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Exploring individual differences factors influencing acceptance use of e-resources in higher education in Oman.

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Abstract

This study investigated factors that influence faculty members attitudes toward accepting Masader (Oman virtual science library) e-resources at the higher education in Sultanate of Oman, this is due to the unexpected decrease after the first year of use by the academics. To achieve this, a set of behavioral factors has been relied upon, such as the behavioral intention (BI) and the perceived usefulness (PU) and perception of easiness (POE). These factors may also be affected and related to other external factors such as individual differences (ID). The relationships between these different factors are also formulated as hypotheses to verify their stability and validity.

The study population consists of This study will only focus on academics in universities and colleges in the Sultanate of Oman. The researcher used mixed methods for the current investigation, where both qualitative and quantitative approaches are joined for a blend of data. The study found a direct relationship between (POE& PU) and the (BI) to use, and direct relationship between (ID) and (POE& PU), which in turn affects (BI) to use. The results also indicate that the gender, age and Academic experience affects the (BI) of academics towards the use of Masader.

Keywords

Masader, Technology Acceptance Model (TAM), perception of easiness (POE), perceived usefulness (PU), behavioral intention (BI), individual differences (ID).

1. RESEARCH BACKGROUND:

The utilize of e-resources by academics and researchers, it is, therefore, a significant zone of research in recently information environment. It has turned to an essential part of institutions in higher education as it plays a necessary function in gathering the needs of these institutions from information and communication. Sejane (2017) concur that e-resources enable access to a broad domain of data from anywhere in the world, such as up-to-date scientific papers. It allows educational institutions to share information and to organize the output to a wider user with websites. There are International efforts around the world to let access and use of e-resources in academic digital libraries.

However, the acceptance of the use of e-resources by users in general and academics and researchers, in particular, is still, a significant variable to judge the success of the effectiveness and confidence of this type of information in education and research (Kelson, 2016).

2. PROBLEM STATEMENT

This study aims to explore individual differences factors (ID) that impact the academics adoption e-resources of Oman virtual science library (Masader) in higher education institutions in sultanate of Oman.

3. RESEARCH AIMS AND OBJECTIVES

1. Identify the relationship between (perception of easiness and perceived usefulness) with the behavioral intention to adopt the use of Masader.
2. Determine the relationship between the individual differences of the academics and behavioral intention to adopt the use of Masader.
3. Examine whether the demographic variables (gender, age, and years of academic experience) affects the academics behavioral intention to adopt the use of Masader.

4. RESEARCH QUESTIONS

1. What is the relationship between (perception of easiness and perceived usefulness) and the behavioral intention to adopt the use of Masader?
2. What is the relationship between the individual differences of the academics and behavioral intention to adopt the use of Masader?
3. Did demographic variables (gender, age, and years of academic experience) affects the academics behavioral intention to adopt the use of Masader?

5. HYPOTHESES:

H1. Perceived usefulness has positive effects on behavioral intention to use Masader.

H2. Perception of easiness has positive effects on perceived usefulness.

H3. Perception of easiness has positive effects on behavioral intention to use Masader.

H4. Individual differences have positive effects on perceived usefulness.

H5. Individual differences have positive effects on the perception of easiness.

