

## **Exploring the Research Culture in an Educational Faculty in Malaysia**

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### **ABSTRACT**

Globally, journal publication index is used as a key indicator to measure university performance. At the macro level, it contributes to the university ranking. At the micro level, it reflects academicians' scholarship values and credentials. Over the last decade, tertiary education has rapidly grown in the Asia Pacific region. Tertiary institutions are competing among themselves nationally and regionally for university ranking, student intake and research funding. These three elements have numerical figures that are inter-related and powerful enough to dictate the fate and survival of an institution. Journal publication output plays a big role in this numerical game. For that reason, it is the topmost interest of many institutions and faculties to boost research writing output of their members. Paradoxically, minimal efforts have been made in the majority of instances to understand the needs and obstacles for such an aim to be realised. In this study, a preliminary attempt was made to gather the views and perceptions of academicians from an educational faculty in Malaysia. The data were collected via an online survey. The findings informed that academicians were facing different sets of challenges in different stages of their careers. Beginners reported the lack of technical support as the major hindering factor faced by them in producing academic output while the more senior members identified personal factors such as paradigm shift and motivation as the major hindering factors faced by them. Thus, the differential needs of academicians need to be acknowledged and to be supported with suitable mechanisms and catalysts.

*Keywords:* Journal publication, research culture, education faculty, Malaysia, Asia Pacific

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### **INTRODUCTION**

Many top world university rankings use bibliometric indicators to compare the academic standards of universities. To name a few (1) Webometrics Ranking

of World Universities (WRWU) by Cybermetrics Lab in Spain, (2) Academic Ranking of World Universities (ARWU) by Shanghai Jiao Tong University of China, (3) Performance Ranking of Scientific Papers for World Universities (PRSPWU) by Higher Education Evaluation and Accreditation Council of Taiwan, and (4) THE-QS World University Rankings (THE-QS) by a private company, Quacquarelli Symonds Limited based in England (refer to Table 1). With the exception of THE-QS, almost all ranking systems place

great importance on the output and impact of research over the other indicators (Ahuillo, Bar-Ilan, Levene, & Orteja, 2010; Chen & Liao, 2012). Despite the fact that a full spectrum of research measures include grant, consultancy, exhibition and knowledge transfer, research output in the form of publications remains as a dominant measure in these world university ranking systems. A direct consequence of this is the increased emphasis on academic publication for academic staff of universities.

TABLE 1  
Relative Relevance of Research Output and Research Impact in World University Rankings

Ranking systems	Indicators	Weightage
Webometrics Ranking of World Universities (WRWU)	Research output (30%) Rich files Google scholar	80% of total
	Research impact (50%) Link (visibility)	
Academic Ranking of World Universities (ARWU)	Research output (40%) Articles published in <i>Nature</i> and <i>Science</i> Articles indexed in SCI/E & SSCI	60% of total
	Research impact (20%) Highly cited researchers	
Performance Ranking of Scientific Papers for World Universities (PRSPWU)	Research output (20%) Number of articles of the last 11 years Number of articles of the current year	50% of total
	Research impact (30%) Number of citations of the last 11 years Number of citations of the last 2 years Average number of citations of the last 11 years H-index in the last 2 years Number of highly cited papers Number of articles of the current year in high-impact journals	
THE-QS World University Rankings (THE-QS)	Research impact (20%) Citations (Scopus)	20% of total

Source: Ahuillo *et al.*, 2010 & Chen & Liao, 2012

The pressure of publication is faced by academicians worldwide. A general impression is that academicians in North America outperform their counterparts in all other regions. This impression is supported by solid data provided by the International Bureau of BMBF in Germany. The bureau conducted a review of world research publications from 1992 to 2007 (Haustein, Mittermaind, Tunger, & Julich, 2009) and the findings revealed that 41.0% of world research publications were produced by North American researchers, followed by European researchers at 39.4%. The remaining 19.6% were shared by 12 Asia Pacific countries included in the review (i.e., Japan, China, Australia, South Korea, Taiwan, New Zealand, Singapore, Iran, Thailand, Malaysia, Indonesia and Vietnam).

