**PERCEPTION OF POSTGRADUATE STUDENTS TOWARDS OPEN ACCESS PUBLICATION IN SOME SELECTED INSTITUTIONS IN MALAYSIA**

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**Abstract**

This article investigates perception of postgraduate students towards open access publication in two research institutions in Malaysia. A descriptive survey was used in the study which involves 121 respondents from 500 sample population sent instrument to from both Universities. A simple random technique was used for the study. Data were analyzed using frequency counts, percentages, mean and standard deviation, independent sample t-test and One-way analysis of variance tests (ANOVA) was employed to determine if there is a statistically significant mean differences in perceived usefulness and perceived effectiveness of OA publications between ages of postgraduate students. The findings revealed why postgraduate scholars should embrace Open Access publication for wider visibility and reproducibility of academic research and development. The results also show that majority of the respondents were of mean age of 2.67 and highest age bracket was between 26-35 years. However, the sample size of the survey was quite small and further research is needed to determine if similar findings are obtained when other researchers are included in the sample.

**Keywords: *Perceived Usefulness, Effectiveness, Open Access, Postgraduate Students, Publishing.***

1. **Introduction**

As scholarly communication awareness is moving speedily away from the traditional ways of publishing to the new forms of scholarship and gaining wider spectrum through social media and Open Access. Scientists and many scholars (Pasquini, Wakefield, and Roman, 2014) are to embrace this new form scientific publication but some still feel skeptical about the trend in the scholarship, (Nicholas et al; 2016).

To be Open in scholarly practices is by granting access to scientific publishing without any restriction. Without access to the publication or data created by a researcher is like creating a barrier between the created data and the users especially when such data or finding is funded by public money. Open Access (OA) in its freshest exercise is digital, virtual, non-charge, free and open to most copyright and certifying limitations (Suber, 2013). Saying in a different way, it follows eliminating both price barricades- payments, authorizing charges, pay-per-view dues and authorization hurdles (mostly, exclusive rights and certifying restrictions) (Budapest Open Access Initiative 2002; Suber, 2013) so that data and information are freely accessible online and can be used for any legal drive, without monetary, lawful, or mechanical barricades other than those dedicated from attaining access to the internet itself (Budapest Open Access Initiative, 2002). The philosophies of OA are perceived as open-door and universal goods and their involvement signifies open-door and universal goods particularly to the academe.

In opposition, instead of OA to be adopted normally, different agreements were taking on the various issues such as approval barriers, durations and who bears the cost of the production process, bearing in mind that OA is not totally free, involving peer reviewers, facility and technology costs. Also, diverse models which include libre OA (free of charge and expressly permits uses beyond fair use), green and gold OA (pay-for-production trailed by deferred publishing in an OA repository or gratis OA), delayed/deferred OA (paid access initially, becoming open after a set time period), gratis OA (free of charge, but not free of copyright or licensing restrictions), and so on (Budapest open access initiative 2002; Suber, 2013).

On the one hand, information and communication technologies (ICTs) and online forums are creating novel prospects in organizing and publishing content of research projects, scholarly publications and huge data sets, so as to make them instantly available to other researchers as well as potential users in the business world and the society at large. ICTs further allow gathering of large volumes of data and information that can be the basis of scientific experiments and research, contributing to make science progressively more data-driven. Virtual depositories and archives offer the preference of storing, accessing, using and recycling research and scientific contributions and productivities –both articles and data sets and codes, and prompt the transfer of knowledge among scholars and across scientific arenas, developing novel ways of join forces together to make new research methods (Force 11, 2012). This novelty of science is more of overt and data-driven enterprise and has reveals that public access to scholarly publications and scientific data proliferates the visibility of, and excesses arising from the body of knowledge and exploration.

The challenged faced in the academics especially among postgraduate scholars could be disconnect in a scholarly system that does not adequately incentivize open research (Nicholas et al, 2015; Nosek, Spies and Motyl, 2012). However, awareness deals with the perception to be strongly motivated on research attainments in their career, the postgraduate students sensed the significance of directing their efforts on scholarly related works and as a way in prevailing in the trail to proving themselves with progress in their study. From the findings of Müller's (2014a, 2014b), highlighting the earlier facts accrued on their study, they perceive financing in the propagative phases of scholarly work, such as education-oriented events, (i.e. teaching, overseeing and mentoring students), as delaying rather than driving forward their careers. Nevertheless, Nicholas et al., (2015c) noted that this is one facet of the academic world that might change hitherto, as it goes counter to today’s changing societal priorities, which perceive the future in the globalized knowledge world as spinning not alone on research and innovation, but also on education for all and openly, progressively democratized practices of scholarship (Veletsianos and Kimmons, 2012), both call for and enable taking a much more wide-ranging, inclusive and representative view of scholarly achievement.

In the work of Olajide-Williams and Popoola (2013) perception is the subjective process of acquiring, interpreting, and organizing sensory information. It refers to how the brain organizes and interprets sensory information. Olajide-Williams and Popoola report that lately perception was considered by the school of psychology called behaviorism to be a largely passive and inevitable response to stimuli. Similarly, Ekvall, Isaksen, Lauer, and Britz (2000) posit that perception could be influenced by the intensity and physical dimensions of the stimulus, our own past experiences, how ready we are to respond, and our motivation and emotional state. They further assert that perception has to do with understanding issues. Perception is the cognitive impression that is formed of “reality” which in turn influences the individual’s actions and behavior towards that object (in our case, Open Access).