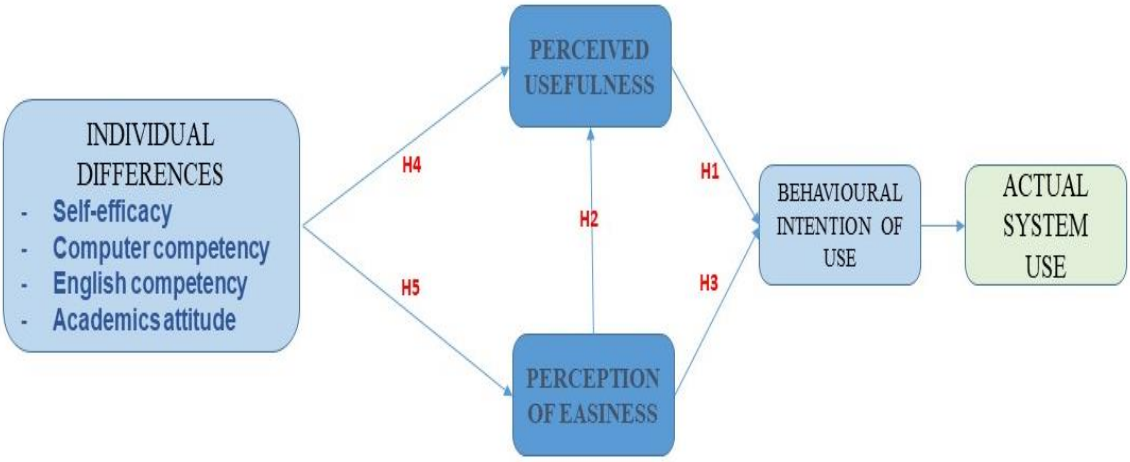

Figure 1 Hypothesized model

6. LITERATURE REVIEW

6.1 Tam

Technology Acceptance Model (TAM) is the most commonly used model of all the above-listed mentioned models and theories in IT and IS. In addition, TAM has drawn researchers ' attention to studying technology adoption and they focused more on these problems (Alkandari, 2015). Technology adoption has actually achieved importance through TAM (Davis, B agozzi& Warshaw, 1989). This is due to the reasons put forward by Davis (1989), who declares that there has been a deficiency in the field of IT, as regards valid and high-quality measures to predict the extent of user acceptance, its relationship to system usage and its associations with the system being used. As a result, TAM has introduced a suitable scale for predicting users' acceptance and the usage of technology, based on perceived usefulness and perceived ease of use

Furthermore, TAM has been widely applied, validated and successful in higher education. There is significant TAM applicability most experienced research regarding the investigation of academics' and students attitudes and behavior towards technology in higher education, for example online discussion forums (Adetimirin, 2015), web-based learning systems (Yeou, 2016), social networks using in Higher Education(Dumpit& Fernandez, 2017), Wiki Technology (Altanopoulou& Tselios, 2017), internet (Mallya&

Lakshminarayanan, 2017). TAM also has been used to study the adoption of e-resources in higher education (Sadiku& Kpakiko, 2017; Fasi, 2018; Lwoga& Sife, 2018).

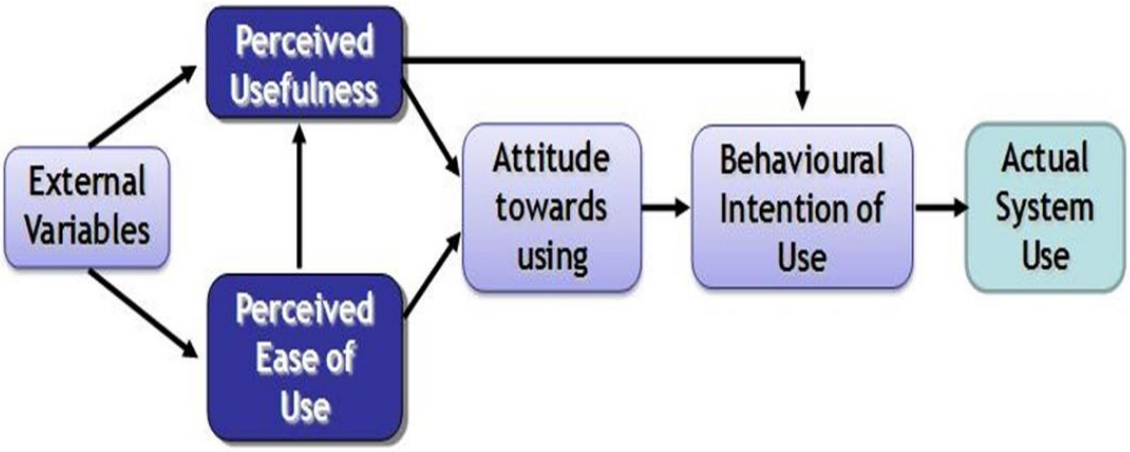

Figure 2 Technology Acceptance Model (TAM)

6.1.1 The Perception Of Easiness (POE)

Davis (1989) defines perception of easiness (POE) as "the degree to which an individual believes that his use of a specific system will be with less effort. Tao (2008) reveal that an information system that can easily supply the information needs of users will be a useful system for them. This is confirmed by the outcomes of his study, which stated that perception of easiness plays a clear function in the acceptance of e-resources positively on the usefulness. Mallya (2017) confirm that the perception of easiness effect does not affect behavioral intent significantly without influencing the perceived usefulness. Study by Ju& Albertson (2018) confirmed also that perception of easiness significantly influenced intention to use video digital libraries both directly and indirectly, through perceived usefulness. Most studies always suggest the influence of one belief on another, but there are studies suggesting that the effect of both beliefs (ease and usefulness) is equal to behavioral intent (Agarwal & Prasad, 1999; Joshua& King, 2020). Adeoye& Olanrewaju study (2019) confirmed that the perceived usefulness and ease of using the library's e-resources for respondents is impressive. This indicates that the users are in tune with the use of technology in the library to carry out their research and academic work. This reveals the level of satisfaction of respondents using e-resources. Users acknowledge the commitment of the university and library to provide adequate e-resources.