Many studies have been conducted by social scientists, linguists and experts in higher education to investigate the reasons for non-American researchers falling behind in academic publications (e.g. Pratt, Margaritis, & Coy, 1999; Lee, 2003; Lyytinen, Baskerville, Livari, & Te'eni, 2007; Tynan & Garbett, 2007; Jaroongkhongdach, Todd, Keyuravong, & Hall, 2012; Singh, Thuraisingam, Nair, & David, 2013). One of the reasons identified is delayed establishment of research culture. Research culture in the context of higher education institutions refers to the standard or norm established in an institution in promoting and supporting research activities and practices. In general, it refers to whether academicians view

research as their regular job routine and responsibility and whether they recognise it as an integral part of their job appraisal and a catalyst of career advancement (Pratt *et al.*, 1999; Hill & Haigh, 2012). Such insight and belief have been long established in American academia (Geiger, 1986). In the last two decades, researchers in the other regions have begun to relate to the relevance and importance of research (Pratt *et al.*, 1999; Lyytinen *et al.*, 2007; Hill & Haigh, 2012; Valladolid, 2013). In the Asia Pacific region, the urge for the cultivation of research culture is partly driven by tertiary education reforms in the past 20 years (Lee, 2007; Altbach, 2009; Postiglione, 2011; Singh *et al.*, 2013).

#### *Tertiary Education Reforms in Asia Pacific Region*

Tertiary education is rapidly growing in the Asia Pacific region as a result of globalisation (Arokiasamy & Nagappan, 2012) and global economic recession (Postiglione, 2011). Today, there are increasing efforts to study the higher education contexts in Asia-Pacific as a regional block in order to better understand the research and teaching strengths shared by countries in this region (Denman & Higushi, 2013). In many countries in this region, tertiary education needs to be reformed and restructured in order to serve the market demands of knowledge workers locally and to be more competitive globally (Postiglione, 2011; Arokiasamy & Nagappan, 2012). For example, reforms of tertiary education were reinforced

in Malaysia in 2007 when the federal government introduced the National Higher Education Strategic Plan Beyond 2020 and the National Higher Education Action Plan 2007-2010 (MOHE, 2007a, 2007b). There are now 622 tertiary educational institutions in Malaysia (Ahmad, Farley, & Naidoo, 2012), a four-fold increase from merely 156 institutions in 1992 (Lee, 2004; Wan, 2007). This increase in number also increases the competitiveness among the institutions in institutional ranking, student intake and research funding. To increase the university competitive level, it is becoming a norm now that the academicians in each and every university need to contribute to improving the university bibliometric index by producing journal publications (Low, Phoon, Petras, & Abdul Rashid, 2013; Singh *et al.*, 2013).

Many Asia Pacific countries have shown a spurt of scholarly output over the past two decades. For example, China has shown a remarkable nine-fold increase (n=9309 in 1992, n=99270 in 2007, in Haustein *et al.*, 2009). Countries in Southeast Asia such as Singapore (n=1251 in 1992, n=7756 in 2007), Thailand (n=573 in 1992, n=4319 in 2007) and Malaysia (n=408 in 1992, n=2417 in 2007) have also recorded as much as a five- to six-fold increase (Haustein *et al.*, 2009). Nguyen and Pham (2011) studied the scientific output in the ASEAN (Association of Southeast Asian Nations) countries (10 Southeast Asian countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and

Vietnam) between 1991 and 2010, and they recorded an average annual growth of 15%. Despite this impressive achievement, many academicians in this region still face continual challenges in their academic endeavours. Lee (2007) identified four major factors that contribute to the lack of an academic culture in Southeast Asia: (1) heavy teaching load, (2) low pay, (3) lack of facilities and resources to carry out research, and (4) reduced academic freedom i.e. restrictions on what can be researched and what can be expressed to the public.

#### *Research and Publication in Malaysia*

In Malaysia, since the launching of the tertiary education reforms in 2007 (MOHE, 2007a, 2007b), the Ministry of Higher Education has channelled generous monetary support to increase academicians' wages and to support their research works. Thus, at least the second and third reasons identified by Lee (2007) are now less applicable to the public universities in Malaysia, particularly those identifiable within the category of research universities (for classification of Malaysian universities, refer to Ahmad *et al.*, 2012). Despite that, gaps remain before Malaysian universities can reach higher levels in world university ranking.

