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Educational Researchers in Malaysia – Who They Conduct Their Research for?

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ABSTRACT

The urgent need to transfer the impact of educational research into practice is widely reflected in national agendas around the world. However, the gap between research and practice persists in other parts of the world as well as in Malaysia. This study sought to explore the factors that drive educational research in Malaysia. We employed a qualitative case study design to investigate the practices of 14 educational researchers using face to face in-depth interviews and content analysis of their research documents. The findings revealed three major drivers- researching for key performance indicators (KPI's), researching for citation and H-index, and researching for personal development as a researcher, which shaped the research agenda of educational researchers. Higher education policy-related implications are discussed to have educational researchers effectively target their research for teachers' consumption for improved teaching standards.

Keywords: Educational research, evidence-based practice, higher education, Malaysia, teachers

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INTRODUCTION

A great emphasis is placed on the use of evidence-based or research-driven pedagogy by the school teachers all around the world for it is believed that teachers' knowledge of 'what works' would not only enhance their teaching skills but also student outcomes (Cain & Allan, 2017). Scholars have argued in multiple ways for the relevance and rationale for the use of educational research for policy and practice. For example, Brown

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(2015) posited that educational research was valuable for teachers in two ways - usability and signifying value. The former explained that educational research was useful for teachers in addressing practical problems related to teaching and learning and the latter suggested that the information obtained through research was of superior quality when compared with other sources of information. Brown (2017) claimed that teachers mainly used educational research to design teaching and learning activities for better learning outcomes, class management, or solving specific problems related to teaching and learning. Educational research also aids teachers in understanding individual differences among students in cognitive, affective, and conative domains to design and implement appropriate curriculum and pedagogy (Awang-Hashim et al., 2019) and often guides the design of specific interventions and guidelines that have been found effective in solving identified issues (Brown, 2017). However, despite these benefits, the question remains as to why educational research is incapable of rendering a direct impact on educational practices at the school level. Studies in the past have focussed on teacher-related factors (eg. Goldacre, 2013; Mortimore, 2000) that prevent teachers from utilising research evidence to inform their pedagogy; nonetheless, it remains widely obscure what drives educational researchers' research agenda. Do they design their investigations with the intention of informing school teachers' pedagogy in practical ways?

Weiss (1979), theorized the use of educational research in three categories namely, instrumental, conceptual, and symbolic. Instrumental use implies the concrete application of research output in the form of interventions and protocols to make decisions or solve problems. Conceptual use refers to the change in thinking, also known as 'enlightenment', that may occur as a result of knowing the research output. Several authors (e.g. Anwaruddin, 2015; Winch et al., 2015) have elaborated this utility using Aristotle's Nicomachean Ethics which highlights teaching as a craft 'techne' that requires practical wisdom 'phronesis' and the research output has the potential to influence both the dimensions. Lastly, symbolic use refers to the use of research evidence as a persuasive tool to support policy-related decisions. The first two of these three are directly concerned with teachers' practices and are also frequently used in discourses pertaining to the use of educational research (e.g. Cain, 2017; Ion & Iucu, 2014). However, those discussions are beyond the scope of this paper. Finally, Cain and Allan (2017) argued that research output was also likely to contribute to organisational learning whereby teachers engaged in discussions and interactions which, in turn, led to collegial sharing, questioning, and critiquing thereby converting tacit knowledge of individuals into explicit knowledge and adding richness to school climate (Brown et al., 2016).

The significance of transferring the impact of educational research into practice is widely reflected in national agendas,

policies, and initiatives around the world which intends to encourage teachers to use evidence-based practices and educational researches to make an impact on practices. In the UK, the government has launched 'What Works Centre for Education', and the 'Evidence for Policy and Practice Information and Coordinating Centre' to measure the impact of educational interventions, (Cain, 2015; Dagenais et al., 2012). In the United States several approaches to disseminate educational research output can be traced through the 'American Institutes for Research', 'the What Works Clearinghouse', 'Doing what works', just to name a few (see, Dagenais et al., 2012). In Malaysia, on the other hand 'Knowledge Transfer Program policy' that encourages collaboration between academia and industry through consultancy, education, training, graduate development, and conferences (Sohail & Daud, 2009).

Despite these efforts, the evidence suggests that the gap between research and practice remains wide owing to several issues surrounding the nature of research methodologies used for educational research, the nature of research outcomes, policy directions, teachers' attitudes, perceptions, and skills required to utilises research, and school leadership practices which can either facilitate or hinder the use of educational research (Brown & Zhang, 2016; Cain, 2015; Levin, 2013). Apart from policy-related initiatives and context-related factors (such as schools, school leadership, and school effectiveness) (Cartwright, 2013; Moss, 2013), it is teachers and educational researchers who are mainly held accountable for the prevailing gap since the two reside in two extremely different worlds (Olivero et al., 2004). A considerable amount of attention is devoted to investigating teachers' perspectives and beliefs in terms of challenges related to the use of educational research. For example, studies have highlighted that teachers lack skills (reading reports and statistics) to use evidence in their practice (Goldacre, 2013; Hargreaves, 2007), they find the academic language very complex and technical (Mortimore, 2000), and the findings and research methods have little or no relevance to solving practical problems in their classrooms (Bartels, 2003; Gore & Gitlin, 2004; Hoogveld et al., 2005). Access to research-based information and lack of support from school management are also some of the challenges teachers reports as barriers in utilising the educational research (Cain, 2015; McDonough & McDonough, 2014).

Nonetheless, the educational researchers are often accused of treating teachers as the subject and the object of their research (Shkedi, 1998; Smith, 2002), considered outsiders to schools (Zajano & Edelsberg, 1993), who merely perceive schools as data collection sites (Taber, 2002), and do not want to see themselves in any other role except that of researchers (Ekız, 2006). Apparently, the discourses on teacher involvement in research and teachers as researchers (e.g. Bickel & Hattrup, 1995; Diezmann, 2005) whereby teachers' roles are active as researchers and

not limited to being subject or object of educational research are the consequences of researchers' distance from the practical issues surrounding schools.

