Fall 10-20-2019

Barriers to Publication: Stories of Ph.D. Students from Malaysian Universities

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Abstract

This study aimed at elaborating barriers to publication perceived by doctoral (Ph.D.) students from Malaysian universities. We interviewed 7 Ph.D. students from 3 Malaysian universities. Besides, we also distributed a survey instrument to 125 participants who attended doctoral programs in 12 Malaysian universities. Thematic analysis was used to analyze the interview data. Meanwhile, descriptive statistics, t-test, and ANOVA were applied for the survey data analysis. Findings revealed some external barriers such as lack of funding for publication fee, lack of funding for professional translators, a response time of the reviewers, negative results of the review, and difficulties in coordinating with co-authors. Internal barriers like limited skills in English, lack of time to write, limited writing skills, and limited skills in submission process were also reported.

Keywords: Barriers, publication, Ph.D. students, Malaysian universities

INTRODUCTION

The academic publication informs results of studies to the public. From the results sharing, science is helped to progress from ideas exchange. Publishing is compulsory as one of the requirements for Ph.D. students in some universities (Soyer, Taourel, Trillaud, Vicaut, Laurent, Dion, 2011; Rallison, 2015). In addition, publishing may impact career and research funding. It is widely understood that there is significant academic pressure on higher education institutions to write, conduct research and disseminate the findings in a publication as well as to maintain

other activities like teaching and public service. Ameen (2013) argued that research activities and publication frequency are significant and central to academics' routines and occupational identities. Where teaching has been historically known as the core function of higher education academics, research and publishing have now transformed to become far more connected into the higher education institution milieu (Waghid, 2009). Sweeney (2001) further suggested that scholarly publications resulted by research are the main part of academics' responsibility and significantly countable for salary and job security since they are related to the development of the institutions.

In the context of Malaysian higher education, a quality publication is required for Ph.D. students. A measurement and concern for standardization, quality, clarity, and transparency have been developed for type criteria of publication. The measurement and concern also cover indexation and review of each journal (Turner, Shamseer, Altman, Schulz, & Moher, 2012). From the journals' perspectives, they require certain guidelines or instructions for their prospective authors (Vintzileos & Ananth, 2010). The publication requires more stringent requirements: e.g., mandatory trial pre-registration and wide research coverage (Scott, Rucklidge, Mulder, 2015; Dal-Ré, Ross, & Marušić, 2016).

Even though some improvement on articles' writing guidance has been developed in some reports, the concern and measurement sometimes may complicate the process of publication (Smith, Kulatilake, Brown, Wigley, Hameed, Shantikumar, 2015). Further, it is internationally competitive to publish. Because most journals require authors to write in English, language is also a barrier; not every researcher or practitioner is a native English-speaker (Montgomery, 2004). There have been many studies informing barriers to publication. Mostly, they were conducted in developed countries; few researches were done in developing countries (e.g. Duracinsky, Lalanne, Rous, Dara, Baudoin, Pellet, Descamps, Péretz, & Chassany, 2017; Montgomery, 2004; Smith et al., 2015). Therefore, this study aimed at elaborate barriers to publication perceived by Ph.D. students from Malaysian universities.

LITERATURE REVIEW

Publication identified through the process of peer review marks the legal platform for the research content to be confronted, referred, and criticized as well as discussed by the community of the academia. Authors must be able to not only present their research results

and claims but also to support and argue their proposed knowledge. The community welcomes the culture of discussion for open knowledge (Balogun, Sloan, & Germain, 2006; Marshall, Baucom, & Webb, 1998). This practice is very important to give the right direction to the progression of knowledge. Transforming from being a platform for sharing and discussion, publication has been becoming one of the most significant measurements for Malaysian academician performances. Publication is an important measurement of academic productivity in research and is utilized to put faculties and academic institutions into certain ranking systems (Norhazwani & Zainab, 2007).