Postgraduate students as most of them are, want to build their career reputation online. These are young, dynamic, talented and energetic scholars who can do anything and go extra miles to make their work visible and go viral online but the lack of openness to do so. Hence, according to Nicholas et al., (2016), “the main currency for scholars is not power nor wealth, but reputation.”

Though, reputation has been built upon one activity –one research, one output publication and one measurement –citation.” He further stated that reputation is a new way of building, showcasing and measuring scholarly reputation in today’s world. This reputation can quickly or speedily materialized if these young researchers were having access to scholarly publication that they can reproduced to make results of researches not static so long. This research sought to investigate the perception of postgraduate students towards Open Access Publications in some selected research institutions in Malaysia.

**2. Literature Review**

**2.1. Postgraduate Students’ Concern about Open Access (OA) Publications**

Awareness remains a vital aspect when we talk about OA among the postgraduate scholars. The impact and the existence of OA policy in their respective institutions will help in contributing to the course of OA publishing. Several surveys have found out that many postgraduate researchers are not familiar with the concept of OA and some were hesitant to make it a priority as many of them still remain ignorant about its implications (Swan et al., 2004; Swan and Brown, 2005, Abrizah, 2009).

On the contrarily, a survey carried out by Rowlands and Nicholas (2005) and revealed that many Asian postgraduate students (researchers) are slightly aware about OA publications as many of the researchers still underused its benefits. However, in her paper, Zainab reported that OA movement in Malaysia had direct impact on the development and academic visibility of researchers and that of their institutions as well as enhancing collaboration between scholars (Zainab, 2010).

Among many reasons given for the underused of OA are: repetition of research work, confusion of copyright issues, fear of plagiarism, peer reviewed issues, associating one’s work with inconsistent quality, publication price issues etc. (Christian, 2008; Singeh, 2011).

**2.1.1. Quality Control:**

The rapid dissemination of results that could be obtained easily without a barrier of cost and the genuineness of the information needs to be looked into. Implementing quality control is a great issue in OA debates and the originators of such findings or ideas should be accord their proper credits. The issues of payment for publication and bandwidth in some part of the world have limited access to research outcomes and consequently hindered further studies in some ways. For example, in a situation where few privilege ones have access to research results (either through subscriptions or pay per view), a scenario that Swan (2008) called “The gentleman’s club survives, –if only seen as a figure of speech.”

The Internet has been a gateway that unlock access to scientific results and data that could only be transferred through print-on-paper and the Advocates of OA argued that scientific results must be made available such that all researchers can see them, used and reuse them, for free, via the Web without restriction or so, provided a due process is taken on its usage. Other arguments in favor of quality control of open access materials come from different perspectives – as in lack of proper peer reviewed of research publications, the eagerness to publish in a prestigious and respected journal for promotion and tenure are other factors of quality control (Harnad, 2006).

**2.1.2. Copyright Issues:**

Copyright and intellectual property are one of the major concerns of academic scholars on the issue of OA. According to Harnad (2006), there is a misconception of what OA means and the belief of violating copyright agreements. Kiran and Chia (2009) in their studies argued that out of 10 respondents who had deposited materials in the institutional repository, only one was confident about the copyright issues when submitting his previously published journal articles to the library’s institutional repository, while the other 9 “have a slight idea”. Confusion over what is permissible according to their publisher agreements leads to the tendency to be over-cautious (Sale, 2006).

Additionally, Commercialization of insightful work and the whole clamor about who will pay and what amount ought to be paid civil argument spins around the topic of copyright issues? The squabbling over fluctuated plans of action, and the side contentions over publicly funded research outcomes, cloud a bigger, more essential question: Can open access be—the major change to a framework where researchers no longer face boundaries to accessing to others’ work (or their own)— an evolving science?

**2.1.3. Undermining Trial and Error Systems in Disciplines:**

In the introduction to his book, Open Access and the Humanities (2014, pp. ix-xi), Peter Suber briefly set out, from an advocate’s viewpoint, what has come to be an overwhelming part of the level-headed discussion encompassing Open Access (OA): Open access benefits the sciences and humanities about similarly, however has been becoming quicker in the sciences. [… ] Certain myths and misconceptions (experimentation syndicate) about OA are more tireless and across the board in the humanities than in the sciences. [… ] the thought that these myths and misconceptions are more normal in the humanities only on the grounds that humanists have had less time than researchers to get up to speed with the moderately late coming of OA.

Be that as it may, that is not valid, they have had precisely as much time nor is the clarification that humanists are more thoughtless users of agreements, strategies, statutes, or investigations of OA itself. From his contention, we speculate the genuine clarification is that humanists have had less working cases of OA to demonstrate the idea and demonstrate that the sky does not fall. They have had less working cases to dissipate false impressions, produce eagerness, and motivate responsibility. Provided that this is true, then the humanities work under an endless loop in which the slower development of OA causes a slower development of good understanding, and the other way around (Suber, 2016).

Suber, a person who could claim to be the accepted pioneer of the OA development, precisely surveys the circumstance here (Suber, 2016). Accepting that we take after Suber and trust that all orders advantage from and are moving towards OA, the humanities and a portion of the sociologies linger a long ways behind their logical partners. The issue is, however, that despite the fact that there are great reasons why such a change may be alluring, such a teleology is not generally acknowledged. Truth be told there are a scope of resistances and counter-arguments beyond sciences, predicated once in a while, consequently the requirement for illumination is resulted.