6.1.2 Perceived Usefulness (PU)

Davis claims that individuals tend to use a specific system if they feel this system will allow them to perform their tasks better (Davis et al., 1992, p. 1116). Tao (2008) Confirms that the most influential variable was perceived usefulness the acceptability of the e-resources used by health students, but there are studies suggesting that the effect of

both beliefs (ease and usefulness) is equal to behavioral intent (Agarwal & Prasad, 1999; Joshua& King, 2020; Adeoye& Olanrewaju, 2019). Most studies agree that the perceived usefulness is affect stronger than the effect of the perception of easiness perception of easiness directly on the behavioral intention (Jeong, 2011; Adegbore, 2011; Thong et al., 2002; Davis, 1993; Ju& Albertson, 2018). This is confirmed by a study (Izuagbe, 2016), which dealt with two variables (productivity& relative advantage) which affect the usefulness of using e-resources in the libraries of Nigerian private university. The results indicated that the increase in the perceived usefulness is offset by an increase in the adoption of the e-resources usage. As the outcomes of the research (Mallya, 2017) this was applied to students of private universities in India, where accepting the use of the Internet for academic reasons was concerned, perceived usefulness was a significant factor in determining the student's behavioral intention to use the Internet for academic reasons.

6.2 INDIVIDUAL DIFFERENCES (ID)

There is an agreement in the previous studies that individual differences are the most important external variables impacting the information system's success and user interaction with the computer, and it plays a major role in influencing e-resources usage (Zha et al., 2014).

6.2.1 Self-efficacy

The first and most important way is to interpret what they have done; self-efficacy is not a static notion, it’s continuously realized in the individual mind, through what Yahaya (2017) called "mastery experiences". When individuals have higher self-efficacy in getting information, they are ready to face difficulty or failure in searching, comparing and evaluating information (Zha, 2015). Previous studies have examined self-efficacy across fields, taking as their focus computer self-efficacy (Lee et al., 2009), academic self-efficacy (Zhu et al., 2011), job search self-efficacy (Dahling et al., 2013), political self-efficacy (Vecchione et al., 2014) and teaching self-efficacy (Arsal, 2014). In this study, we focus on self-efficacy influencing adoption of a virtual library, defined as individuals ' assessments of their ability to search, compare and evaluate their e-resources (Zhou, 2012).

6.2.2 Computer Competency

Al-Alawi (2013) confirmed in his study that computer skills are among the most important determinants that have influenced the acceptance of academics in the applied sciences colleges in Oman to the use of e-resources. Studies undertaken in Oman have revealed similar results (Al-Aufi, 2006; Al-Alawi, 2014). Fasi (2018) in his study about the use of higher education digital libraries at Taibah University indicate that computer skills are essential for effective the e-resources usage, According to Fasi, there is an important relationship between the use of digital libraries by students and their computer skills. This study's findings are compatible with the Lwoga & Sife (2018) which applied to 204 academics participated from three public universities in Tanzania.

6.2.3 English Competency

To be able to read and understand information published in e-resources, it is very significant to have the necessary awareness of the language skills, which the information published (Park et al, 2009). Many studies show that English has surpassed other languages in electronic publishing. This is confirmed by AL-Aufi (2006) in the results of his study, which pointed to the great interest and increasing use of English in research and scientific communication, especially among academics in general and applied sciences at the Sultan Qaboos University in Oman. Al-Aufi and Al-Harasi (2010) in their study applied on academics at Sultan Qaboos university emphasize the dominance of English language and the great and growing, Arab academics' escape (especially in applied sciences) towards English writing, not only at the level of authorship but also at the level of information retrieval. The study results of Al-Alawi (2013) confirmed that the respondents found that their English language skills made their use of e-resources easier with arithmetic mean, and helped them achieve greater benefit from these e-resources. These and other studies have confirmed that English Competency, especially in academia, affects the perception of easiness of e-resources and the expected usefulness from using these sources (Park et al., 2009).

6.2.4 Academics Attitude

Jestin and Sornam (2016) examining the use of e-resources by faculty members in engineering colleges in Kerala. The results show that the majority of faculty are well aware of e-resources and most of them use e-resources at least once a week. Overall, the availability of e-resources is good except for some engineering electronic packages. Most employees use desktop computers to access key and e-resources. The purpose of their use is to teach. The password is unknown, the threat of viruses, poor internet connectivity, lack of time, and the availability of restricted e-resources on campus are some of the difficulties they face. The study also reveals that almost all employees are satisfied with the facilities available for accessing resources. Kaur (2018) analyses User Attitude and Satisfaction with Electronic Information Resources in Jalandhar Research Institute Libraries. He has been found to be generally satisfied with digital tools by the scientific respondents. Nonetheless, it also found that non-scientific respondents do not make full use of online resources. It was proposed based on these results, that the library should increase bandwidth to improve the speed of accessing e-resources.