In a comparative study conducted by Bentley and Kyvik (2012), Malaysia stood out as quite uniquely different from the other 12 countries (namely Argentina, Australia, Brazil, Canada, China, Finland, Germany, Hong Kong, Italy, Norway, UK

and the USA) in several aspects. A general finding was that most professors in the other 12 countries showed stronger interests in research as compared to their lower-ranking counterparts and correspondingly, they also devoted more time into research over teaching. However, despite the fact that Malaysian professors also expressed strong interest in research, they reportedly spent very little time on research. Comparatively, they devoted longer hours to teaching and administration as compared to professors from other countries. Furthermore, Malaysian professors' research activities did not increase during non-teaching period as compared to those of professors in the other countries. These findings coincide with Lee's (2003) suggestion that Malaysian academics spend more time in administrative activities due to the lack of a research culture.

### *Research Culture*

As previously defined, research culture refers to the establishment of norms for research practice in an institution. In the context of higher education, it refers to the presence of beliefs, attitudes and behaviours that support scientific inquiry, critical thinking, innovation and creativity among the members of faculties or universities (Pratt *et al.*, 1999; Valladolid, 2013). Salazar-Clemeña and Almonte-Acosta (2007) believe that research culture is formed by the interactions of three domains: (1) faculty tasks in teaching, research and community services, (2) individual attributes and outputs, and (3)

institutional attributes and policies. As a result, the establishment of a research culture does not happen overnight (Salazar-Clemeña & Almonte-Acosta, 2007) and most of the time it requires top-down efforts made by the institutions and faculties (Pratt *et al.*, 1999). The popular recommendations to develop a research culture include the building of a research environment (Salazar-Clemeña & Almonte-Acosta, 2007) and establishment of a community of practice (Hill & Haigh, 2012). The ultimate aims of these efforts are to increase individuals' research capabilities and subsequently institutional research output. The building of a research environment is largely an administrative initiative that potentially covers these eight indicators outlined by Salazar-Clemeña and Almonte-Acosta (2007): (1) institutional research policies and agenda, (2) departmental culture and working conditions, (3) budget for research, (4) infrastructure, (5) collaboration with and access to research professionals in other institutions, (6) policies and guidelines on research benefits and incentives, (7) research committee, and (8) publications. On the other hand, the building of a community of practice refers to the efforts of creating mutual support among the members of a faculty or institution. As reported by Hill and Haigh (2012), it includes (1) funding and supporting learning through research clusters/teams, (2) establishing research centres, (3) producing graduate students, (4) working collaboratively in research projects, and (5)

recognising the membership of the research community. As a result, the building of a research culture entails systematic planning at the administrative level and requires careful consideration of all the indicators and elements mentioned above.

### *Research Culture in the Context of Teacher Education*

Some higher educational researchers have put forward the view that the cultivation of research culture is more difficult in professional faculties such as the accounting and educational faculties compared to natural sciences (Hill & Haigh, 2012; Singh *et al.*, 2013). As explained by Hill and Haigh (2012), many teacher educators are recruited into the service for their achievements in professional practice rather than for their research competence and expertise. As a result, many academics in the educational faculty are not laboratory-trained researchers compared to their natural sciences colleagues who perceive research as a predominant part of their career. On top of that, teacher educators face the extra work demands and responsibilities of supervising pre-service teachers in schools, establishing university-community partnerships with schools and responding to top-down projects from the ministry (Martinez, 2008; Hill & Haigh, 2012). Therefore, it is not surprising that many teacher educators simply do not have enough time for their research works and they are not research active. The lack of a research culture in educational faculties negatively affects the faculties' competitive levels to

compete for university funding and it also affects the job promotion of individual faculty members when they are judged based on common university standards.