While there are a number of investigations in the past as well as in recent literature that have focused exclusively on teacher-related factors regarding the use of educational research (e.g., Cain, 2015; Shkedi, 1998), there still remains paucity of investigations that focus on educational researchers to investigate the factors that drive their research agenda which, in turn, limit their direct contribution for teachers' consumption of educational research. The findings may provide an explanation of why the two worlds of educational research and practice are situated so far apart wherein while teachers are encouraged and expected to espouse evidence-based findings, it is unknown whether educational researchers facilitate this aspiration and purposefully direct their investigations towards teachers' consumption. Therefore, the current study is aimed at exploring the factors that drive educational researches in Malaysia. We believe that those drivers determine the nature of their research including the subject, its implications, type of methodology, and the medium to disseminate research findings.

The primary research question that guided the study was -

> What are the drivers that shape educational researchers' intentions for undertaking educational research?

Theoretical Underpinning

To understand the drivers that shape educational researchers' research agenda and how it contributes to the perceived gap between education research and practice, we employ the tenets of the principal-agent theory which originated in the field of economics (Williamson, 1985). The theory is commonly applied in higher education research to explore the relational phenomenon between two parties for example, government and higher education institutes (Lane & Kivisto, 2008), or higher education institutes and its staff (Wan et al., 2017). The three primary assumptions of the theory are, there should be two parties, one is the principal and the other is the agent who is appointed to function on behalf of the principal. Second, a goal conflict between the goal of the principal and the agent must exist. Third, there is a probability of information asymmetry (Waterman & Meier, 1998) between the two. Furthermore, the principal contributes inputs in terms of appropriate funding to warrant the desired outputs from the agent (Lane & Kivisto, 2008).

To translate these assumptions for the current study, we understand that educational researchers (agent) are appointed and funded by the government/academia (principal) under contractual agreement to serve the needs of society by creating and sharing knowledge to raise the educational standards of a nation (Lane & Kivisto, 2008). It is believed that through the application of appropriate incentives (inputs) that may

function as a motivational resource for agents to act in desired ways to accomplish the goals set by the principal. However, Lane and Kivisto (2008) argued that by rule the agent was required to function in the best interest of the principal, but as a result of goal conflict and information asymmetry the goals of both the parties might not coincide and the agent might be prompted to operate by self-interest. All in all, the application of this theory would facilitate us to investigate the goal conflict and information asymmetry that occurs between the educational researchers and the demands of academia and how the incentives may not be well aligned with one of the desired outcomes established by the principal.

Background of the Study

The present study is situated in the Malaysian higher education context that has undergone restructuring to meet the global challenges by establishing academic excellence (Ministry of Education Malaysia, 2015). This is further affirmed by the statistics which suggest that massive amount is been spent in the development and expansion of higher education in Malaysia (Chapman & Chien, 2014). One criterion of the Ministry of Higher Education (MOHE) Malaysia is to establish teaching excellence, especially in the eyes of the international community, by increasing universities ranking through publication in indexed journals for higher citations. This ambition has subsequently exerted pressure on academics to produce greater research and publication output and acquire citations (Wan et al., 2017). Furthermore, research and publication are also one of the criteria for tenure and promotion requirements. In line with this ambition, MOHE, Malaysia allocates a generous amount for research funding in form of a variety of grant schemes across all disciplines (MOHE, 2018) and additionally, 1.3% of GDP is spent on research and development (The World Bank, 2018) to fulfil the ambition. As a result, recent reports from Scopus (Elsevier, 2018) and Clarivate Analytics (Clarivate, 2017) indicate that the Malaysian research output and quality have immensely increased. However, in terms of impact (such as innovation and patents), the information is limited to Engineering, Chemistry and Agricultural Sciences only. Systematic information related to the impact of educational research produced in Malaysia on educational practice is almost non-existent; however, an empirical investigation suggests that the use of research evidence is limited to symbolic utilisation, that too at a surface level. The authors (Sirat & Azman, 2014) "argue that reasons for the lack of uptake of evidence include the long time frame for research, vague or equivocal findings, irrelevant research questions, and analyses that do not fit with the policymaker's assessment of the issue". The authors also conclude that proximity between the researchers and the policymakers is a way forward to have evidence-informed policies and practices in Malaysia.

METHOD

The study employed a qualitative case study design using a constructivist-interpretivist paradigm (Denzin & Lincoln, 2003). Given the exploratory nature of the current investigation, a qualitative methodology was deemed appropriate. Qualitative research is able to provide deeper insights for understanding underlying reasons around the investigation and which can later generate hypotheses for quantitative investigations (Creswell, 1998).

Educational researchers were the 'case' studied for their research practices. The case study methodology was deemed appropriate because it allows in-depth exploration of a particular situation using one or more methods in real-life context and interpretation of findings can be contextualised (Simons, 2009).

Participants and Procedure

The participants comprised 14 educational researchers who were employed as faculty members in Malaysian public universities.

All the thirteen public universities in Malaysia that have education faculty were invited to participate in the study through personal networks. Using purposive sampling, the criteria to recruit participants were that they must be active educational researchers at any public university in Malaysia; they must have five or more years of experience with research in education and must have accomplished at least three educational research projects. In the end, participants from eight public universities, who agreed to participate in the study, were recruited as participants. Table 1 provides information of the particpants.