7. METHODOLOGY

7.1 Research Approach

This research will adopt the mixed method approach, which Creswell (2014) defined as “approach to inquiry that combines both qualitative and quantitative forms of research”. It involves philosophical assumptions; the implementation of qualitative and quantitative approaches and the combining or integration of both techniques will use into a search.

7.2 Population and Sampling

According to the Ministry of Higher Education statistics (2019), there were (2727) academics in 30 institutions they are members of the e-resources service of Masader. According to that, the recommended size for the survey sample is (337). In fact, 500 questionnaires were distributed online to ensure that the number of analytical responses was obtained after excluding responses that were not analyzable.

7.3 Data Collection

The questionnaire will include a number of questions to help the researcher to collect data on the study subject, and answer the hypotheses raised. The second phase of the research will involve interviewing academics, the researcher selected (10) academics from the total who agreed to conduct an interview with them in the question asked in the online questionnaire.

7.4 Quantitative Data Analysis

The quantitative data acquired from the study sample were analyzed with SPSS through the phase one survey. This program provides various types of statistics required to analyze quantitative data and to create helpful tables and graphs that can be presented in the report.

7.5 Qualitative Data Analysis

Content analysis and thematic analysis is one of the most important methods for analyzing qualitative data as both are used to develop a framework for describing and organizing this type of data. In this study, thematic analysis was used to analyze qualitative data by focusing on the commonalities between the data (Braun and Clarke, 2006).

8. RESULTS

8.1 Demographic data

8.1.1 Gender

As depicted in Table 1, the majority of the respondents are males with 67.6% compared to 32.4% of females. that is mean 3 in 10 respondents were females.

Table 1 The effect of Gender on the Behavioral Intention (BI).

Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Sig. (2-tailed)
Male	304	214.93	65338.50	18978.500	.002
Female	146	247.51	36136.50		
Total	450				

8.1.2 Age

The results of the distribution of respondents among age groups indicate that more than half of the respondents are between the ages of 36-45 (52%),

And Respondents from the age group 23-30 represent the lowest percentage among the total which is about 9.8%. Table 2 illustrate the frequency and percentage of each age group.

Table 2 The effect of Age on the Behavioral Intention (BI).

Age	N	Mean Rank
23-30	44	201.64
31-35	66	231.83
36-40	116	246.50
41-45	122	226.17
more than 45	102	207.01
Total	450	
Chi-Square	10.288	
Sig.	.036	

8.1.3 Academic Experience

When examining the academic experience of the respondents, the majority of respondents (96%) have academic experience of more than 16 years, whilst 20% have academic experience between 6 and 10 years, and around 10.9% have academic experience between 1 and 5 years. Finally, those with average academic experience (between 11 and 15 years) constituted approximately 3.1% of the total respondents (Table 3).

Table 3 The effect of Academic Experience on the Behavioral Intention (BI).

Academic Experience	N	Mean Rank
1-5 years	49	128.56
6-10 years	90	256.06
11-15 years	14	293.00
16-20 years	179	215.99
more than 20 years	118	248.86
Total	450	
Chi-Square	62.299	
Sig.	.000	

8.2 Results relating to the research questions and hypotheses.

Q1. What is the relationship between (Perception Of Easiness and Perceived Usefulness) and the Behavioral Intention to adopt the use of Masader?

Table 5 shows the link between (Perception Of Easiness and Perceived Usefulness) and (Behavioral Intention). It is clear that all correlation coefficients are is statistically significant at the level of (0.000) which is a value less than (0.05), and that the highest value between the behavior intention and the perceived usefulness (.508), and it is a positive and moderate relationship. Moreover, the perception of ease is closely related to behavioral intention (.432), but less than the perceived usefulness, both of which are positive.

Table 5 Correlation Coefficient between (POE & PU) and (BI).

Spearman's rho		Perception of Easiness (POE)	Perceived Usefulness (PU)
Behavior Intention (BI)	Correlation Coefficient	.432**	.508**
	Sig. (2-tailed)	.000	.000
	N	450	450
**. Correlation is significant at the 0.01 level (2-tailed).			

Three hypotheses fall under the first question:

H1. Perceived usefulness has positive effects on behavioral intention to use Masader.

Table 6 shows that the correlation coefficient is positive and statistically significant, as the calculated correlation coefficient value is equal to (.508), which is significant at the level of (0.000) which is a value less than (0.05), which indicates a positive and moderate relationship that links between the Perceived usefulness and the behavioral intention to use, and this result confirms the first hypothesis.

Table 6 Correlation Coefficient between (PU) and (BI).

Spearman's rho		Perceived Usefulness (PU)
Behavior Intention (BI)	Correlation Coefficient	.508**
	Sig. (2-tailed)	.000
	N	450

H2. Perception of easiness has positive effects on perceived usefulness.