To improve an education and research standard, Malaysian Ministry of Higher Education, MoHE (2010) required that Scopus and ISI-Thompson indexed journals to become the publication target for higher institutions. The acknowledgment on certain publication or journals is an important sign through a policy informed to the higher institutions professors and lecturers as well as doctoral students (MoHE, 2010). Therefore, many universities in Malaysia are now requiring their professors, lecturers, and doctoral students to publish in journals indexed by Scopus and/or ISI-Thompson. Regarding this phenomenon, many of the universities reward authors who published in the journals with money and certification (MoHE, 2010; Norhazwani & Zainab, 2007).

Publishing is not an easy thing to do because there are many barriers to face during the submission and review processes. Certain rules and guidance have been set by journals' editorial boards including language standard which mostly requires English (Duracinsky et al., 2017; Montgomery, 2004). Other barriers reported were lack of time to write articles, skills in writing, difficulties to start the writing (Duracinsky et al., 2017). Other barriers include lack of funding for publication fee, lack of funding for professional translator, response time of reviewers, negative result of reviewer, and difficulties in coordinating with co-authors (Antonelli & Mercurio, 2009; Duracinsky et al., 2017; Garnet & Mahomed, 2012; Paiva, Araujo, Paiva, de Pádua, Cárcano, & Costa, 2017; Scherer, Ugarte-Gil, Schmucker, & Meerpohl, 2015).

Many researchers have discussed barriers to publication for academic staff, administrative staff, or researchers (e.g. Duracinsky et al., 2017; Montgomery, 2004). However, the investigation on the publication barriers experienced by Ph.D. students required to publish in

scholarly journals is limited. Therefore, this study was considered to analyze barriers to publication perceived by Ph.D. students Malaysian universities.

METHOD

This study used a mixed-method approach with a sequential exploratory design conducted from December 2018 to May 2019. The sequential exploratory design is marked by the collection and analysis of qualitative data in the first phase followed by the collection and analysis of quantitative data in the second phase (Creswell 2014). This design emphasized how the quantitative findings help elaborate on or extend the qualitative findings. The study involved 7 Ph.D. students from 3 Malaysian universities for the qualitative phase with the interview as the data collection technique. For the quantitative part, we distributed a survey instrument to 125 Ph.D. students from 12 Malaysian universities. All sample' universities require publication in scholarly journals as one of the graduation requirements for their Ph.D. students.

Qualitative phase

In the first phase, a qualitative method was utilized for this study with a case study approach. We used purposive sampling, non-probability, for this study. We selected the most appropriate sample for answering the research questions (Creswell, 2014). When the selection was achieved, we finally selected 9 Doctoral students. However, 7 participants agreed to get involved while the other two said that they had to leave Malaysia for their research data collection. From nine Ph.D. students that we invited to participate, 7 students confirmed their agreement to get involved. The participants were fairly diverse who were from 35 years to 45 years of age. The participants are 3 Indonesians, 2 Egyptians, 1 Jordanians, and 1 Pilipino. Three participants have published an article in a Scopus-indexed journal while five of them have not been successful in publishing their academic manuscript(s). All participants in the interview were registered in three universities located in Kualalumpur, Malaysia. These three universities require their Ph.D. students to publish articles in either ISI-Thompson or Scopus-indexed journals. This requirement was issued to improve the university level in the international ranking (MoHE, 2010).

We examined and reviewed relevant literatures (Duracinsky et al., 2017; Garnett & Mahomed, 2012; Garnet & Mahomed, 2012) on barriers to publishing articles in scholarly

journals experienced by academics or non-academics. We set three main interview questions based on the relevant literature review to obtain in-depth information about the barriers. The three questions are "how do you see the policy about journal publication before graduating from the doctoral program?" what barriers do you experience to publishing your article?" and what recommendation do you want to propose to the university?" However, we merely set the discussion of this study on the question about the barriers to publication. As the participants' involvement was of a voluntary, we interviewed each of them in an informal situation and places such as restaurant, library, and international students' room. All participants were conversant with the purpose of the study, their participation was voluntary and they were able to address at any point if they disagreed. We interviewed the participants in English.

The record of all data was written in a thirty-page written of narrative response. In this study, names, universities, and other sensitive personal information of the participants are masked into initials, i.e. a pseudonym to protect their confidentiality. In the essence of ethics of the research, respect for peoples' needs a commitment to make sure their right and autonomy where they may be eliminated and diminished. Adherence to this, the essence of research ethics ensures that people would not be utilized simply as a means to obtain research purposes (Connelly, 2016). We addressed the participants as R1 to R7 for the report of the current study.