Table 1
Information on participants

ID	University	Gender	Area	Number of years as a researcher	Number of accomplished research projects
ER1	CU	M	Curriculum and instruction	16	10
ER2	CU	F	Educational management	17	9
ER3	CU	F	Instructional technology	12	6
ER4	RU	F	Instructional technology	30	18
ER5	RU	M	ESL	16	10
ER6	RU	M	ESL	21	13
ER7	CU	F	Education psychology	28	15
ER8	CU	F	Education psychology	8	6
ER9	CU	M	Education management	8	5
ER10	CU	M	Educational Psychology	31	17
ER11	CU	F	Instructional Technology	14	9
ER12	RU	M	Educational Psychology	31	18
ER13	RU	M	Educational Administration	9	7
ER14	CU	F	Educational Philosophy	28	17

Note: CU = Comprehensive University, RU = Research University

Out of eight participating universities, five were research universities and nine were comprehensive universities. In the Malaysian context, the comprehensive universities, with a greater focus on teaching, offer a wide range of courses and different fields of study. On the other hand, the research universities are mainly focussed on intensive research programs and are characterised by competitive entries as well as academic orientation. The number of years of experience as a researcher indicated their position as a senior and junior researcher.

Institutional ethical approval was obtained and an invitation to participate in the study was sent out officially via e-mails to a number of researchers. Participants gave their consent to participate in the study in written form and were promised anonymity of their identity as well as their institutional identity.

Data Collection

The study sought to understand the factors that prevent educational researchers in conducting research for the direct consumption of teachers by investigating the drivers that shape their research agenda. For this purpose data was collected using two source 1) face to face in-depth interviews and 2) content analysis of the research documents obtained from the participants. Background information on participants' name, gender, area of specialisation, number of years as a researcher, and number of accomplished research projects was collected using a questionnaire.

The primary source of data was face to face in-depth interviews conducted using semi-structured, open-ended questions. Face to face in-depth interviews in the qualitative design is considered as an appropriate method to obtain thick and rich data (Creswell, 2007). They also facilitated gathering additional information using follow up questions from the participants for more clarity (Berends, 2006). Interviews were conducted over seven months by the two lead researchers involved in the study using a semi-structured interview protocol (Appendix A.)

The participants were met with an appointment at the place and time of their convenience. Some of the participants were met more than once, however, on an average, each meeting lasted for 60- 80 minutes. The interviews were conducted mainly in the English language; however, some participants choose to speak in Bahasa Malaysia (BM) in between. All the interviews were recorded by obtaining permission from the participants and later translated (those in Bahasa Malaysia) and transcribed by a research assistant.

The secondary source of data comprised research documents such as research reports and/or published articles of the research projects that the participants had accomplished in the last 5 years. We limited our scope to 5 years only due to the enormity of data. These documents were submitted in hard or soft copy form during or after the face to face interviews. A total of 56 research documents were received. However, for a few projects, the participants had worked

jointly, therefore to avoid repetition such projects were eliminated. In the end, we were left with 51 projects to analyse. This source of data provided elaborated information on the nature of educational projects undertaken by the participants. The information is discussed in the result section.

Data Analysis

The study employed a thematic analysis method which "is a method for identifying, analysing, and reporting patterns (themes) within data. It minimally organises and describes your data set in (rich) detail" (Braun & Clarke, 2006) to analyse the data obtained from the in-depth interviews. The analysis was done using three stages proposed by (Saldana, 2011). In the first phase, the three researchers independently read the transcripts and pre-coded the data to overcome the research bias and establish reliability (Yin, 2009). In the second stage, the three researchers collaboratively compared the pre-coded data and developed descriptive codes. In the third phase, the researchers together assigned those codes under major themes.

We employed content analysis on research documents to further explore the focus area of their research projects and to understand their objectives behind undertaking educational research. According to Hsieh and Shannon (2005) content analysis is "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns". Coffelt et al. (2016) stated that while there are several ways to analyse the frequency, the objective of content analysis which is quantification and systematisation remains consistent across all methods. In the current study, the unit of measurement was the research document and pre-determined categories were made to code the documents. The categories and their descriptions are provided in Table 2.

Table 2
Coding category description for research projects

Categories	Description
Type of research	A study that was theoretical in nature, concerned with developing or testing theory was labelled as basic research while the study concerned with solving practical issues was labelled as applied.
Research use/ implication	Study output that provided a concrete application of research output in forms of intervention and protocols to make decisions or solve problems labelled as instrumental. While the study output resulted in a change in thinking or provided conceptual knowledge, and suggestions for teachers were labelled as conceptual. The study output that contributed to the policy decision was labelled as symbolic.
Methodology	For methodology codes like survey, experimental, action research, qualitative (interview and observation), and others were used.
Samples	For sample codes like students, teachers, administrators, and others were used.
Research dissemination	The modes used for disseminating the research output were coded as a published paper, seminar, module, training, and others.

Three of the five researchers among the team went through the documents individually. Later, they collectively created a detailed code log of 35 words/phrases for all the categories as indicated in Table 2. Two independent coders who had previous experience in the content analysis performed the coding using the code log. Both the coders met more than twice to establish intercoder reliability. In the second phase, the frequency of each code was calculated on the basis of its occurrence. Finally, the frequencies were tabulated for discussion purposes. Some research documents were coded for more than one category.

Establishing the trustworthiness of a qualitative study for its rigor is of utmost importance (Lincoln & Guba, 1985). To ensure the credibility of the study, data triangulation was conducted between the interview data and content analysis data. Additionally, to ensure the validity of data the member check technique was carried out to ensure if participants' responses were understood accurately (Lincoln & Guba, 1985). Finally, the study design and procedures are reported meticulously to enable replication of this study for future investigations which, in turn, supported the audibility of the study (Chiovitti & Piran, 2003).

RESULTS

Research Documents Results

We begin by presenting the results of the content analysis which will further support the findings of face to face interviews. Table 3 presents the frequency for each category coded for the research documents.