**2.1.4. Fee and Time Constraint vs Acceptance and Rejection Rate to Publish**

Many postgraduate students are facing poor submission rate and this makes it difficult for them to keep up high recurrence timeliness. Not very many get money related support to distribute in top level journals. Very few of them are aware of the processes involved in indexing and publish in high impact journals either by the Institute for Scientific Information (ISI) Web of Science (WoS), Scopus or other discipline-based databases as a strategy to improve their visibility and credibility.

Open Access (OA) as we probably aware, helps users find, recover, read, used and reuse the result they need. Besides, it helps authors enlarge their audience and amplify their impact in the scientific ways. Nevertheless, these benefits of OA prompted to the others, in any case, if OA had helped readers and authors of scientific research, then it progresses investigate itself and every one of the advantages that rely upon the research. One of the most compelling arguments for legislated OA policies is that governments should assure public access to the timely publish results of publicly funded research. This argument is widely effective because it aims to accelerate the research funding agencies have already decide to fund with public money, increase the return on the public’s large investment in research, and improve fairness to taxpayers. There’s no downside for the public interest, only an incomplete upside.

However, to go back to the fee and timely, and acceptance and rejection rate to publish, the study of Suber, (2016) uncovered that journals in the humanities have higher rejection rates than journals in the sciences. As indicated by him, this is not on account of they are more thorough, but rather in light of the fact that they cover more extensive themes and get correspondingly more submissions per published paper. Regardless, their higher rejection rates influence their capacity to charge fees to cover the costs of production (Charging these fees is the best-known yet not the most widely recognized business model for OA journals.) If somebody on the author side of the exchange, for example, the author's employer or funder, pays an article processing charge, then no one needs to pay on the reader side, and the work may become OA. But the fee for an article must cover the costs of vetting all the articles rejected for every one accepted. Hence, fee-based OA journals with high rejection rates must charge higher fees than other journals. The fee-based model works best in well-funded fields with relatively low rejection rates, and most exceedingly awful in fields like the humanities.

**2.1.5. Citation Impact:**

In reputational terms, the significance of Open Access is that it gives rise to: (1) new types of ‘actors’ and large increases in the number of these actors (e.g. freelance scientists, citizen researchers); (2) new formats for conducting and disseminating research, such as blogs and online communities; (3) more inclusive and broader ways of measuring scholarly reputation (e.g. altmetrics). The market has not been slow to recognize the opportunities arising, and a new breed of web-based services have been introduced over the past 6 years to meet the need for more open, inclusive, and comprehensive means of constructing, exhibiting, and assessing scholarly reputation.

Because of their novelty, these services currently do not have an agreed name, so they are referred to as ‘emerging reputation platforms and mechanisms’. However, the first set of citation-based Scientometrics were created by researchers to help librarians make better decisions about their collections, such as type of serial to purchase or not, and journal metrics applications to the libraries acquisition collection remains one of the viable promotion tools published by Thomson Reuters[[1]](#footnote-1).

As collection developers noticed that the library holdings are well taking by their clients’ needs, they deem it fit to consider metrics such as journal ranking, “impact factor, Scimago Journal Ranking (SJR), and Source-Normalized Impact per Paper (SNIP).” Scholar like (Haustein, (2012) argued that altmetric data such as social bookmarking metrics have a role to play in assessing citation impact of journals. The query of how does science quantify the value of a published portion of effort? According to Priem (2013) and in[[2]](#footnote-2), the standard metric today for citation impact is altmetrics – measuring various sources for mentions of scholarly publications, WoS and Scopus citation databases are used mostly to determine the quality of journals (the impact factor) or articles that are most frequently cited. Highly cited articles (and journals) have measurable impact.

As proliferation of Open Access published experiments are succeeding, they begin to gain more ground in numbers. Furthermore, in today’s scholarly environment, we all know that metrics alone cannot tell the whole story of an item’s value within the context of the entire collection2. To say, Open Access articles have higher importance, and it’s becoming obvious that researchers take the chance to read and use what they would otherwise not have gotten. With this, researchers approached towards metrics usage in their publications will inform potential scholars and institutions on the valuable model to follow when making informed decisions on their researches (Swan, 2012). Recently, the European Commission (EC), a major proponent of Open Science, saw the significance of the new development and commissioned an exploratory investigation of the workings of the emerging market and views of the various stakeholders in order to determine whether it should stimulate growth and encourage good practice (EC, 2015). For further findings, see Nicholas, Herman and Jamali (2015a).

* 1. **Effectiveness and efficiency of OA**
     1. **Direct cost saving (Subscriptions, ILL, Pay Per View (PPV)):**

Scientific information is both a scholar’s most remarkable returns and technological advancements most essential assets. Librarians are one of the general populations that grasped the presentation of OA since it benefits them in a way that membership charges to the alleged journal editors will be decrease radically, thus, the reception and the opportunity, adaptable and reasonableness in the utilization, reuse and conveyance makes OA upgrades spread of scholarship. The increasing charge of journal membership is a noteworthy constrain after the rise of OA development. The appropriateness and effectiveness of OA could be found in the rise of digitization and the World Wide Web (WWW) has expanded the likelihood of making data accessible to anybody, anyplace at whatever time and in any arrangement. The system by which this lessening in cost is accomplished is through diverting existing financing streams.