Table 7 demonstrates that the correlation coefficient is positive and statistically significant, as the calculated correlation coefficient value is equivalent to (.592), which is significant at the level of (0.000) which is a value less than (0.05), which indicates a positive and moderate relationship that links between the Perception of easiness and Perceived usefulness, and this result confirms the second hypothesis.

Table 7 Correlation Coefficient between (PU) and (POE).

Spearman's rho		Perception of Easiness (POE)
Perceived Usefulness (PU)	Correlation Coefficient	.592**
	Sig. (2-tailed)	.000
	N	450

H3. Perception of easiness has positive effects on behavioral intention to use Masader.
Table 8 reveals that the correlation coefficient is positive and statistically significant, as the estimated correlation coefficient value is equivalent to (.432), which is significant at the level of (0.000) which is a value less than (0.05), which indicates a positive and moderate relationship that links between the Perception of easiness and behavioral intention, and this result confirms the third hypothesis.

Table 8 Correlation Coefficient between (POE) and (BI).

Spearman's rho		Perception of Easiness (POE)
Behavior Intention (BI)	Correlation Coefficient	.432**
	Sig. (2-tailed)	.000
	N	450

Q2. What is the relationship between the individual differences of the academics and behavioral intention to adopt the use of Masader?
Table 9 shows the correlation between (Individual Differences) and (Behavioral Intention). It is clear that correlation coefficients are is statistically significant at the level of (0.000) which is a value less than (0.05), and that the highest value between the behavior intention and the sub variables of individual differences, we can see that Academics attitude (AA) have more effect in Behavior Intention to use Masader (.735), and English language competency (EC) have the lowest effect (.302).

Table 9 Correlation Coefficient between (ID) and (BI).

Spearman's rho		SE	CC	EC	AA	Individual Differences (ID)
Behavior Intention (BI)	Correlation Coefficient	.379**	.673**	.302**	.735**	.462**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	450	450	450	450	450

With regard to this question, the researcher assumed two hypotheses that fall under the second question, considering that the belief variables (PU, POE) are intermediate variables that are affected by external variables (ID, SQ) and affect the behavioral variable (BI).

H4. Individual differences have positive effects on perceived usefulness.

Table 10 demonstrates that the correlation coefficient is positive and statistically significant, as the calculated correlation coefficient value is equivalent to (.599), which is significant at the level of (0.000) which is a value less than (0.05), which indicates a positive and moderate relationship that links between the Individual Differences and Perceived Usefulness, and this result confirms the fourth hypothesis.

Table 10 Correlation Coefficient between (ID) and (PU).

Spearman's rho		Individual Differences (ID)
Perceived Usefulness (PU)	Correlation Coefficient	.599**
	Sig. (2-tailed)	.000
	N	450

H5. Individual differences have positive effects on the perception of easiness.

Table 11 reveals that the correlation coefficient is positive and statistically significant, as the estimated correlation coefficient value is equivalent to (.707), which is significant at the level of (0.000) which is a value less than (0.05), which indicates a positive and strong relationship that links between the Individual differences and Perception of easiness, and this result confirms the fifth hypothesis.

Table 11 Correlation Coefficient between (ID) and (POE).

Spearman's rho		Individual Differences (ID)
Perception of Easiness (POE)	Correlation Coefficient	.707**
	Sig. (2-tailed)	.000
	N	450

Q3. Did demographic variables (gender, age, and years of academic experience) affects the academics behavioral intention to adopt the use of Masader?

To answer this question, which tests the association between some demographic characteristics (gender, age, and years of academic experience) and Behavioral Intention (BI). Usually, the independent samples t-test is used for the samples, and because the nature of the data for this study as we mentioned earlier are non-parametric data, the Mann-Whitney and Kruskal-Wallis tests will be used.

A. Gender

Mann-Whitney U test provides the non-parametric equivalent of the t-test and allows comparisons of samples distributed other than the normal distribution. In this test, the central tendency measures to be compared is the median rather than the mean, and as with many non-parametric (non-parametric) tests, all calculations are performed by setting the rank for each data point rather than the actual numbers (Elst, 2019).

From Mann-Whitney Test result that is shown in Table 12 it can be concluded that female group is statistically significantly affect the academics behavioral intention higher than the Male group (U = 18978.500, p = .002). Where the average ranks of the male group (214.93) and the total ranks (65338.50), while the mean levels for the female group (247.51) and the total ranks (36136.50), and the value of the significance (.002). This indicates that there are statistically significant differences between the mean levels of males and females' grades in favor of females with a degree (U = 18978.500, p = .002).

Table 12 The effect of Gender on the Behavioral Intention (BI).

Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Sig. (2-tailed)
Male	304	214.93	65338.50	18978.500	.002
Female	146	247.51	36136.50		
Total	450				

B. Age

Likewise, when the Mann-Whitney U test provides a non-parametric alternative to the T-test for two samples, the Kruskal-Wallis test as an alternative to ANOVA test using grade levels is a non-parametric alternative used where more than two samples are compared (Hesse, 2017).

The researcher conducts this test in order to determine which Age group has the higher effect on the academic's Behavioral Intention. The result of the test is presented in Table 13, where it can be conclude that Age group 36 to 40 is statistically significantly affect the academics behavioral intention higher than other groups (Mean Rank = 246.50), and that Age group 23 to 30 is statistically significantly affect the academics Behavioral Intention lower than other groups (Mean Rank = 201.64). (Chi-Square = 10.288, p = .036).

Table 13 The effect of Age on the Behavioral Intention (BI).

Age	N	Mean Rank
23-30	44	201.64
31-35	66	231.83
36-40	116	246.50
41-45	122	226.17
more than 45	102	207.01
Total	450	
Chi-Square	10.288	
Sig.	.036	

C. Academic Experience

Table 14 presents the result of Kruskal-Wallis test in order to determine which Year of Academic Experience group has the higher effect on the academic's Behavioral Intention. It can be noticed that the 11 to 15 years of Academic Experience group is statistically significantly affect the academics Behavioral Intention higher than other groups (Mean Rank = 293.00) and 1 to 5 years of academic experience group is statistically significantly affecting the academics behavioral intention lower than other groups (Mean Rank = 128.56). (Chi-Square = 62.299, p = .000).

Table 14 The effect of Academic Experience on the Behavioral Intention (BI).

Academic Experience	N	Mean Rank
1-5 years	49	128.56
6-10 years	90	256.06
11-15 years	14	293.00
16-20 years	179	215.99
more than 20 years	118	248.86
Total	450	
Chi-Square	62.299	
Sig.	.000	

9. DISCUSSION

Q 1. What is the relationship between (perception of easiness and perceived usefulness) and the behavioral intention to adopt the use of Masader?
Three hypotheses under this question will be discussed:

H 1. Perceived usefulness has positive effects on behavioral intention to use Masader.
The correlation coefficient for this hypothesis indicates a statistically significant positive effect of perceived usefulness on academic's behavioral intention to use Masader. This result is in line with the findings of Joshua& King (2020), Adeoye& Olanrewaju (2019), Ju& Albertson (2018), Izuagbe (2016), Mallya (2017). All of these studies affirm that increased adoption of any technology is facilitated by increasing user perception of the usefulness of the technology in question. This leads us that academics who perceive Masader is useful are more likely to have a positive behavioral intention towards using it.

Most of those interviewed answered that e-resources are very useful in many aspects, whether those related to education or scientific research such as improving performance, increasing efficiency and productivity, and saving the time of the beneficiary from the service and the financial costs incurred by the institution as a result of traditional subscriptions to the printed periodicals. Many of those interviewed also praised the use of technology in education, and encouraged the use of advanced communication technologies that could connect education workers around the world.

H 2. Perception of easiness has positive effects on perceived usefulness.
The correlation coefficient for this hypothesis indicates a statistically significant positive effect of the Perception of easiness and Perceived usefulness. No amount of ease of use will compensate for a system that does not do a useful job. However, the significant impact of perception of easiness on perceived usefulness assumes the important role that easiness plays in making the system useful. In order to increase the perceived usefulness, the capabilities of the system must match those of those who benefit from the system. This finding confirms with previous studies carried out by Mallya (2017) and Ju& Albertson (2018). These studies indicate that perception of easiness can indirectly affect a user's behavioral intention by affecting the perceived usefulness.

H 3. Perception of easiness has positive effects on behavioral intention to use Masader.
The correlation coefficient for this hypothesis indicates a statistically significant positive effect of the perception of easiness and behavioral intention. the study finding is consistent with the studies conducted by Park et al. (2009), Mallya (2017) and Ju& Albertson (2018). Perception of easiness showed a lower effect on academic's behavioral intention in comparison with perceived usefulness, this can be attributed to the skills that academics possess in dealing with technology, whether they acquired during their studies or after joining higher education institutions, this has contributed greatly to facilitating their use of electronic information sources and other existing information systems, perhaps because the target population (academics In higher education institutions) were

in an academic environment saturated with technology, and this is evident from the descriptive data for the study sample. This in turn, underlines the seriousness of perceived usefulness in academics Masader e-resources usage. This finding is inconsistence with the finding of studies, which emphasizes that the effect of both beliefs (ease and usefulness) is equal to behavioral intent (Agarwal& Prasad, 1999; Joshua& King, 2020; Adeoye& Olanrewaju, 2019).