All responses from the recordings were transcribed into transcripts and read line-by-line. We marked parts that are relevant to the objectives of the study in different highlight colors and spread the data to discover and tally all importantly relevant statements to understand the patterns and themes (Creswell, 2014). It also aims to deepen the explanation of our data. We analyzed the entire transcript on all parts of the participants' responses. Then, we note the similarity or dissimilarity between the analyses. We managed, grouped, and put the important statements among the participants into clusters. Afterward, the classification and reduction of the data were conducted. We did the steps to achieve the research objective by setting the data into a manageable set of themes comprising brief statements. To make certain that our interpretation clear, we informed a rich description and narratives (Leung, 2015; Merriam, 1998) of the participants' perception and experiences of the barriers to publication. To ensure our interpretations, we checked not only with the participants, but also provided rich and thick descriptions (Merriam, 1998) and narratives of Indonesian doctoral students' classroom

engagement experiences. This included verbatim examples from the transcribed interviews. Another important thing to ensure the credibility of our study is the fact that one of us shared the same language and cultural background with the participants, which helped us to interpret our data in a more nuanced way.

Quantitative phase

After analyzing the qualitative data, we conducted a survey to describe the situation and the characteristics of the participants (Fraenkel & Wallen, 2009). The first step in developing the survey was to set the survey instrument based on the analysis of the interview data. Besides, we also set demographic information questions for the survey participants. All researchers developed the instrument in two sessions of discussion. Twenty indicators were initiated from this process.

Further, face and content validity were conducted to validate the instrument (Lynn, 1986). Three Ph.D. students were invited to the first discussion session for the process of face validity of the instrument to revise wordings, contexts, and terms used in the instrument. For content validity, the instrument was scrutinized with three professors who have many experiences in publishing academic papers in reputable journals. As a result, 5 items were dropped; fifteen items remained for the next process of validation.

For the next process of validation, CVI was applied to validate the instruments. Ten professors from 5 universities agreed to get involved; fifteen experts were invited by emails where 2 professors did not reply the emails and invitation and 3 professors refused to participate. Each indicator was examined using scales of relevance and simplicity (Halek, Holle, & Bartholomeyczik, 2017; Lynn, 1986) responded on a 4-point scale (1 = not relevant/ not simple to 4 = very relevant/ very simple). We requested that the experts can evaluate whether the indicators covered all related aspects or whether missing components found in the instrument.

The CVI was evaluated for the item levels (I-CVI) and scale level (S-CVI). The assessment of I-CVI was conducted using a score of 3 or 4 divided by the total number of experts (Lynn, 1986). For this study, the I-CVI should not be less than .78 () for 10 experts. The evaluation of S-CVI was done within the average portion of the items on one scale rated 3 or 4 (average agreement by experts = S-CVI/AVE) where the acceptable score is .8 (Halek et al., 2017). The

entire I-CVI and S-CVI values extended the threshold values. Fifteen items with 6 variables were distributed to the participants of the survey.

After the instrument was valid and reliable, we distributed it to the target population of this study. The population of the study is all Ph.D. students in Malaysian universities. Meanwhile, the target population is all Ph.D. students who are required to publish their academic manuscript in indexed scholarly journals. Simple random sampling was applied in which we collected the data through Google form which were shared and informed through some WhatsApp groups of Ph.D. students from 12 Malaysian universities. We received 132 responses. 225 of them were measurable; 7 responses were not complete. One hundred and twenty-five responses were analyzed in this survey where 74 of them (59.2%) are males and 48 participants (38.4%) were males. Seventy-three (34.4%) Ph.D. students attended social science programs while 52 (41.6%) studied in science programs.

For the data analysis, we used descriptive statistics (Ross, 2010) to measure the mean and standard deviation (SD), as well as the Cronbach's alpha (α) of the survey. We also examined if the statistical results were different in terms of participants' demographic information namely gender, age, and Ph.D. programs. T-test and ANOVA test were used to see the differences.

FINDINGS

The findings of this study are discussed in two phases similar to the design of the study, quantitative and qualitative.