As more journals embrace OA, it is imagined that aggregate library consumption on journal subscriptions will diminish, permitting more cash to be diverted into paying for the costs required in OA publishing (Swan, Willmers and King 2014). Through OA effectiveness and efficiency, researchers and librarians from higher institutions of learning everywhere gained increase access to knowledge, publications, receive greater visibility and enhanced readership of library clienteles which in turned leads to more scientific research. This financial model redirects funding away from the demand side (library subscription budgets) towards the supply side (OA publishers and repositories). Library spending plans get to be channels for paying for vault upkeep and article processing charges (APCs), with the favorable position that rehash memberships to journals so as to get to legacy content need never again be paid, this is cost-savings in displayed by the librarians (Swan, 2012).

Similarly, dissemination of OA journals is on the rise and these journals make their contents freely available online (though they may still charge subscriptions for printed versions) but with few savings and employed variety of business models to cover their cost such as (pay per view). In line with Swan reports, there are more than 7,000 journals recorded in the Directory of OA Journals, a service that is compiling a verified, searchable index of this type of publication. Some of these journals head their categories in the impact factor rankings published by Thompson Reuters1. The effectiveness and efficiency could likewise be found in the book publications through OA where books are making accessible uninhibitedly on the web while offering print duplicates (a model that is still by and by for some OA journals with a few alterations) (Swan, 2012).

The BOAI[[3]](#footnote-3) (2002) detailed the kinds of access barriers that are non-permissible in an OA world –financial, technical and legal. By implications, removing of a temporal barrier, meaning that research findings should be immediately available to would-be users once in publishable form, and thereafter, available permanently. It is helpful to think of this as ‘price barriers’ (for example, subscription costs or pay-per-view charges) and permission barriers (burdensome copyright or licensing limitations on use discussed below) (Suber, 2010).

* + 1. **Free reading, write papers and collaborate with peer review work:**

In like manner, submit at the Budapest Open Access Initiative (BOAI, 2002) researchers had this say concerning publishing their research in scholarly journals without payment for request and knowledge. The new innovation is the web and people in general great they make conceivable is the overall electronic circulation of the peer reviewed journal literature which is totally free and unhindered access to it by all researchers, scholars, students and different inquisitive personalities.

Removing access barriers (price limitations) to writing quicken exploration, enhance education, impart the learning of the rich to poor people and the rich, and make this writing as helpful as it can be, and establish the framework for collaborate together with other scholars in a typical intellectual discussion and quest for knowledge. This free and unlimited online accessibility is known as open access and it has demonstrated that OA is financially possible, that it gives readers uncommon energy to discover and make utilization of important literature and that it gives authors and their works unfathomable and quantifiable new perceivability, readership, joint effort and impact (BOAI, 2002).

* + 1. **No barrier in wage due to copyrights or licensing issues:**

By opening up access to scholarly publications we signify “its free accessible on the internet, allowing anybody to use, download, duplicate, circulate, print, search, or link to the full text of these articles, crawl them for indexing, pass them as data to programming or utilize them for whatever other legitimate reason, without money related, lawful or technical boundary other than those indivisible from accessing the internet itself.” The only constraint is on reproduction and dissemination, and the main part for copyright in this space, ought to be to give authors control over the respectability of their work and the privilege to be appropriately recognized and cited (BOAI, 2002).

* 1. **Scholarly Communication Scenario of OA**

The development of the web in the 1970's and the World Wide Web in the 1990's was extraordinary, and affected on human day by day and social presence (Ghani, Suparjoh and Hamid, 2008; Ling, Yaacob and Phang, 1996; Nath and Murthy, 2009). The World Wide Web was initially made at CERN, the European high vitality energy physics laboratory, as a method for dealing with conveyed databases (Meadows, 1997).

A substantial extent of PCs and cell phones are associated with the web to impart, share and get data and the numbers are developing exceptionally. The WWW and web opens windows of data and chances to the whole world, changing the world into data brokers—everyone have square with opportunity to get data and responds to them as they happen. These transformations has allowed for easy ways in getting things done through OA.

**2.3.1 Self-archiving in repositories (Green OA):**

Green open access also refers to as self-archiving repositories is publishing in a non-open access journal and afterward transferring a post print of the article to an institutional or disciplinary repository. Green open access consolidates the advantages of making individual’s work open-access with the cachet of publishing in a set up journal. Green OA likewise has the advantage of not paying article processing charges as a rule. An institutional repository is by and large one oversaw by a school or college.

In 1991, the high-energy physics preprint server, arXiv[[4]](#footnote-4) (preprints are the pre-peer review version of journal articles) was set up and the act of self-archiving (depositing in an OA file) of scientific articles flourished in that group. In his comment on Beall's (2013) article provides details regarding Green OA, Vladimir, says that preprint repositories, for example, arXiv have turned out to be standard in a few groups including physics, mathematics and computer sciences. A hefty portion of these permits you to include the correct citations, including DOI of your articles once it has been published in a regular journal.

Genuine journals, in any case, obliged you to sign an exchange of-copyright agreement, as a rule incorporate a condition that expressly permits you to keep the preprint on the repository and on your own page, and after been through the peer review processes and finally published, the authors upload the final version so that anyone anywhere can access it, and it is distinguished by the notes for version change and by the journal reference. So it is often easy to tell if the arXiv contains the same text as the journal (Dominic, 2013; In Beall, 2013) truth be told, one ought to abstain from publishing in journals that don't permit this as they might be one of such journals as stipulated in Beall's ruthless records and further check COPE for standard morals approach in publishing.