Q 2. What is the relationship between the individual differences of the academics and behavioral intention to adopt the use of Masader?

Agarwal & Prasad (1999) found out that the individual differences that can affect the extent to which a particular society accepts a certain technology may differ according to the nature of that society, and for this study, it included four individual differences according to the researcher's opinion due to his knowledge of the nature of the study community and which is: self-efficacy (SE), computers competency (CC), English competency (EC) and academics attitude (AA). It is clear from study results that correlation coefficients are is statistically significant at the level of (0.000) which is a value less than (0.05), and that the highest value between the behavioral intention and the sub-variables of individual differences, we can see that Academics attitude (AA) have more effect in Behavior Intention to use Masader (.735), followed by computer competency (CC) with (673), while English language competency (EC) and self-efficacy (SE) have the lowest effect (.302) (.379) respectively.

The researcher assumed two hypotheses that fall under the second question, considering that the belief variables (PU, POE) are intermediate variables that are affected by external variables (ID) and affect the behavioral variable (BI).

H 4. Individual differences have positive effects on perceived usefulness.

The results demonstrates that the correlation coefficient is positive and statistically significant equivalent to (.599), which is significant at the level of (0.000) which is a value less than (0.05), which indicates a positive and moderate relationship that links between the Individual Differences and Perceived Usefulness, and this result confirms the fourth hypothesis.

H 5. Individual differences have positive effects on the perception of easiness.

The results reveals that the correlation coefficient is positive and statistically significant, equivalent to (.707), which is significant at the level of (0.000) which is a value less than (0.05), which indicates a positive and strong relationship that links between the Individual differences and Perception of easiness, and this result confirms the fifth hypothesis.

By comparing the results of the two hypotheses, it becomes clear to us that the effect of individual differences on perception of easiness is greater than their impact on perceived usefulness, and this from my point of view is very logical as the psychological characteristics, personality traits, and cognitive and emotional elements that academics distinguish such as their positive attitude towards the use e-resources (AA), or their skills in using the computer (CC) Or the English language (EC), as well as their confidence in the ability to deal with Masader as a system of e-resources (SE), all of these differences

play an important role in easiness the use of the system and thus obtaining the expected usefulness from it.

These results are consistent with the results of some previous studies such as Kaur (2018), Singh (2009), Jestin& Sornam (2016), that cited users' attitudes towards technology areas being an important factor in explaining technology acceptance. Al-Alawi (2013) and Al-Alawi, 2014 confirmed in his studies that computer skills are among the most important determinants that have influenced the acceptance to the use of e-resources, Fasi (2018) indicate that computer skills are essential for effective the e-resources usage, Lwoga & Sife (2018) found an important relationship between the use of digital libraries by students and their computer skills. On the other hand, the results of this study are not compatible with other studies such as Yahaya (2017) and Zha, (2015) that confirmed that when individuals have a higher self-efficacy in obtaining information, they are ready to face difficulty or failure to search for, compare and evaluate information, and therefore they play a central role to the acceptance of new technology. Also, self-efficacy has been tested as a fundamental external variable in several fields and has been shown to have a significant impact on technology acceptance in these areas (Lee et al., 2009; Zhu et al., 2011; Dahling et al., 2013; Vecchione et al., 2014; Arsal, 2014; Zhou, 2012). Also, Other studies were not fully consistent with the results of this study in that the English language had a weak effect on behavioral intent. Many studies confirmed that the beneficiaries found that their English language skills made their use of e-resources easier and it helped them to achieve greater benefit from these electronic resources, and that their impact was great and not weak (Park et al, 2009; AL-Aufi, 2006; Al-Aufi and Al-Harasi, 2010; Jawhri, 2004; AL-Khathamy, 2010; Al-Aklebi 2011; Al-Alawi, 2013).

The results of the two phases of the study agree on the research question by clarifying that individual differences are an important factor in explaining the differences in the intention of academics to use e-resources, and that the reason is that they generally understand the ability of individual differences to enhance the benefit from this use. Most interviewees agree that learning specific skills is not enough to be able to handle technology, but rather requires confidence in the ability to use these skills effectively. This leads to self-efficacy. Interviewees also emphasized that computer skills are one of the most important determinants that affect acceptance of the use of any technology in general and e-resources in particular and that their computer skill has made the use of resources easy and simple in terms of printing, downloading files, sending documents in PDF format, sending them by email, or sharing them on social media accounts. Some interviewees believe that most of the publication in Masader is in English in addition to other languages, of course, which may cause difficulty in a country like Oman, in which the Arabic language is the official language and this may explain the weak influence of (EC) on the behavioral intention of the academics. However, most of the interviewees were PhD graduates and conducted their degrees in English, so the language was not an obstacle for them in dealing with Masader. Regarding the academic's attitudes (AA) towards the use of Masader Most of the academics interviewed have expressed that they

like to use e-resources that are available through the Masader platform, and they consider their use useful and positive considering the nature of their work.