In this study, an educational faculty in Malaysia was investigated to provide case-study insights into the common practices and dilemmas faced by teacher educators in Malaysia. The area of teacher education has been identified in the literature as an area in which the cultivation of a research culture is exceptionally challenging (e.g. McGaghie, 2009; Hill & Haigh, 2012). Therefore, it is hoped that the case-study findings provide insight into the missing gaps and the efforts required in nurturing a research culture in this specific area in a region where the research culture is considered to be still predominantly lacking. Thus, this study is conducted to address the following questions:

- (1) What are the hindering factors that would affect the production of scholarly output in an educational faculty?
- (2) What are the factors contributing to improved performance in scholarly output?
- (3) What are the implications of the findings on faculty's strategy planning?

Despite being an action research that is aimed to determine immediate local solutions, the findings of this study are potentially applicable to the larger Southeast Asian context and other developing countries worldwide that share similar contexts.

## MATERIALS AND METHODS

The faculty focused on in this study was an education faculty of a research university in Malaysia. A research university is an academic institution committed to the creation and dissemination of knowledge in a wide range of disciplines through top-quality teaching and research (Altbach, 2009). As reported by Singh *et al.* (2013), currently there are about 20 public universities in Malaysia and these universities are categorised into three types: research universities, comprehensive universities and focused universities. The latter two are regarded as teaching universities. Comprehensive universities offer a vast variety of undergraduate and postgraduate courses while focused universities tap on specified fields such as engineering or teaching. Research universities could be considered as the leading universities in the country. The sample faculty selected is within one of the top-three research universities in Malaysia. The university secured a top 500 ranking in the latest Webometrics Ranking of World Universities (WRWU).

The faculty in the current case study consists of five professors, 11 associate professors and 52 lecturers. This study is the first step of a larger plan initiated by the dean's office to instil a research culture among the faculty members. A secretariat was formed to steer-drive the larger plan. Prior to this study, the secretariat studied the previous year's faculty publication record and identified several aspects that required further investigation. These

aspects of enquiry were formulated into 13 closed-ended questions and 1 open-ended question in a simple survey format developed by the researchers of this study. The survey was launched online via [www.freeonlinesurvey.com](http://www.freeonlinesurvey.com) for four weeks. Announcement and subsequent reminders about the survey were sent to the emails of all faculty members at weekly intervals. Faculty members were urged to participate in this survey voluntarily. To encourage participation, three measures were taken, (1) a direct URL link was added to the email content to ensure easy access to the survey form, (2) an additional email reminder was sent three days before the closing date to ensure no one had missed the date, and (3) the faculty writing club also advertised this survey in the quarterly newsletter, which was published online and in hard copy, which was sent to all faculty members two weeks before the closing date. At the end of this survey period, the data were exported from the online database and downloaded as a single digital file in SPSS 20.0. Statistical analyses were conducted using the similar software.

## RESULTS

### *Response Rate*

On the whole, 21 faculty members completed the online survey (N=68). The 30% participation rate fulfilled the baseline requirement of the self-posted survey, which Baruch and Holton (2008) found as 52.7% with a standard deviation of 20.4. However, this rate was arguably less satisfactory considering the sample size and

the accessibility of the targetted members to the survey materials and responding modes. In this context, the reduced response rate potentially reflects the lack of interest among many faculty members (the remaining 70%) to participate in the activities or events related to academic writing. This presumption will be further discussed in the discussion section.

*Respondents' Characteristics*

The 21 respondents who participated in this survey represented a proportional

distribution of academicians from various academic positions and years of service. The distribution shows that the sample, in general, is representative of the larger population in the faculty. However, it is important to note that there is a slight under-representation of professor-level respondents and those with longer years of service (refer to Table 2). This distributional data suggest that the subsequent findings might be slightly more reflective of the junior academicians in the faculty.