Nonetheless, to control the overabundances of these alleged savage journals, and since the greater part of these journals are some of the time recorded by ISI or Scopus in their database. Hence, the fair and goodness assessment of these regarded indexing and abstracting databases like ISI and Scopus are required. On the off chance that any journal digressed from great practices, they should be expelled from their databases and instantly caution the scholars to know about such practices.

According to Vladimir (2013) In Beall (2013), they need to watch these purported indexing and abstracting substances as well, all things considered, the greater part of the journals, Open or traditional infer its notoriety in one way or the another from these bodies., likewise, trust must be discovered by these indexing elements for eventual fate of scientific research output, he however, identified some of the reasons while some researchers still publish in some predatory journals instead of Green OA publishing even when they had prior knowledge of their “wickedness”. They incorporate speedy and simple acknowledgment for publication; not all journals permit post print documenting in repositories. Sometimes this can be negotiated, however, others allow it only after an embargo period; post print self-archiving is extra work for the author and many of them don’t want additional effort on their part and lastly he says that one generally cannot archive the publisher’s PDF version of the article; the post print is normally the Word version (Vladimir, 2013 In Beall, 2013). However, publishing individual intellectual work in predatory or low-quality open-access journals may stigmatize and damage one’s career, hence, the solution is to publish and appear in an established journal which is to use the green open-access publishing model.

**2.3.2 OA Journal (Gold OA publishing):**

OA journals additionally add to the corpus of openly available literature. According to Swan (2012), there are more than 7,000 of these journals, altogether offering over 600,000 articles[[5]](#footnote-5). Likewise, people group standards assume a part in figuring out if such journals are invited and upheld by researchers. In some disciplines there are many, highly successful Open Access Journals, such as in Biomedicine; and in some geographical communities there is also an organized approach to Open Access publishing, exemplifies by the Latin American Service SciELO (Scientific Electronic Library Online[[6]](#footnote-6)). The potential for catching elevated amounts of Open Access material by this course is great, but limited by the willingness of publishers to forego their subscription-based revenue model and switch to one that delivers Open Access. The situation of OA publishing are varied and so there are many publishing operations and thousands of small or one-journal operations (6Beall’s List of predatory journals –which has disappeared in a thin air since January 2017, just for the subscription-access literature, quality ranges from excellent to poor, nonexistent peer review and rapid publication, the Open Access journal literature is no different in that direction.

Although, Beall’s list is no more available online, however, [[7]](#footnote-7)–COPE is another publication ethics committee to check for predatory journals and editor in scholarship). The earliest sizeable Open Access publisher to show that OA can be consistent with commercial aims was BioMed Central[[8]](#footnote-8) which currently publishes over 200 journals, mainly in biomedicine, though with coverage in discipline like chemistry, physics and mathematics. Another publisher that has high impact journals in biology and medicine is PLOS ONE8 which has presented another arrangement of value control in their publishing, though, still based on peer review, pre-publication referees are asked to judge an article simply on the premise of whether the work has been completed in a sound scientific manner, it pertinence and noteworthy as well as the impact made on post-publication community response online, this innovation has been copied by another publishing bunch Nature which propelled *Nature Scientific Reports[[9]](#footnote-9) as of late*. This has been effective in the developing nations as it makes authors work in those regions findable and readable by developed-world researchers. OA has turned into an extraordinary leveler in scholarship and any semblance of Scientific Electronic Library Online (SciELO), a collection of peer-reviewed OA journals published mainly from South American countries in Spanish or Portuguese, covering over 800 journals and over 300,000 articles in natural science, medicine, agriculture and social sciences (Swan, 2012).

Likewise, Bioline International[[10]](#footnote-10), an administration that gives a free electronic publishing a free electronic publishing platform for small publishers wishing to publish OA journals in the bioscience, has more than 50 journals in its collection, all from developing and emerging nations covering biomedicine and agriculture. Also, library incorporates their catalogues the Directory of OA journals (DOAJ) thereby increasing their visibility and articles from that part of the world and creating attention of developed world scholars.

* 1. **OA Impact: Visibility, Usage and Scholarly Impact**

This perceivability is new: without open access, the best way to see scholarly work is by paying for memberships to journals or by paying a fee to view an article on a publisher’s website. This has the impact of limiting access to everything except the minority who can bear the cost for access in these ways. For the individuals who work in universities with very much loaded libraries, it is calming to note that the WHO found in a study led toward the begin of the thousand years that the greater part of research-based foundations in lower-salary nations had no ebb and flow memberships to global research journals, nor had they had any for the past five years.

Obviously, scientists in developing nations rank access to the research literature as one of their most squeezing problems (Swan, 2014; WHO, 2013). Truth be told, it is not simply in the developing world that access is an issue. In a great many surveys, it is found that researchers in the wealthy, developed world likewise keep running into issues accessing what they require.

A current review by the Research Information Network in the UK, for instance, found that in spite of the fact that scientists report no issues in finding the data they require, accessing it is still a challenge. So by making their work open access, researchers are helping to create a global knowledge commons so that all may benefit (RIN, 2014; Swan, 2014).