Intercoder reliability for all the categories except research use/implication was found to be very strong which ranged from r=0.78 to r=0.85 whereas for research use/implication it was r=.68. The analysis of coding categories in rank order indicates that most educational researchers undertook basic research; the highest numbers of implications were focussed on conceptual use, the method employed predominantly

Table 3
Frequency of coding category for research projects

Categories	Sub-categories	n
Type of research	Basic	39
	Applied	12
Research use/ implication	Instrumental	8
	Conceptual	19
	Symbolic	28
Methodology	Survey	22
	Experimental	5
	Action research	4
	Qualitative	17
	other	3
Samples	Students	35
	Teachers	17
	Administrators	0
	Others	4
Research dissemination	Published paper	38
	Seminar	17
	Module	4
	Training	5
	Other	0

Note: The number of research dissemination outlets exceeds the number of research projects since some research projects were disseminated in more than one way. Similarly, some studies had multiple implications.

were surveyed, with students as participants majorly. Finally, the dissemination mode was primarily publishing an empirical article followed by seminar presentations.

Interview Data Results

The interview data suggested three major drivers, researching for key performance indicators (KPI's), researching for citation and H-index, and researching for personal development as a researcher that shaped educational researchers' intentions to undertake educational research. However, each driver revealed separate subcategories which are presented in Table 4 with their frequency occurrence per participant and example of illustrative comments.

Researching for KPI and Ranking

Malaysia's quest to place its university in international ranking has reinforced competitive and categorical KPI's for the faculty members across public universities. According to which, at the end of the year, the faculty members are required to report details of all the academic activities for performance appraisal. Out of which, the most significant ones are the acquisition

Table 4
Classification of drivers of educational research

Drivers		Subcategories	f	Illustrative comments
Researching for KPI and ranking				
	Funding	Researching for policy agenda	14	"An impactful investigation is not feasible without sufficient funding" (E4).
				"Of course, our credibility rests in providing evidence for policy-related matters"(E9).
	Publication	No. of publications	8	" My research should help me produce a good number of articles each year to be published in indexed journals" (ER8)
		Publication mode	14	" Of course our first choice is publishing in journals that are reputable because that is appropriate for us" (ER14)
		Language & methodology	10	"For indexed journal publication, quality of write up cannot be compromised"(ER2)
Citation and H index		Dissemination source/audience	9	" a groundbreaking theory or major contribution can get me attention from the scholarly community " (ER13)
Researching for self-development as a researcher				
		Focus on specialisation	11	" I need to go vertical in my area of expertise to gain specialisation in my field" (E5)
		Self-development	8	" …of course, the investigations that will enhance my skills as a researcher will be my priority"(ER9).

of grants and the number of publications in indexed journals. These indicators are crucial since they shape faculty promotion-related decisions and as well as contribute to international ranking criterion (Wan et al., 2017).

Funding. The findings across all the participants, irrespective of the university type or seniority level of the researchers, suggested that the availability of funding, either at international, national, or university level, heavily influenced their research agenda and overlooked their personal interest. For example, E13 stated, "…I don't really have the liberty to pick and choose the issues that I would like to investigate because I need financial support to conduct my inquiry? Similarly, E10 suggested that "even we are not a research university; our grant-related KPI can be heavy. I am willing to generate data from other sources but there will be a complaint about no funding. We need to align our investigations that are supported at the national level". Further probing into how KPI related to grant has shaped their research priority, E14 described the state in the following way-

> *I must admit that years ago there was not much research culture. But since the KPI on the grant is linked to position and competition to try hard to get a research grant, I see this has made people interested. But the question is- are we doing research for the sake of fulfilling KPI or doing research for the sake of solving a real problem? For many, it is to fulfil the KPI and get a promotion. I think it is not genuine research in that sense. That is the negative thing about the new trend.*

Further probing suggested that the availability of grants was determined by the national agenda which mainly focused on policy-related matters. ER1 stated that "when you receive a large amount of money, your study must contribute at a larger level such as helping form new policies or recommendations for higher-level decisions". ER6 stated that "successful acquisition of grant means we do what they want, not the other way round. It difficult to serve all the stakeholders at one go, we expect through policy-related contribution we contribute to other stakeholders".

Furthermore, the researchers' also admitted that their expertise must be utilised for investigating policy-related matters and it is at the government's onus to drive practical guidelines to solve practical problems. ER10 stated that "Our contribution through education research is mainly to send the message, our recommendation to the government, then for several areas, it's their task to bring those recommendations to practical guidelines".

Here a distinct connection between qualitative findings and quantitative findings of content analysis is revealed. For example, the document analysis suggested that the basic research, which is mainly supported by national fundamental research grant scheme (FRGS), was reported as highest in number.

Additionally, the research implications of research documents also suggested that the educational researchers focused on informing policy or providing conceptual tools as their research output.

Publication. Similar to the funding acquisition requirement, publications in indexed journals are another most significant requirement for public universities to meet the international ranking requirements. Not only this, the quality and quantity of publications are central to the faculty's performance appraisal for promotion and tenure. Hence, generating quality publications out of the research was a key driver for the participants to undertake educational research. For example, ER3 said that "this is important to us, we are very concerned about high ranking in the world, if we did not contribute enough publications we will be affected and the university's initiative will be affected". Another one stated, "Publication of articles in quality journals is compulsory for academic excellence, we must ensure that we have enough rich data to help us fulfil our publication requirement" (ER4).

This was one reason that has a university place a higher emphasis on publication in journals than other forms of publication, ER5 described that-

> *Two years ago, I tried publishing my findings in a book form, but unfortunately, when you do this, you have to spend your own money. The university does not help you. So to publish one book, it took me more than 2 years. And by the time they publish a lot of things have changed.*

ER 13, shared the similar details, "publishing in journals not only have technical advantages but the incentive schemes are better than it is for other forms of publication, at the same time, journal article contributes more towards university ranking".