Qualitative phase

The barriers found in the qualitative phase include external and internal barriers. Externally, the findings indicate that the majority of the participants in the interview informed that lack funding for their article submission or publication payment is one of the barriers with the frequency of seven statements making this barrier as the most stated barriers in the interview. The second most stated external barrier revealed in the interview session is lack of funding for professional translators. It is commonly known that most international Ph.D. students in Malaysia are from non-English speaking countries. Therefore, most doctoral students in education need a service of professional translators for their publication. One of the participants stated that he needs a professional translator because English is not his native; writing in English is very challenging. Thirdly, four statements informed by the participants

informed that the time of journals' reviewers returned their article was so long in the review process. R7 in the interview said that he once waited for six months just to get the decision of 2 reviewers. Surprisingly, his article was still rejected. Similarly, negative feedback from the reviewers also demotivated the participants to submit their paper to another journal and it was informed by four statements of the participants. Last external barriers informed in this qualitative phase was limited coordination with co-authors revealed by 2 participants. Table 1 shows sub-theme of the external barriers, statement frequency, and quotation samples

Table 1

External barriers

Sub-themes	Statement frequency	Quotation samples
lack of funding for publication	7	"I work hard to have my paper published in an appropriate journal. However, lack of funding discourages me. Most journals charge the authors, though some are free, the charged ones are easier to get accepted" (R4)
lack of funding for language translation	5	"As an Indonesian, I need a professional translator for my article to get published. It doesn't come cheap since there are a lot of translation services offering RM 500 per ten pages [119 USD]. I have so many bills to pay for our living and our school and it is a burden for me with no scholarship" (R2)
response time of reviewers	4	"I can't wait for the response from the reviewer since I have to register for my graduation as soon as possible" (R1)
negative feedback of reviewers	4	"Once my first paper was rejected, it was devastated to read the negative feedback from the 2nd and 3rd reviewer. It was so demotivating" (R7)

limited coordination with co-authors	2	"I did not communicate well with one of my supervisors. He did not help me publish and did not seem to care much about it. I am really disappointed to have him as my supervisor who actually is in charge helping me publish" (R3)

Through thematic analysis, we also categorized internal barriers as the second theme emerged from the qualitative data analysis. Four sub-themes were included in the internal barriers that include participants' limited skill of English (7 statements), lack of time to write (7 statements), limited writing skills (3 statements), and limited submission skills (3 statements). One of the participants said that English is not his mother tongue. So, he could not use appropriate English and it was hard for him to publish their articles in scholarly journals. Similarly, another participant's response revealed that it was not enough time for him to write due to academic and professional work that he has to do. "Limited writing skills" was another sub-theme in this study where one of the participants said that she had not practiced well in writing since she spent much of her time as an elementary school teacher. The least responded sub-theme was "submission skill" which was also an important barrier that needs to be solved as two of the participants mentioned it in the interview. Table 2 exhibits detail information on the sub0temes, statement frequency, and quotation samples).

Table 2

Internal barriers

Sub-themes	Statement frequency	Quotation samples
limited skills in English	7	"I think the most barrier that I face during my [article] submission process to the scholarly journal is English where I have a limitation with this language, not my mother tongue" (R6)
lack of time to write	7	"I don't have much time to write academic articles since I have to go back and forth, Malaysia-Egypt. Having done my thesis submission, I must go back to

		work in my home country" (R2)
limited writing skills	5	"I need to learn how to write well since it is not my thing. Now, I am really active attending writing workshops, it helps me a lot improve my writing skill" (R7)
limited submission skills	2	"I have to keep learning the tricks and tips to submit my paper to good journals since I am new in this matter. Sometimes, I think it is important to have friends or training on this" (R2)

Quantitative phase

As the qualitative study has revealed both external barriers and internal barrier in form of verbatim findings, we strengthened the results with quantitative data presentation by reporting the statistical analysis of both external and internal barriers followed by differences regarding external and internal barriers based on gender, program, and age.