**2.4.1 University of Malaya and University of Technology, Malaysia (UTM) (How many downloads, views etc.?)**

**2.4.1.1 Visibility and Usage**

Use visibility converts into use. Download figures from repositories show the inactive interest for research data that has traditionally been bolted up behind pay dividers, open access just through subscription or by paying for individual article access. For instance, the things saw in the University of Malaya research repository website substantial open access gathering, Materials are seen downloaded by users in Malaysia in 2016 is a total of 53,425 downloads as at February, 2017.[[11]](#footnote-11) on the other hand, A total of 132,593 downloads were done on the repository from 60 countries, the first top ten countries are Malaysia (53,425), Unknown Country (18,736), China (11,009), United States (10400), Indonesia (6061), France (5597), India (3465), Japan (2918), Australia (2891) and Germany (2554), while the least 10 countries are Austria (69), Portugal (71), Tunisia (72), Uganda (76), Morocco (81), Algeria (84), Zambia (86), Switzerland (87), Belgium (88), while Denmark, Greece and Mauritius have 90, and Nigeria and South Africa have 331 and 305 downloads respectively.

However, it is worth emphasizing that this is new usage as well as one way of showcasing visibility world over, since people and institutions who have access to the journals in which those articles were published do not need to access them through the open access repository; the repository is serving users around the world whose libraries do not subscribe to the journals, and is bringing new and additional users to the University of Malaya (UM) and University of Technology, Malaysia (UTM) because they shared the same repository with other institutions in Malaysia.

Both UM and UTM Research Repository are powered by [[12]](#footnote-12)[*EPrints3 and* 12[*EPrints2*](http://eprints.org/software/)](http://eprints.org/software/)which is developed by the [[13]](#footnote-13)[School of Electronics and Computer Science](http://www.ecs.soton.ac.uk/)at the University of Southampton. Other Institutions can also set up their own institutional repository using the free software on UM website and training can be given to them free of charge by the University of Southampton.

**2.4.1.3 Best evidenced by usage**

**2.4.1.3.1 Standards for Web Content Interoperability**

The Open Archives Initiative develops and promotes interoperability standards that aim to facilitate the efficient dissemination of content. OAI has its roots in the open access and institutional repository movements. Continued support of this work remains a cornerstone of the Open Archives program. Over time, however, the work of OAI has expanded to promote broad access to digital resources for eScholarship, eLearning, and eScience.

UM Research Repository is the University of Malaya’s and that of the Universiti Teknologi Malaysia Institutional Repository (UTM-IR) are perpetual, accessible and growing collection of research work which includes peer-reviewed articles, conferences and working papers representing our rich intellectual community. It has been established to provide a deposit service for the academic staff and researchers. It is an initiative of the UM and UTM Libraries.

Where possible the details of each item described in the archive will include a link to a freely available electronic copy of the full text or other electronic documentation of the research output. UM has 12814 public records, but none was shown in UTM repository website as at February, 2017, download ranges from articles, book section, monograph, conference or workshop, book, theses, patent, artefact, exhibition, composition, performance, image, video, audio, database, experiment, teaching resources and others. Some of the repositories are in different formats such as in Press, Journal or publication forms and are varies too. Ordering and retrieving could also be done chronologically or by author’s name and title11 and [[14]](#footnote-14)

**2.4.1.3.2 Benefits of depositing research**

By storing and making available our research outputs via the Research Repository we will be helping the worldwide scholarly research community to discover and retrieve the work of University of Malaya and that of Universiti Teknologi Malaysia Institutional Repository (UTM-IR) researchers.

**2.4.1.3.3 Advantages for researchers**

1. **Wider dissemination**
2. E-print repositories enable free worldwide web-based access to research outputs.
3. **Increased impact**
4. Studies show that research deposited in open access repositories have considerably increased impact as citation rates rise.
5. **Increased visibility of research**
6. UM Research Repository conforms to the Open Archives Initiative (OAI) standards. This means that research deposited here has a higher ranking by search engines such as Google and that deposited research will be harvested and indexed by specialist services such as OAIster.
7. **A showcase for research**

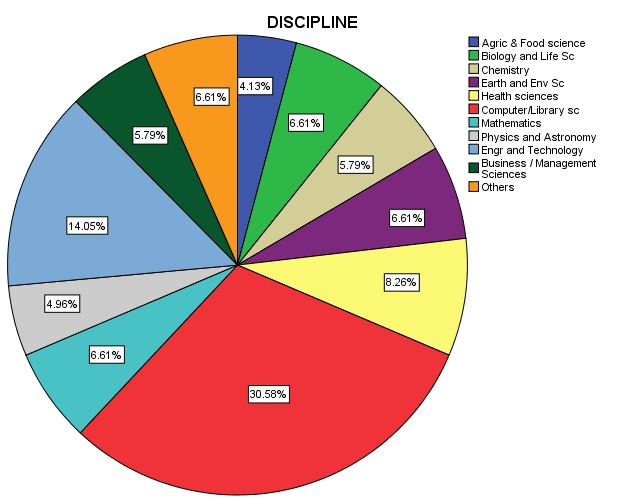
The repository provides a means to bring together your research output. The repository can be linked from your research centre or faculty web pages 11 and 14

**3.0 Method**

**3.1 Procedure**

We strategically conducted research to determine from the respondents about their perceptions towards Open Access Publishing. Participants in the study are Postgraduate students from two research institutions in Malaysia –University of Malaya (UM) and University Technology Malaysia (UTM). Before participating in the survey, an introduction mail was created and sent along with the survey instrument to request the indulgence of researchers to partake and share their experience on the perception towards Open Access as well as the perceived usefulness and effectiveness of Open Access Publishing in Malaysia. The study is a voluntarily one and respondents are not force to complete the survey, however, their cooperation and experience on the topic was sought for others to learn and ways of improving Open scholarship. The questionnaire was designed using online google form and distributed via students’ information mail portal from both universities after seeking permission from the administrator of those universities before sending it to the researchers in the study. The survey took less than 20 minutes of the respondents’ time to complete. Their confidence and security level were guaranteed as all collected data is strictly for academic purpose as their names and details were not revealed in the analysis.