The participants also shared the acute necessity to use academic and technical language and robust methodology for successful publication "to be able to meet reputed journal requirements, our work cannot be disseminated in pointers; it has to written in technical and scientific language". ER1, explained that " if we wish to choose to publish in journals with high impact, it is important that not only the subject matter is communicated technically, but the methodology used to investigate the topic has to be in-depth and rigorous. ER 10 clarified this further "in the field of educational psychology, I can't rely on action research or qualitative interviews very often, I need to gather a large amount of survey data to get into journals with high impact factor".

Researching for Citation and H-index

The number of citations and H-index were among the performance indicators for university ranking methodology (for example, Times Higher Education, 2017). However, citation number and

H-index requirement have yet to become a standard for performance appraisal at public universities in Malaysia, yet, most participants, especially the junior faculty, expressed concern over this issue and cited this as one of the factors that shaped their research agenda. As ER12, "I try to take on projects that are novel and able to get attention from researchers in my area, maybe I can propose a framework or a theory that would become the basis of future studies and credited to me". ER 8 put it this way-

> *I need high citations so I can move up faster. I think most of the academics are like that. If you talk about young lecturers today, their concern is actually to get seniority in their profession. So I guess it's quite true. Some of us, including me, are writing just to get citations for promotion. We are not writing for the public, no, we aren't.*

This objective compelled the educational researchers to carefully target the audiences and publication outlets that would facilitate them in increasing their citation, thus H-index. ER2 stated that "I need to be strategic in making my work visible to those who would use and cite it". The similar idea is to share by ER11 as following-

> *...well I have been toying with this idea to write in the newspaper to reach the general audience and to make a practical impact but that would not increase my citation neither do I get any benefit in terms of incentive or KPI so I have to think carefully about myself too.*

It is important for the researchers to increase their visibility in their academic context as one explained, "For us to be considered influential, we need to establish ourselves and increase our credibility and visibility in the academic context in our community and then in the outer circle" (ER7).

Researching for Self-development and Expertise

Besides ranking and performance indicators, other drivers that shaped participants' research priorities were researchers undertaking research for self-development and seeking expertise in their area of specialisation. ER7 shared that "Investigation in my own area keeps me current, or it keeps me updated about the area of my specialisation, it lets me know what I need to do more to move forward". Participants stated several reasons for adhering to their area of specialisation such as-

> *I feel optimistic when I do research under my area of specialization because I feel that I am contributing to knowledge in the area of my specialization and it makes me a scholar and a good teacher. That knowledge supports my teaching in my classroom.* [ER14]

ER9 further added that "I get to work with like-minded individuals and this establishes long term friendship and collaboration. You need this intellectual spark and network to thrive in academics".

An intrinsic need to develop themselves as a competent researcher and scholar also powered their research. For example, E4 stated that "I need to do research to improve myself, to develop my skills and deepen my understanding and knowledge". E11 added further reasons for undertaking educational research, "…Firstly, I do it for self-development and satisfaction – I think doing research is fun – basically, I do this for my own mental health! Secondly, the educational research provides opportunities to reconsider different critical perspectives to view concerns in my classroom".

DISCUSSION

The discussion surrounding teachers' use of educational research and the gap between educational research and practice still remains unresolved (Cain, 2015; Cain & Allan, 2017). The current study employed principal-agent theory to assess if there exists a goal conflict and information asymmetry, especially on the part of an agent (educational researchers) towards filling the said gap. The data analysis was not informed by the theory, however, the theory facilitated the interpretation of the findings. The findings suggest a clear misalignment between the principal and the agent which may have prompted the agent to operate in self-interest or in another direction. The findings indicate the current incentive system (financial and recognition), is directed towards the goals such as tenure, promotion, and university ranking aspiration and is not appropriate towards addressing the said gap thus limiting educational researchers' ability in becoming directly useful to the schools as community and teachers as stakeholders.

As the findings indicate that the incentives provided by the principal are directed towards those actions that may not be appropriate towards addressing the gap, prohibiting the educational researchers in conducting researches for the direct consumption of teachers. The current incentive system (financial and recognition), appraisal criteria for tenure and promotion, and university ranking aspiration are directed towards the goal other than being directly useful to the schools as community and teachers as stakeholders.

The results suggest that the participants, irrespective of their seniority or university type, shared similar intentions towards undertaking educational research. The three main drivers that shaped their research undertaking were researching for their own KPI (promotion, tenure, and appraisal) and university ranking, researching for citation and H-index, and researching for personal development as a researcher. The efforts towards achieving these criteria limit educational researchers' willingness and capabilities to directly connect with the teachers to establish a meaningful dialogue and advance their teaching practices. The educational research instead, as Cain and Allan (2017) described it "discovers

problems with practice, persuades influential stakeholders of the nature and importance of these problems, helps to create conceptual and practical tools for addressing these problems, and occasionally, evaluates the extent to which the problems have been addressed". For instance, in the current study, the major driver to undertake research was to acquire grants that primarily focus on issues that can contribute to higher-level decision making and policy-related issues. It is unlikely that teachers will have access or interest to read those policy agendas. Additionally, the implementation of those findings becomes the prerogative of individuals in power positions. The knowledge mobilisation of research to the classroom becomes dependent on the aid of intermediaries (Carlile, 2004). Therefore, the stakeholders driving the research agenda are mainly the top officials, not the schools or teachers. To this Cain and Allan (2017) stated that, "Impact reaches practice, therefore, at the level of decision making but without informing teacher thinking or organisational learning".

Another major driver to undertake research was to conform to the publication requirement in reputed journals. In this case, the effort was directed towards the standards established by the journals to sustain scientific credibility and depth of inquiry such as the use of appropriate academic terminology, robust research methodology, and concepts and findings that are grounded in theory or scientific principles. As suggested by the content analysis results, this was the reason for several participants to undertake large-scale quantitative investigation and ignoring emphasis on classroom-based investigations. While undoubtedly those practices may well contribute towards scientific convention, but practical uses of those studies remain elusive for teachers as it requires specialist skills from teachers to decode and understand the technicalities of an empirical article (Dagenais et al., 2012). Furthermore, the methodology used by the researchers is also questioned by teachers for contextual, practical and accessibility issues (Gore & Gitlin, 2004).