TABLE 2  
Respondents' Self-Reported Background Information

Categories	Actual population in the faculty (N=69)	Survey respondents (N=21)
<b>Academic positions</b>		
Professor	14.5% (n=10)	9.5% (n=2)
Associate Professor	21.7% (n=15)	23.8% (n=5)
Senior lecturers and lecturers	63.8% (n=44)	66.7% (n=14)
<b>Years of service</b>		
More than 5 years	81.2% (n=56)	66.7% (n=14)
Less than 5 years	18.8% (n=13)	33.3% (n=7)

Results of correlation analyses revealed that academic positions and years of service did not correlate with research publications,  $r(21)=.36, p=.11$ . Next, the analyses explored types of publication output. The respondents were asked to report their publication achievements in the recent five years (Jan 2007-Dec 2011). More than half of the respondents (61.9%, n=13) had published between one and five articles in ISI and Scopus-listed journals in the mentioned time; while two (9.5%) had published between six and 10 articles

(estimated average: at least one article per year). This group of respondents also actively published in other journals (results are in bold in Table 3). For subsequent discussion, this group of respondents is referred to as '**active researchers**'. On the other hand, 28.6% of the respondents (n=6) had not published in ISI and Scopus-listed journals in the recent five years. In comparison, the productivity of these respondents in other journals was also lower as compared to the other group of respondents. Only one third of them (n=2,



N=6) had published more than five articles in the mentioned time compared to two thirds in the other group (n=11, N=15).

For subsequent discussion, this group of respondents is referred to as ‘**beginner researchers**’.

TABLE 3  
Publication Output

		Publications in Other Journals				
		> 10 articles	6 –10 articles	1–5 articles	0 article	
<b>Publications in ISI and Scopus-listed journals (Jan 2007- Dec 2011)</b>	> 10 articles	0	0	0	0	
	6 –10 articles	<b>4.8%</b> n=1	<b>4.8%</b> n=1	0	0	<b>9.5%</b>
	1–5 articles	<b>19.0%</b> n=4	<b>23.8%</b> n=5	<b>19.0%</b> n=4	0	61.9%
	0 article	4.8% n=1	4.8% n=1	19.0% n=4	0	28.6%
		28.6%	33.3%	38.1%	0	100.0%

*Research Grants and Research Supervision*

Of the 21 respondents, all reported experience of participating in research grants. Other than university grants (n=21), 40% of them also had research experience in national and international grants (n=10, n=4 respectively). Pertaining to this, the majority of them (71.4%, n=15) had published between one and two research articles for every research grant that they were involved in. Five (23.8%) had published between three and four papers and one (4.8%) had published more than five papers for every research grant that he or she had received. The data suggest that the respondents’ commitment to their research grants were obvious and none had failed to publish research articles based on their research outcomes. Further, writing outcomes from research grants

and publications in ISI and Scopus-listed journals was shown to be correlated statistically,  $r(21)=.48, p < .05$ .

In the recent five years (Jan 2007- Dec 2011), 98.2% of them (n=20) had experience in supervising research students. About one third of them (33.9%, n=19) reported experience in supervising PhD candidates while the rest were involved in Master’s level research supervision (64.3%, n=36). Pertaining to this, about two thirds of them (71.4%, n=15) reported that they had co-written between one and five research articles with their supervisees in the recent five years (estimated average is less than one article per year). Another 14.3% (n=3) had co-written between six and 10 articles (estimated average is one to two articles per year) while 4.8% (n=1) had co-written more than 10 articles (estimated average is two articles per year).

As a whole, this set of data showed that research supervision was a common professional practice in this faculty. For one fifth of the respondents, at least one research article was generated per year through this mode. The results of the statistical computation showed that 'writing with research students' shared a strong correlation with 'publications in non-ISI and non-Scopus-listed journals',  $r(21)=.56$ ,  $p < .01$ .

### *Perceptions*

The respondents were asked to provide four types of perceptual ratings: (1) satisfaction towards own achievements in scholarly output, (2) aspiration for further improvements, (3) importance of scholarly output in career advancement, and (4) satisfaction towards faculty support in this process. Pertaining to this, one third (33.3%,  $n=7$ ) expressed satisfaction towards their current achievements, while half of the respondents (52.4%,  $n=11$ ) expressed dissatisfaction. Three respondents were unsure (14.3%,  $n=3$ ). Satisfaction of own achievements was found to be strongly correlated with publication records in ISI and Scopus-listed journals,  $r(21)=.56$ ,  $p < .01$  and writing outcomes from research