Statistical results

Three variables were addressed regarding the external barriers of the current study; funding, review process, and other external factors. The entire variables achieved appropriate Cronbach's alpha values of above .700 (Hair, Risher, Sarstedt, & Ringle, 2019). In addition, the mean value of each item varies from moderate (3.42) to high (4.10). The mean of item EF1 "lack of funding for publication" and ER1 "response time of reviewers" are respectively above 4. Mostly, the items' mean are in between above 3.75; "Lack of funding for translation, EF2" (M = 3.98; SD = .575), "Complicated feedback of reviewer, ER3" (M = 3.90; SD = .615), and "Lack of funding for other payment, EF3" (M = 3.90; SD = .620). Four items; ER2, EO1, EO2, and EO3, are reported to have mean values below 3.75 such as "Insufficient support from peers, EO3" (M = 3.98; SD = .575) and "Negative feedback of reviewers, ER2" (M = 3.66; SD = .597)

Table 3

External barriers to publication

Variable	Item	Mean	SD	α
Funding	Lack of funding for publication (EF1)	4.10	.562	.766

	Lack of funding for translation (EF2)	3.98	.575	
	Lack of funding from other payment (EF3)	3.90	.620	
Review process	Response time of reviewers (ER1)	4.07	.624	.711
	Negative feedback of reviewers (ER2)	3.66	.597	
	Complicated feedback of reviewer (ER3)	3.90	.615	
Other external factors	Lack of coordination with co-authors (EO1)	3.66	.740	.819
	Insufficient support from supervisors (EO2)	3.73	.614	
	Insufficient support from peers (EO3)	3.42	.698	

For the internal barriers, three variables were also included in the survey phase; writing skills, time, and other internal factors. Similar to the external barriers, the Cronbach's alpha values of the three variables meet the recommended value (Hair et al., 2019). The value ranges from .703 to .832 (Table 4). In addition, six items were included in the three variables. All items obtained a mean of above 3.75. The highest mean is obtained by "lack of time to write, IT2" (M = 3.94; SD = .600), followed by "lack of discipline, IT1" (M = 3.93; SD = .637). The lowest mean value for the internal barriers is found in the last item of the other internal factor "lack of intention, IO2" (M = 3.82; SD = .648).

Table 4

Internal barriers to publication

Variable	Item	Mean	SD	α
Writing skills	Limited skills in English (IW1)	3.90	.658	.726
	Limited writing skills (IW2)	3.88	.655	
Time	Lack of discipline (IT1)	3.93	.637	.703
	Lack of time to write (IT2)	3.94	.600	
Other internal factor	Limited submission skills (IO1)	3.92	.667	.832
	Lack of intention (IO2)	3.82	.648	

Differences regarding external and internal barriers based on gender, program, and age

The study also reported whether the demographic information (gender, program, and age) differs in regards to the external and internal barriers (Table 5 and 6). The t-test results informed that no significant differences emerged male and female Ph.D. students regarding the external barriers (t = 1.139; p > .005) and external barriers (t = .698; p > .005). Similarly, there is also insignificant difference regarding the external barriers based on program (t = -.560; p > .005); however, a significant difference is indicated regarding the internal barriers based on the program (t = -.726; p < .005). The ANOVA analysis informs that there is no significant differences between age for both the external (t = .642; p > .005) and internal barriers (t = .260; p > .005).

Table 5

T-test results based on gender and program

Demographic	M	SD	*t*	*p*	Sig. (p < .005)
External barriers					
Male	3.85	.515	1.139	.102	No
Female	3.77	.431			
Internal barriers					
Male	3.90	.447	.698	.405	No
Female	3.89	.387			
External barriers					
Social science	3.75	.311	-.560	.300	No
Science	3.82	.436			
Internal barriers					
Social science	3.78	.646	-.726	.049*	Yes
Science	3.90	.500			

Table 6

ANOVA results based on age

Demographic	M	SD	*F*	*p*	Significance (p < .005)
External barriers					
<30 years old	3.75	.311	.642	.528	No
30 to 40 years old	3.82	.436			
> 40 years old	3.85	.400			
Internal barriers					
<30 years old	3.78	.648	.260	.771	No
30 to 40 years old	3.89	.500			
> 40 years old	3.96	.308			