Among the other drivers, it was noticed that the research direction is also determined by citation agenda, especially for the junior researchers who have a long way ahead to their academic success. In this case, the research of the participants was targeted towards the scholarly and scientific community, not teachers. The research is primarily conducted to carve a niche within the scholarly community and for the scholars as intended users who would boost the citation index. This objective further contributes to the production of studies that are in-depth and complex and has the potential to inspire change or originate new theory to facilitate citation. As McIntyre (2005) calls research generated knowledge is, "generalised, propositional knowledge; abstract, and theoretical; evaluated for its clarity, coherence, and validity; it is narrowly focused and generated by rigorous and rational thinking". Thus, drifting teachers further apart from using education research since as the evidence suggests that

teachers are likely to use only those findings that match their context and personal (Hemsley-Brown & Sharp, 2003; Nutley et al., 2003).

Finally, self-development and focus on expertise was another driver that determined participants' research direction. This approach was regulated both by intrinsic and extrinsic motives. For example, becoming an expert would earn them authority in subject matters that will satisfy self-esteem needs as well as acquired expertise will enrich their teaching experiences. This indicated that participants strived to flourish as researchers primarily and to establish academic credibility as their central objective before they began 'advocacy for an outer circle like teachers' (ER 3).

According to principal-agent theory, it appears that higher education institutes' (principal) expectations from the researchers (agent) are multifaceted that have caused information asymmetry and goal conflict. The key drivers revealed through the findings explain to us the reasons that limit educational researchers' ability to contribute explicitly. We understand that primarily the agents (educational researchers) were appointed to produce a body of knowledge that would be practically relevant to raise the standards of teaching and overall education by directly involving themselves with schools and teachers. However, on the contrary, the educational researchers' efforts are now directed towards generating, theory, or novel ideas or policy-related decisions, or to be noticed by other scientific community for impactful publications and citations. In summary, only teachers and educational researchers cannot be held accountable for the persisting gap between the research and practice, this change is subjected to centralised transformation through policies at the national level for higher education. Furthermore, it should also be noted that not all institutes of higher education are operating on the performance agenda. Teacher-training institutes and teaching-focused universities might be contributing in different ways.

Knowledge Implications

The role of educational researchers and the drivers that shape their research needs to be taken into account in bridging the research-practice gap, or else, merely pushing teachers towards addressing this issue will leave it a lopsided effort. The findings suggest that educational researchers are primarily concerned with contributing to decision making, policy, resources, and theory building as a result of the incentives that are directed towards these preferences. The knowledge transfer remains contingent on the intermediaries Furthermore; the investigations are primarily deliberated towards influencing reviewers or scholars, teachers as direct consumers are overlooked.

To mobilise the knowledge transfer and have research-informed educational practices, phenomenal efforts have been made at the international level by providing open access policy for research paper and easy access for seminars and conferences for teachers (Levin, 2013). However, no matter how well-meant these efforts are, they may

not render desirable results if the research output is not principally directed towards teaching practices.

All in all, as much as teachers are encouraged to use evidence for their teaching practices, educational researchers should as well target their efforts in the direction of teachers. The role of high education is central to this initiative by directing appropriate incentives. Since the responsibilities of academicians are multifaceted, academia must ensure an equitable incentive structure, so that the academicians' attention can be brought to bridge this gap.

Practical Implications

Sincere efforts to close this gap, it is important for higher education institutes, especially in Malaysia, to calibrate the policies concerning incentive plan to direct educational researchers' efforts towards producing studies that have instrumental value and have the potential to contribute towards teaching practice directly without having to depend on mediators. For example, allocating grants which exclusively focuses on innovating educational intervention that have practical implications for teachers. A similar effort is seen in the UK whereby £135 million over a 10-year period was awarded to What Works Network www.gov.uk/whatworks-network) for educational interventions (Cain, 2015).

Along with the incentive to undertake teacher practice focused inquiry, educational researchers must formally familiarise themselves with the understanding of how teachers would use research generated knowledge for what researchers produce and what teachers need are 'sharply contrasting kinds of knowledge' (McIntyre, 2005). Investigations that focus on the production of pedagogical knowledge which is "practical, specific and personal, with a broad focus (Cain, 2015), must be encouraged and duly acknowledged by the higher education institutes. This initiative can be further strengthened by providing opportunities for teachers to partner with educational researchers in undertaking teaching and learning inquires through school and university partnerships. These collaborations will facilitate teachers in interpreting the outcomes in relation to their own experiences. This way teachers' role in educational research will be more active and meaningful.

Another significant way to promote education researchers for educational practice is to establish a mechanism that facilitates research impact beyond academia for schools and teaching practices. Similar to the citation H-index, the practical impact should contribute to researchers' appraisal. One such example is the Research Excellence Framework (Martin, 2011) established in the UK which aims to gauge the research impact of studies conducted in the UK (Kelly, 2016). Despite its criticism (Sivertsen, 2017), the component that promotes accountability among the educational researchers for research impact for the benefit of public investment is of great significance in the Malaysian context. Furthermore, through appropriate

incentives, educational researchers should be hold accountable for disseminating the research findings in a teacher-friendly way and those outlets must carry the same repute as publishing in indexed journals does.

Limitations and Future Recommendations

Despite insightful findings, we believe that by employing a more diverse selection of participants would have enriched the outcomes of this study. For example, the current study recruited participants only from research and comprehensive universities. Additionally, for generalisability and validity purposes, such investigations in the future can incorporate larger data from other relevant sources.