**3.2 Participants**

The sample consisted of 121 postgraduate students from Malaysia using two research institutions in Malaysia –University of Malaya and University of Technology, Malaysia. These Researchers were invited to participate in an online survey about their perception towards Open Access Publication in Malaysian Universities. The data was collected between November 2016 and February 2017. Questionnaire was developed as a research instrument and measurements was based on five Likert scale. The mean gender of the respondents is 1.49, and 62(51.2%) of the respondents were male while 59(48.8%) were female. The mean age of the respondents is 2.67, and the bulk of age in the distribution falls between 26-35years 54(44.6%), followed by 36-45years 43(35.5%), 14(11.6%) are in the range of 46-55 years while age brackets of less than 25 and 56-65 years fall under 5(4.1%). This actually reflected on the types of the researchers that participated in the study. The mean qualification score of the respondents is 1.51, and the bulk of the highest qualification in the distribution is Master degree with 67(55.4%), followed by PhD qualifications 

**Figure 3.2 Discipline of the Respondents**

46(38.0%), other qualifications are 8(6.6%). Furthermore, the mean score of the institution is 1.45, and the Skewness of the distribution is at (.220) while Kurtosis (-1.999) and the normality test of the study showed that it was normally distributed, and based on the outcome of the descriptive analysis in (Table 3.1), it also shows that University of Malaya researchers form the bulk of the researchers in the study with 66 (54.5 %) of the respondents while University Technology Malaysia were 55 (45.5%). The respondents were asked to indicate their discipline in the study, Figure 3.2 below shows the respondents discipline in the study. Computer science and Library Science form the bulk of the discipline with 37 (30.6%), followed by Engineering and Technology 17(14.0%) while Health Science is the next in the distribution with 10(8.3%) and the mean discipline in the distribution is 6.29.

**4. Analysis**

**Hypotheses**

**H1: There are no statistically significant mean differences in perceived usefulness of OA publications between male and female postgraduate students.**

**4.1. Postgraduate Students Perceived Usefulness of OA publications between Genders**

An independent sample t test was carried out between gender and postgraduate scholars’ perceived usefulness of Open Access publications variables. A visual inspection of Table 4.1 reveals that there are no statistically significant mean differences existed in major indexing services, [t (119) =.222, p>0.05] between male researchers, (M=3.69, SD=1.236) and female postgraduate students (M=3.64, SD=1.214), also, there are no statistically significant mean differences existed in OA increasing author’s reputations, [t (119) =.275, p>0.05] between male postgraduate students, (M=3.29, SD=1.395) and female postgraduate students (M=3.22, SD=1.403), furthermore, there are no statistically significant mean differences existed in author’s work widely open to all, [t (119) =.381, p>0.05] between male postgraduate students, (M=3.71, SD=1.136) and female postgraduate students (M=3.63, SD=1.244), likewise, it shows that there are no statistically significant mean differences existed in developing academic careers, [t (119) = -.390, p>0.05] between male postgraduate students, (M=3.76, SD=1.327) and female postgraduate students (M=3.85, SD=1.186), more so, it also shows that there are no statistically significant mean differences existed in innovative of OA publications, [t (119) = -.469, p>0.05] between male postgraduate students, (M=3.60, SD=1.207) and female postgraduate students (M=3.69, SD=1.087), and that there are no statistically significant mean differences existed in the availability of author’s works, [t (119) = -.522, p>0.05] between male postgraduate students, (M=3.63, SD=1.296) and female postgraduate students (M=3.75, SD=1.154), lastly, the Table 4.1 reveals that there are no statistically significant mean differences existed in increases readers’ perception of research quality, [t (119) =.585, p>0.05] between male postgraduate students, (M=3.92, SD=1.149) and female postgraduate students (M=3.80, SD=1.156).

**H2:** **There are no statistically significant mean differences in perceived effectiveness of OA publications between male and female postgraduate students.**