DISCUSSION

Lack of funding for submission and lack of funding for translation was the main external barriers revealed by this mix-method study. All participants informed the two factors as the external barriers in the interview sessions. Besides, the survey result also supported the qualitative results because they achieve the highest mean compared to other items of the external barriers. This result is not consistent with what other previous researchers (Duracinsky et al., 2017; Garnet & Mahomed, 2012; Tzarnas & Tzarnas, 2015; Scherer et al., 2015) found. They revealed that lack of funding was not the main barrier to publication. However, they informed that lack of funding were barriers for a few participants. Pavia et al., (2017) addressed this mater saying that publishing in high- and low-impact journals is also dependent on financial resources. The possible reason why the financial factor becomes the main barriers emerged in this study because the participants may have many bills to pay including their living cost and educational fees and their incomes are insufficient to pay all the bills. Besides, students loan are not common in Malaysia and other developing countries in which the participants are originally from.

Next external barriers inform in this study were the response time of reviewers and negative feedback of reviewers which each was informed in 4 statements from the interview sessions. The quantitative reports also support the findings that revealed that response time obtain the highest mean among the review process variable. This finding is similar to the research reports informed by Antonelli & Mercurio (2009) and Duracinsky et al. (2017) who found that the barriers were significant in preventing researchers publish their academic articles.

The least responded external barrier revealed from the qualitative data analysis was limited coordination with co-authors responded by two statements. However, the survey results indicate that the barriers are perceived with a mean value of 3.66 or moderate. In addition, we also reported that support from supervisors and participant to be important barriers to publication perceived by Ph.D. students in Malaysia. Regarding this factor, Antonelli and Mercurio (2009) also revealed that the relationship with co-authors can be problematic for researchers to publish. This might happen because of the disagreement in choosing the appropriate journals for their academic papers.

The limited skill of English was the main internal barrier to publication stated by all interviewees in the qualitative phase. Quantitatively, these two factors have also been reported for their highest mean values. Scherer et al., 2015, Duracinsky et al. (2017), and Garnet and Mahomed, (2012) also informed that limited skills of English as one of the main barriers to publication in their research findings. The other internal barriers found in this study were limited writing skill (5 statements). Similarly, the survey results also support the interview data. The limited writing skill has increased publication barriers reported by Paiva et al. (2017).

Lack of time to write is also experienced by the interview participant supported by the results of the survey. We also added "lack of discipline" as another survey item that is proven to be one of the barriers to publication. Lack of time was also a theme from other previous studies informing barriers to publication (Duracinsky et al., 2017; Garnet & Mahomed, 2012). However, lack of discipline is a new finding of this study. This factor can be a barrier might be because most Ph.D. students involved in this study have full-time professional jobs that decrease their time to work on their academic activities.

Other internal barriers reported in this study are limited submission skills and lack of intention. Limited submission was reported by all participants in the interview and supported by the results of the survey. Meanwhile, lack of intention was only reported by the survey results. Paiva et al. (2017) also reported that lack of submission skills as one among the barriers reported by the participants in their study. In this study context, the two barriers might be triggered by the professional background of the Ph.D. students that do not require them to have publication. A further investigation should be carried out for this factor.

Besides reporting the external and internal barriers to publication, we also extended the data presentation by informing the differences regarding these two barriers based on three demographic information; gender, age, and programs. Through t-test and ANOVA test, the reports show that there are no significant differences for both the external and the internal variables perceived by the survey participants in term of age, gender, and program. However, a significant difference was detected for internal barriers in terms of participants' program. This part should be considered to become a future research project to get a more in-depth understanding of demographic information regarding barriers to publication.

Implication

The level of barriers experienced by this group of Ph.D. students in education would lead readers to believe that they possessed the capability and willingness to publish and if the funding for publication and translation was supportive and appropriate, many outputs from their research would be beneficial for the betterment of the universities. The training for English writing is also needed when the students have had good research to publish. In addition, the university needs to guide these students through a board or a program for the review processes, if the reviewers of the journals give feedback, positive or negative. The action, program, or training to support Ph.D. students to minimize barriers to publishing in scholarly journals requires a strong commitment from the management team from the universities and supervisors in producing an enabling environment, rather than a hindering environment.

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