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REFERENCES

Anwaruddin, S. M. (2015). Teachers' engagement with educational research: Toward a conceptual framework for locally-based interpretive communities. *Education Policy Analysis Archives*, *23*(40), 1-25. https://doi.org/10.14507/epaa.v23.1776

Awang-Hashim, R., Kaur, A., & Valdez, P. N. (2019). Strategizing inclusivity in teaching diverse learners in higher education. *Malaysian Journal of Learning and Instruction*, *16*(1), 105-128.

Bartels, N. (2003). How teachers and researchers read academic articles. *Teaching and Teacher Education*, *19*(7), 737-753.

Berends, M. (2006). Survey methods in educational research. In J. L. Green, G. Camilli, & P. B. Elmore (Eds.), *Handbook of complementary methods in education research* (p. 623-640). New Jersey, USA: Lawrence Erlbaum Associates Publishers.

Bickel, W. E., & Hattrup, R. A. (1995). Teachers and researchers in collaboration: Reflections on the process. *American Educational Research Journal*, *32*(1), 35-62.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101.

Brown, C. (2015). *Evidence-informed policy and practice in education: A sociological grounding*. London, England: Bloomsbury Publishing.

Brown, C. (2017). *Achieving evidence informed policy and practice in education: Evidenced*. Bingley, England: Emerald Publishing Limited.

Brown, C., Daly, A., & Liou, Y.-H. (2016). Improving trust, improving schools: Findings from a social network analysis of 43 primary schools in England. *Journal of Professional Capital and Community*, *1*(1), 69-91.

Brown, C., & Zhang, D. (2016). Is engaging in evidence-informed practice in education rational? What accounts for discrepancies in teachers' attitudes towards evidence use and actual instances of evidence use in schools? *British Educational Research Journal*, *42*(5), 780-801.

Cain, T. (2015). Teachers' engagement with research texts: Beyond instrumental, conceptual or strategic use. *Journal of Education for Teaching*, *41*(5), 478-492.

Cain, T. (2017). Denial, opposition, rejection or dissent: Why do teachers contest research

evidence? *Research Papers in Education*, *32*(5), 611-625.

Cain, T., & Allan, D. (2017). The invisible impact of educational research. *Oxford Review of Education*, *43*(6), 718-732.

Carlile, P. R. (2004). Transferring, translating, and transforming: An integrative framework for managing knowledge across boundaries. *Organization Science*, *15*(5), 555-568.

Cartwright, N. (2013). Knowing what we are talking about: Why evidence doesn't always travel. *Evidence & Policy: A Journal of Research, Debate and Practice*, *9*(1), 97-112.

Chapman, D. W., & Chien, C.-L. (2014). Graduate Education in Malaysia and Thailand. In D. W. Chapman & C.-L. Chien (Eds.), *Higher education in East and South Asia: Expand out, expanding up* (pp. 33-44). Montreal, Canada: UNESCO Institute for Statistics.

Chiovitti, R. F., & Piran, N. (2003). Rigour and grounded theory research. *Journal of Advanced Nursing*, *44*(4), 427-435.

Clarivate. (2017). *Recognizing the Malaysian research stars.* Retrieved October 18, 2017, from https://clarivate.com/blog/recognizing-malaysian-research-stars-2017/

Coffelt, T. A., Baker, M. J., & Corey, R. C. (2016). Business communication practices from employers' perspectives. *Business and Professional Communication Quarterly*, *79*(3), 300-316.

Creswell, J. W. (1998). Qualitative inquiry and research design: Choosing among five tradition. Thousand Oaks, USA: Sage.

Creswell, J. W. (2007). Five qualitative approaches to inquiry. *Qualitative Inquiry and Research Design: Choosing among Five Approaches*, *2*, 53-80.

Dagenais, C., Lysenko, L., Abrami, P. C., Bernard, R. M., Ramde, J., & Janosz, M. (2012). Use of research-based information by school practitioners and determinants of use: A review of empirical research. *Evidence & Policy: A Journal of Research, Debate and Practice*, *8*(3), 285-309.

Denzin, N. K., & Lincoln, Y. S. (2003). Introduction: The discipline and practice of qualitative research. In *Handbook of qualitative research* (pp. 1-28). Thousand Oaks, USA: Sage Publications.

Diezmann, C. M. (2005). Growing scholarly teachers and educational researchers: A curriculum for a Research Pathway in pre-service teacher education. *Asia-Pacific Journal of Teacher Education*, *33*(2), 18-193.

Ekız, D. (2006). Primary school teachers' attitudes towards educational research. *Educational Sciences: Theory & Practice*, *6*(2), 373-402.

Elsevier. (2018). *Research excellence and beyond.* Retrieved October 18, 2017, from https://www.elsevier.com/research-intelligence/campaigns/malaysia-research-excellence-and-beyond

Goldacre, B. (2013). *Building evidence into education.* Retrieved March 27, 2020, from http://media.education.gov.uk/assets/files/pdf/b/ben goldacre paper.pdf

Gore, J. M., & Gitlin, A. D. (2004). [Re]Visioning the academic–teacher divide: Power and knowledge in the educational community. *Teachers and Teaching*, *10*(1), 35-58.

Hargreaves, D. (2007). Teaching as a research-based profession: Possibilities and prospects (The Teacher Training Agency Lecture 1996). *Educational Research and Evidence-Based Practice*, 3-17.

Hemsley-Brown, J., & Sharp, C. (2003). The use of research to improve professional practice: A systematic review of the literature. *Oxford Review of Education*, *29*(4), 449-471.

Hoogveld, A. W. M., Paas, F., & Jochems, W. M. G. (2005). Training higher education teachers for instructional design of competency-based education: Product-oriented versus process-oriented worked examples. *Teaching and Teacher Education*, *21*(3), 287-297.

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*(9), 1277-1288.

Ion, G., & Iucu, R. (2014). Professionals' perceptions about the use of research in educational practice. *European Journal of Higher Education*, *4*(4), 334-347.