grants,  $r(21)=.59$ ,  $p < .01$ . Despite the diverse opinions about own achievements, all the respondents (100%,  $n=21$ ) expressed aspiration for improved performance in academic writing. At the same time, all of them (100%,  $n=21$ ) also felt that academic writing and publication were critical to their career advancement. Two thirds were satisfied with the support given by the faculty in this process (66.7%,  $n=14$ ), while one third expressed dissatisfaction (33.3%,  $n=7$ ). Different from the other aspects of satisfaction rating, this aspect of rating was found to be negatively correlated with the writing outcomes from research grants,  $r(21)=-.48$ ,  $p < .05$ . This potentially implied that, paradoxically, those with better writing outcomes felt that the school should have supported them better in the process. This might also imply that this group of writers was more aware of the support services that they required.

### *Hindering Factors*

The respondents were asked to rate 16 hindering factors according to their own circumstances. The rating was conducted via a Likert scale (1=not relevant, 2=unsure, 3=a little bit, 4=common hindering factor, 5=major hindering factor).

TABLE 4  
Rating of Hindering Factors

Items	Mean	Percentage of respondents identifying the item as a major hindering factor (Scale 5)
Not enough time	4.57	66.7% (n=14)
Overloaded with teaching work	3.57	23.81% (n=5)
Rejection of draft by publisher	3.48	9.52% (n=2)
Lack of statistical assistance/support	3.29	19.05% (n=4)
Lack of writing-skills assistance/support	3.24	14.29% (n=3)
Lack of language assistance/support	3.10	19.05% (n=4)
Research has not yet been completed	3.10	4.76% (n=1)
Delayed research progress due to technical issue	3.00	4.76% (n=1)
Delayed research progress due to personal issue	2.76	0
Lack of quality in research work	2.52	0
Not confident	2.33	0
Not motivated	2.29	0
No luck	2.05	4.76% (n=1)
Paradigm shift	2.00	0
Not interested to write and to publish	1.81	0
Lethargic	1.81	4.76% (n=1)

Considering their responses as a group, the respondents had identified eight factors as hindering their progress and performance in producing scholarly writing (with a mean score of 3 and above). As outlined in Table 4, these eight factors were (1) not enough time, (2) overloaded with teaching work, (3) rejection of draft by publisher, (4) lack of statistical assistance/support, (5) lack of writing-skills assistance/support, (6) lack of language assistance/support, (7) research has not yet been completed and (8) delayed research progress due to

technical issue. On the other hand, as a group, the respondents did not recognise personal factors such as personal issue, confidence, motivation and interest as hindering factors in the production of scholarly writing. As a whole, the results showed that the hindering factors were primarily external in nature i.e. job commitment and lack of various technical support. Next, the responses given by the active researchers were compared with those of the beginner researchers to identify if there were any differentiating variables.

