Ministry of Higher Education (2020). *Classes at higher learning institutions go online until further notice.* https://www.nst.com.my/news/nation/2020/10/629351/

Mizrachi, D. (2015). Undergraduates' academic reading format preferences and behaviors. *The Journal of Academic Librarianship*, *41*(3), 301–311

Mizrachi, D., Boustany, J., Kurbanoglu, S., & Dogan, G. (2016). The Academic Reading Format International Study (ARFIS): Investigating Students around the World. *European Conference on Information Literacy 2016*.

Mizrachi, D., M. Salaz, A., Kurbanoglu, S., & Boustany, J. (2018). *Academic Reading Format Preferences and Behaviours among University Students Worldwide: A Comparative Survey Analysis*. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0197444

Pešut, D., & Živković, D, (2016). Students' academic reading format preferences in Croatia. *New Library World*, *117*(5/6), 392-406.

Sadeghi, M. (2019). A shift from Classroom to Distance Learning: Advantages and Limitations. *International Journal of Research in English Education, 4*(1), *80-88.*

Samzugi, A. (2019). User preference on use of print and Electronic Resources in Selected Universities in Tanzania: A survey. *Library Philosophy and Practice*. 2811. https://digitalcommons.unl.edu/libphilprac/2811

Singer, L. M., & Alexander, P. A. (2017). Reading across Mediums: Effects of Reading Digital and Print Texts on Comprehension and Calibration. *The Journal of Experimental Education,* 1-18. https://doi.org/10.1080/00220973.2016.1143794

Spencer, C. (2006). Research on learners' preferences for reading from a printed text or from a computer screen. *Journal of Distance Education Revue De L'Education A Distance, 21*(1), 33-50.

Wang, S., & Bai, X. (2016). University Students Awareness, Usage and Attitude towards E-books: Experience from China. *Journal of Academic Librarianship, 42,* 247-258. https://doi.org/10.1016/j.acalib.2016.01.001

Zipf, G. K. (1949). *Human behavior and the principle of least effort*. Addison-Wesley.