Kelly, A. (2016). Funding in English Universities and its relationship to the Research Excellence Framework. *British Educational Research Journal*, *42*(4), 665-681.

Lane J. E., & Kivisto, J. A. (2008) Interests, information, and incentives in higher education: Principal-agent theory and its potential applications to the study of higher education governance. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. 23). Dordrecht, Netherland: Springer.

Levin, B. (2013). To know is not enough: Research knowledge and its use. *Review of Education*, *1*(1), 2-31.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry* (Vol. 75). Thousand Oaks, USA: Sage Publications.

Martin, B. R. (2011). The Research Excellence Framework and the "impact agenda": Are we creating a Frankenstein monster? *Research Evaluation*, *20*(3), 247-254.

McDonough, J., & McDonough, S. (2014). *Research methods for English language teachers*. New York, USA: Routledge.

McIntyre, D. (2005). Bridging the gap between research and practice. *Cambridge Journal of Education*, *35*(3), 357-382.

Ministry of Education Malaysia. (2015). *Blueprint 2015-2025 (Higher Education).* Putrajaya: Author.

Ministry of Higher Education. (2018). *Research grants information.* Retrieved October 18, 2017, from http://www.mohe.gov.my/en/initiatives-2/187-program-utama/penyelidikan/548-research-grants-information.

Mortimore, P. (2000). Does educational research matter? *British Educational Research Journal*, *26*(1), 5-24.

Moss, G. (2013). Research, policy and knowledge flows in education: What counts in knowledge mobilisation? *Contemporary Social Science*, *8*(3), 237-248.

Nutley, S., Walter, I., & Davies, H. T. O. (2003). From knowing to doing: A framework for understanding the evidence-into-practice agenda. *Evaluation*, *9*(2), 125-148.

Olivero, F., John, P., & Sutherland, R. (2004). Seeing is believing: Using videopapers to transform teachers' professional knowledge and practice. *Cambridge Journal of Education*, *34*(2), 179-191.

Saldana, J. (2011). *Fundamentals of qualitative research*. New York, USA: Oxford University Press.

Shkedi, A. (1998). Teachers' attitudes towards research: A challenge for qualitative researchers. *International Journal of Qualitative Studies in Education*, *11*(4), 559-577.

Simons, H. (2009). *Case study research in practice*. London, England: SAGE publications.

Sirat, M., & Azman, N. (2014). Malaysia's National Higher Education Research Institute (IPPTN): Narrowing the research-policy gap in a dynamic higher education system. *Studies in Higher Education*, *39*(8), 1451-1462.

Sivertsen, G. (2017). Unique, but still best practice? The Research Excellence Framework (REF)

from an international perspective. *Palgrave Communication, 3,* 17078. http://dx.doi.org/10.1057/palcomms.2017.78

Smith, C. A. (2002). Supporting teacher and school development: Learning and teaching policies, shared living theories and teacher-researcher partnerships. *Teacher Development*, *6*(2), 157-179.

Sohail, M. S., & Daud, S. (2009). Knowledge sharing in higher education institutions: Perspectives from Malaysia. *Vine*, *39*(2), 125-142.

The World Bank. (2018). *Research and development expenditure (% of GDP).* Retrieved April 3, 2020, from https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?end=2015&start=2014

Taber, K. S. (2002). 'Intense, but its all worth it in the end': The colearner's experience of the research process. *British Educational Research Journal*, *28*(3), 435-457.

Times Higher Education. (2017). *World university rankings 2018 methodology.* Retrieved October 18, 2017, from https://www.timeshighereducation.com/world-university-rankings/methodology-world-university-rankings-2018

Wan, C. D., Chapman, D., Hutcheson, S., Lee, M., Austin, A., & Md. Zain, A. N. (2017). Changing higher education practice in Malaysia: The conundrum of incentives. *Studies in Higher Education*, *42*(11), 2134-2152.

Waterman, R. W., & Meier, K. J. (1998). Principal-agent models: An expansion? *Journal of Public Administration Research and Theory*, *8*(2), 173-202.

Weiss, C. H. (1979). The many meanings of research utilization. *Public Administration Review*, *39*(5), 426-431.

Williamson, O. E. (1985). *The economic institutions of capitalism: Firms, markets, relational Contracting*. New York, USA: Free Press.

Winch, C., Oancea, A., & Orchard, J. (2015). The contribution of educational research to teachers' professional learning: Philosophical understandings. *Oxford Review of Education*, *41*(2), 202-216.

Yin, R. K. (2009). Case study research: Design and methods (4th ed.). Thousand Oaks, USA: Sage Publications.

Zajano, N. C., & Edelsberg, C. M. (1993). Living and writing the researcher-researched relationship. *Internation Journal of Qualitative Studies in Education*, *6*(2), 143-157.

APPENDIX

Interview Protocol

Educational researchers in Malaysia – Who they conduct their research for?

Note to the interviewer- Introduce yourself and seek participants' general introduction. Establish a rapport with the interviewee before beginning the investigation.

Script prior to interview for the interviewer-

I would like to thank you for taking the time out and participating in this study. In this investigation, we are primarily interested in exploring the factors that drive educational researchers' research agenda. In that connection, I will ask you a set of open-ended questions. There are no right and wrong answers, please answer honestly. You can choose to speak English or BM.

The interview will last around 1 to 1.5 hours. Please, feel free to ask if you have any questions. Your responses will be kept confidential.

1. May I know about your institution and its research focus?
2. Can you elaborate on your area of research?
3. What inspires you to undertake education research?
4. How do you determine your research topics?
5. How often do you realign your research area? And what factors influence you to do so?
6. Can you talk about a few types of educational researches that you have undertaken and what was the motivation behind each project?
7. What are the main objectives/intentions behind involving yourself in educational research?

Closing remarks for the interviewees

Once again, thank you for participating in the study. Should you have any questions, feel free to contact us.