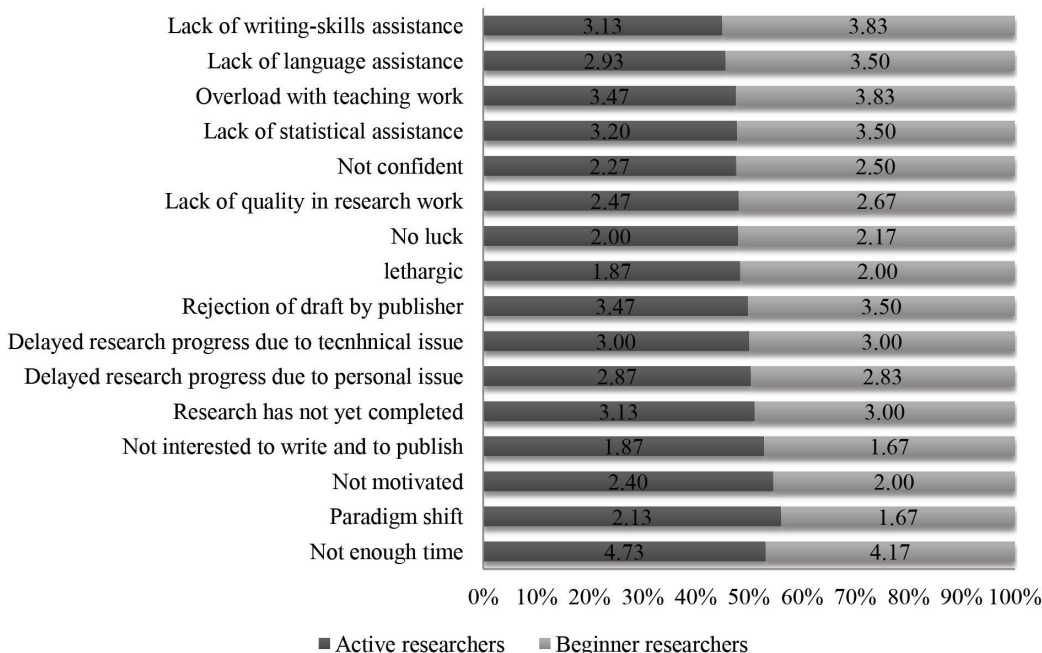


Fig.1: Comparison of hindering-factor ratings between active researchers and beginner researchers.

The Pearson Chi-squared tests revealed that the ratings of hindering factors did not significantly differ with the researcher type,  $\chi^2(1, N=21)=0.167-0.571, p =.06-.90$ . Despite that, the results of the descriptive analyses showed differences in their opinions as follows:

- (1) Active researchers rated the items more highly as compared to beginner researchers (the bottom six items in Fig.1).
- (2) Beginner researchers rated the items more highly as compared to active researchers (the top six items in Fig.1).
- (3) Similar ratings between the two researcher types (one item: delayed research progress due to technical issue).

The results showed that technical factors such as the lack of support or assistance in writing, language and statistical analysis remained as the major hindering factors identified by beginner researchers. On the other hand, at another level, active researchers seemed to face certain personal issues as a major challenge in writing. The issues encompassed ‘paradigm shift’, ‘not motivated’ and ‘not interested to write and publish’. This set of findings pointed to the differential needs of separate writer groups.

**DISCUSSION**

As a whole, this study explored the scholarly writing activities and outcomes of academicians in an educational faculty in Malaysia. Specifically, the study sought

to identify the adverse factors that would affect the production of scholarly output and, at the same time, the contributing factors for improved performance in scholarly output. It is hoped that the findings could provide insight into the cultivation of a research culture in a higher education context, specifically in teacher education. The study gathered a 30% response rate, which arguably is less satisfactory considering the measures taken to encourage participation. This finding reflects that, in general, a sizeable number of faculty members were possibly less interested in activities and events related to academic writing as was found by previous researchers in the context of teacher education (Martinez, 2008; Hill & Haigh, 2012). The reasons might reflect the adverse factors of academic writing as reported by the respondents in this study. These subsequent findings will be used as a starting point to suggest solutions.

From the data provided by 21 respondents in this study, the researchers realized that scholarly output did not correlate with academic position and years of service. This finding adds to the debate where mixed outcomes were found for the relationship between aspects of seniority and scholarly output (Jonkers & Tijssen, 2008; Hemmings & Kay, 2010; Miller, Taylor, & Bedeian, 2011; Barnard, Cowan, & Muller, 2012; Bentley, 2012). In an Asian context as reported by Jonkers and Tijssen (2008), junior faculty members, especially those returning from overseas training, were found to be more actively

involved in academic writing. Researchers such as Miller *et al.* (2011) associated such findings with the values of scholarly output in job security and promotion, which were more strongly felt by the junior members. Tabbodi (2009) observed a similar trend pertaining to be the relationship between seniority and commitment to work. On the other hand, in this study, strong correlations were found between scholarly outputs with writing outcomes from 'research grants' and 'research supervisions'. The findings echoed the general assumption that these two research elements were fundamental to the process of academic writings. Besides that, Hill and Haigh (2012) also provided insight that the establishment of research teams and research supervision helped to create a community of practice that was believed to be the engine of instilling research culture in an educational faculty.