**4.2. Postgraduate Students Perceived Effectiveness of OA publications between Genders**

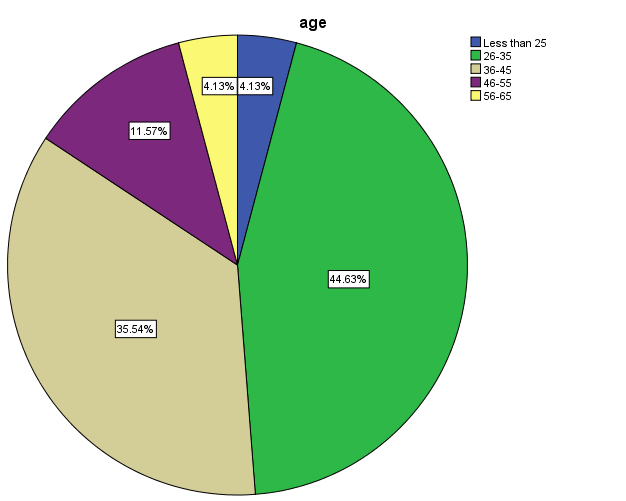
An independent sample t test was carried out between gender and postgraduate scholars’ perceived effectiveness of Open Access publications variables. A visual inspection of Table 4.2 reveals that there are no statistically significant mean differences existed in OA publication increases readership, [t (119) = -.081, p>0.05] between male postgraduate students, (M=3.69, SD=1.313) and female postgraduate students (M=3.71, SD=1.175), also, there are no statistically significant mean differences existed in reproducibility of research, [t (119) =.081, p>0.05] between male postgraduate students, (M=3.63, SD=1.321) and female postgraduate students (M=3.61, SD=1.246), furthermore, the study shows that there are no statistically significant mean differences existed in whether authors publish in OA only if readers have same interest with theirs [t (119) = -.115, p>0.05] between male postgraduate students, (M=3.79, SD=1.147) and female postgraduate students (M=3.81, SD=1.074), likewise, it shows that there are no statistically significant mean differences existed in increasing citation, [t (119) = -.188, p>0.05] between male postgraduate students, (M=3.77, SD=1.165) and female postgraduate students (M=3.81, SD=1.137), more so, it also shows that there are no statistically significant mean differences existed in collaboration with ease, [t (119) = -.231, p>0.05] between male postgraduate students, (M=3.90, SD=1.082) and female postgraduate students (M=3.95, SD=1.105), and lastly, the Table 4.2 reveals that there are no statistically significant mean differences existed in having audience with the same interest, [t (119) =.390, p>0.05] between male postgraduate students, (M=3.47, SD=1.352) and female postgraduate students (M=3.37, SD=1.325).

**H3: There is a statistically significant mean differences in perceived usefulness and perceived effectiveness of OA publications between ages of postgraduate students.**

**4.3. Perceived Usefulness VS Perceived Effectiveness of OA publications between Ages of Postgraduate Students**

One-way analysis of variance tests (ANOVA) was employed to determine if there is a statistically significant mean differences in perceived usefulness and perceived effectiveness of OA publications between ages of postgraduate students. The results of running way ANOVA in Table 4.3 showed that there is a statistically significant mean differences existed in variables like [increases readers’ perception with, F(4,116) = .206, P>= 0.05; enlighten authors about predatory journals F(4,116) = .839, P>= 0.05; Protected by copyright F(4, 116) = .796, P>= 0.05; Increase Authors’ reputations F(4, 116) =1.707, P>= 0.05; OA indexed by major indexing services F(4, 116) = .899, P>= 0.05; OA are of good quality F(4, 116) = 1.957, P>= 0.05; Innovative of OA Publications F(4, 116) =1.508, P>= 0.05; Collaboration with ease F(4, 116) = .443, P>= 0.05; and Reproducibility F(4, 116) =.733, P>= 0.05; Publish is within Author’s discipline F(4, 116) =.575, P>= 0.05; Relevance to Research F(4, 116) = .332, P>= 0.05; Have well Known authors, F(4, 116) = .905, P>= 0.05; Peer Reviewing F(4, 116) =1.019, P>= 0.05; and Increases Citation F(4, 116) =1.053, P>= 0.05] between the ages less than 25, 25-35, 36-45, 46-55 and 56-65 years. However, based on the analysis, at P>= .05 this means we fail to reject the null hypothesis in the study.

**H4:** **The younger a scholar is in academics the higher he/she publishes in high impact journals using OA platforms**.

Figure 4.4 shows the age distribution of Postgraduate Students and Open Access Publications. From the analysis, it shows that the bulk of the age group was in 26-35 years 54(44.6%), followed by 36-45 years with 43(35.5%). 

**Figure 4.4 Age Distribution of Respondents**

This revealed that the participants in the study actually possessed the status of the researchers we focused on in the findings, and that the younger a researcher is in academics, the eager he or she wants to surface in high impact journals. This could be seen in the above analyses that postgraduate students want to belong to the real scholars of their time and they will do anything to make scholarship continues in an open spectrum and nothing but for reproducibility and accessibility and availability of OA publications for further novel studies.

**Conclusion**

As can be seen from the results of this study, majority of the respondents were of mean age of 2.67 and highest age bracket was between 26-35 years, this means that future scholarships are in the hands of these young ones, they dictate the trends in scholarly communications. The also study revealed the eagerness of the postgraduate students to publish in OA journals and to get more citations, reputations, innovative ideas and share/reproduce their knowledge among their peers freely. This is in line with one of the policies of OA advocates (BOAI, 2002).

Also, whether these findings can be generalized to a larger population of postgraduate students is unclear as the sample size of the survey was quite small. A major limitation of the study is that only two research institutions partook in the study in Malaysia, whereas there are five research institutions in Malaysia, and a little timing for collecting the data which was between November 2016 and February, 2017.

More so, other methods can be employed in the future study to elucidate information from the respondents such as using qualitative survey. Further research is also needed to determine if similar findings are obtained when researchers from other three research institutions are included in the sample.

Finally, we concur with Suber, (2013) that the philosophies of OA are perceived as open-door and universal goods and their involvement signifies open-door and universal goods particularly to the academe. Without access to this information, postgraduates students would find it hard to utilize such information and thereby limiting them from using, and reproducing novel findings in their chosen field to OA for others to benefit from too. In concurrence to this, grant agencies and Malaysian authorities should encourage these young scholars by given them grants to carry out elaborate studies and publish the results of their findings in OA platforms.

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