Q 3. Did demographic variables (gender, age, and years of academic experience) affects the academics behavioral intention to adopt the use of Masader?

a. Gender

the results showed that there are statistically significant differences between the academic attitudes towards the use of Masader by gender factor in favor of female academies. the results showed that there are statistically significant differences between the academic attitudes towards the use of Masader by gender factor in favor of female academies.

This unexpected result is consistent with the results of a study conducted in the United Arab Emirates that indicates that most female teachers have very positive attitudes towards technology and have used a set of e-learning tools as electronic information sources in their teaching more than male teachers. The study also showed that female teachers have more experience, familiarity, and knowledge of technology resources and applications than male teachers (Almekhlafi & Almeqdadi, 2010). ALshomrani (2019) and Xiong (2020) indicate also that female respondents were more likely to have some or more knowledge about technology. They result was contrary to most of the results of previous studies that indicate that gender has generally not been found to be significant in explaining technology acceptance in developing countries (Mansuri, 2016; North, 2002; Al-Alawi, 2013; Al-Alawi, 2014). Other studies also indicate that if there are statistically significant differences, it is in favor of males (Gautam, 2017, Joshua, 2020).

b. Age

The results of the quantitative data analysis indicate that the (age) affects the behavioral intention of academics towards the use of Masader. it can be concluded that Age group 36 to 40 statistically significantly affects the academics behavioral intention higher than other groups (Mean Rank = 246.50), followed by Age group 31to 35 with (Mean Rank = 231.83), (Chi-Square = 10.288, p = .036). Combined, these two phases represent the youth stage, in which the beneficiary naturally tends to use technology in various aspects of his life extensively, and this explains this result. This is because younger generations are more aware and knowledgeable of the latest technologies. They are considered a technologically smart group. Moreover, young users are the first users of technologies and focus on gratifying technology in the context of their daily lives, making them the most age-qualified to handle and use electronic information sources.

This result is in line with the findings in the literature which indicates the superiority of the youth category in dealing with technological systems, including digital and virtual libraries, because of their capabilities and experiences, whether acquired due to their daily practices or through training and qualification (Venkatesh et al 2003; Zalah, 2018; Kelson, 2016; Ammar, 2017; Fasi, 2018). Whereas, Krishanan et al, (2017) opposes the outcome of this study, indicating that older users (38-60) had a strong determinant of behavioral intent compared to the younger generation (18-37). Also, some previous studies indicate that the behavioral intention to accept the use of e-resources is not affected by the age variable (Al-shomrani, 2019; Al-Alawi, 2013; Al-Alawi, 2014).

c. Academic experience

The results of the quantitative analysis indicated that the academics experience factor has an influence on academic's behavioral intention towards using Masader. The results also indicate that academics attitudes vary according to their level of academic's experience. The results show that the 11 to 15 years of Academic Experience group statistically significantly affect the academics Behavioral Intention higher than other groups (Mean Rank = 293.00), followed by 6-10 years (Mean Rank =256.06), (Chi-Square = 62.299, p = .000). This result is consistent with the previous result related to the age factor, as academics between the ages of 31-40 years, often have academic experience between 6-15 years, which makes this category for the same reasons that were explained previously.

The findings are directly in line with previous findings (Zalah, 2018; Kelson, 2016; Ammar, 2017; Fasi, 2018) which suggests that academic experience affects the behavioral intention of the beneficiary to adopt the use of information systems in general and electronic libraries in particular. In comparison, however, it contradicts the findings of several previous studies that conclude there are no statistically significant differences due to the variable of academic experience and the degree of its effect on the behavioral intention to accept the use of e-resources (Al-Shomrani, 2019; Al-Alawi, 2013; Al-Alawi, 2014, Krishanan et al, 2017).

10. CONCLUSION:

This study aims to identify individual differences (ID) that impact the academics adoption e-resources of Oman virtual science library (Masader) in higher education institutions in sultanate of Oman, through the application of the (TAM) technology acceptance model. The study found a direct relationship between belief variables (perception of easiness, perceived usefulness) and the behavioral intention to use. The study also found that there is a direct relationship between external variable (individual differences) and belief variables (perception of easiness, perceived usefulness), which in turn affects the behavioral intention to use. The results showed that there are statistically significant differences between the academic attitudes towards the use of Masader by gender factor in favor of female academies. The results also indicate that the age and Academic experience affects the behavioral intention of academics towards the use of Masader. These results acquire great importance in understanding the factors that affect the acceptance of faculty members in the in higher education institutions in sultanate of Oman, to use Masader to accomplish their academic and research tasks.

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