The respondents held different opinions of their own achievements in scholarly output. Over half of them were not satisfied with their current performance. Despite that, all of them expressed aspiration for improved performance. In fact, the findings showed that those with better writing output appeared to be less satisfied with the faculty support as compared to their counterparts. This might be an indication that they were more aware of the support service they require due to their extended experience in academic writing. This set of findings supported the importance of active measures taken to support academicians in the process of academic writing. Further, to ensure efficacy, the measures also needed

to be contextually relevant to match with the academicians' local needs and requirements, possibly differentiated by the extent of academic writing experience they have had. For strategising planning, subsequent findings on adverse and favorable factors were especially critical.

By large, the findings on adverse factors showed that the primary hindering factors were predominantly external in nature, such as time and lack of technical support. These findings were roughly expected since the literature had widely pointed to these two factors as the major obstacles faced by academicians in producing journal publications (Millwater, & Hudson, 2011; Hill & Haigh, 2012; Li, Low *et al.*, 2013). A novel finding of this study was that different types of adverse factor were also found to characterise active and beginner researchers. The findings showed that beginner researchers generally faced a lack of technical support as their major challenge. On the other hand, more active researchers perceived personal factors such as paradigm shift, motivation and interest as major hindering factors in academic output. This set of findings pointed to the hierarchical needs of writers as they advanced in the endeavour of academic writing. A pattern that emerged from this study was that in the beginning stage of writing, the writer's major challenge was to acquire various technical skills concerning academic writing. As they became mature writers, intrinsic factors began to arise.

The findings on the differential needs of writer groups has important practical

implications for faculty administration. As strongly advocated by Pratt, Margaritis and Coy (1999), faculty administration should take on a leadership role in developing a research culture. Faculty administration has to take bold actions to change the systems, beliefs, attitudes, values and behaviours as entailed in the theory of management (Pratt *et al.*, 1999). The findings from this current study showed that to foster the desired changes, faculty administration needs to relate to the differential needs of active and beginner researchers and to offer differential support mechanisms.

First, since technical support was crucial to support beginner researchers, such support needed to be adequately channelled to this group of researchers. To achieve this, the faculty administrators needed to promptly identify the relevant consultation services such as language and statistical consultation and to make these support services available to those in need. In fact, such services as in-house services are common in many tertiary institutions in developing nations, especially those in the medical and science domains (Gusic *et al.*, 2010; Sehgal, Sharpe, Auerbach, & Wachter, 2011). In the attempt to develop a world-class academic profile, such services are essential and should be made accessible at the faculty level. Second, to ensure continual success and improvement in established writers, certain mechanisms targeted to address their higher-level scholastic needs are needed.

In general, research supervision and collaboration are two conventional

mechanisms that are already in place for the sustaining of interest and motivation in scholastic writing. Perhaps, more proactively, faculty administrators could offer certain incentives for improved performance (Pratt *et al.*, 1999) and also work on improving the quality of these existing mechanisms. The improvement plans could be to encourage the growth of research clusters and to work on building positive working relationships between research supervisors and supervisees (Tynan & Garbett, 2007; Hill & Haigh, 2012).

## CONCLUSION

The findings of this study provide some preliminary data to explain the obstacles and catalysts experienced by Malaysian academics in producing scholarly output, in the context of teacher education. A limitation of this study was the small sample size, constrained by a case-study design. However, through investigating the faculty as a unit, it was clear that active and beginner researchers and writers in a faculty faced different sets of challenges pertaining to research and publication. In particular, beginner researchers faced external support issues, which optimistically are easy to overcome by faculty administration by making sure that the support services and intervention strategies are in place. In comparison, active researchers were found to face internal-related issues such as the decline of motivation and interest, which could drastically affect their subsequent track records. Pertaining to this, faculty

administration needs to ensure that a comprehensive mechanism to establish research partnerships and collaboration within the faculty is in place to create a mutual support for the different researcher groups i.e. to provide external technical support for the beginner researchers and continual emotional incentives for the active researchers. By systematically addressing their respective needs, it is hoped that contributions are made to the establishment of a research culture in the studied context and other similar contexts. Future research could investigate the intervention measures used and interviews could be utilised to better reveal personal insight and perception among the target respondents.

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