EDUCATIONAL RESEARCH: PURPOSE, QUALITY AND EFFECTIVENESS

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ABSTRACT

This study was conducted with the view to answering three fundamental questions, relating to the purpose, quality, and effectiveness of educational research. In order to address these topics of enquiry, a significant number of academic studies have been critically reviewed. The research findings indicated that educational research intends to serve two major purposes: generation of new intellectual knowledge and provision of practical guidelines for teaching and learning processes. Aside from meeting the criteria of social studies, a high quality piece of educational research must pay serious attention to ethical issues; employ different strategies and techniques to enhance reliability and validity of research findings; and be accessible to its intended user group(s). Research that "works" should indicate that it substantially meets the requirements of a good study, while generating either short-term or long-term benefits. Through discussion, implications and recommendations for researchers and policy-makers are provided.

Key words: educational research, definition, purpose, quality, effectiveness.

Introduction

Education has been closely linked with the social development and economic prosperity of nations. Yet, in recent decades, educational research aimed at improving the outcomes of education, has been extensively condemned in terms of its quality and relevance to the work of educators and policy-makers (Atkinson, 2000; Pring, 2000; Oancea, 2005; Briggs & Coleman, 2007; Gorard & Cook, 2007; Whitty, 2007). For instance, in the UK in 1998, there were around 60 newspaper articles attacking the irrelevance and poor value for public money of educational research due to the widespread criticisms arising from three government-funded studies[1] (Oancea, 2005). According to Smart (1999, cited in Sanderson, 2003), there is no credibility in social theory and analysis that can provide a warrant for political practice and ethical decision-making. Gorard and Cook (2007) reinforced this position, stating that, 'No secure body of literature exists that policy-makers can rely upon to learn what should be changed in schools' (p. 309). In a more detailed manner, education research has been condemned for 'lack of rigour, failure to produce cumulative research findings, theoretical incoherence, ideological bias, irrelevance to schools, lack of involvement of teachers, poor dissemination, and low cost-effectiveness' (Whitty, 2007, p.3).

To what extent, are the above critiques valid? Are there any misconceptions during the research evaluation process? These thought-provoking questions provoked the current study.

The purpose of this paper is to address three main questions: 'What is the purpose of educational research?'; 'What does quality in educational research look like?' and 'What evidence would convince one that a piece of educational research 'works'?'

With regard to structure, the article is organised into four main parts. The first introduces the research issue. The second seeks to provide a proper understanding of the term "educational

research". Part three presents discussion about its purpose, quality, and effectiveness. Finally, the conclusions come.

What is educational research?

Educational research is a controversial term (Hillage *et al.*, 1998; Coe, 2012). Thus, prior to the discussion regarding its purpose, quality, and effectiveness, it is essential to achieve a sound understanding of the term. Within this study, this will be done by a distinction between educational research and some of the most confusing terms relating to education, namely education research, research in education, and research on education.

Education research is understood as 'research which seeks to explain or comment upon educational phenomena and process' (Burton & Bartlett, 2009, p. 6). Nonetheless, Whitty (2007) holds that education research is a 'broad term', referring to all research in and on education, of which educational research is a part (p. 15). Another opinion in Yates (2004) considers education research as studies conducted with an eye to creating and disseminating knowledge and tools for learning improvement. It is likely that, in this aspect, the term "education research" has been used with a narrow meaning that appears to belong to the term "educational research" discussed below. The terminologies education research and educational research are also used interchangeably by Hillage et al. (1998).

Similarly, educational research has been defined in numerous ways. Firstly, it is regarded as research conducted with the aim of improving policy and practice (Whitty, 2007). This means that the findings of educational research can be used not only by teachers and other educational professionals to inform education practice, but also by policy-makers to improve the effectiveness of policies in the field of education. Secondly, Lodico et al. (2006) define educational research as 'the application of systematic methods and techniques that

helps researchers and practitioners to understand and enhance the teaching and learning process' (p. 4). Likewise, Burton and Bartlett (2009) take educational research as research concerning teaching and learning, conducted by researchers working in educational organisations in order to foster educational achievement. To Carr (2007), educational research is that of great benefit to educational practitioners. It is undertaken with the intention of contributing to the enhancement of practitioners' self-knowledge, enabling them to evaluate and reconstruct their instruction as an educational practice in a rational and reflective way.

Given the difference in the range of users, as defined by Whitty (2007) and other scholars, most seem to agree that the purpose of this kind of research is to promote teaching and learning processes for school improvement. Despite this consensus, Hammersley (2003) argues that, one should not base on the meaning of the word "educational" to define educational research as studies with an attention of educating, or instructing people. It is just a term similar to "social research", which does not necessarily mean that it is conducted by a group of people or upon society in general.

Any research aimed at exploring phenomena within educational settings, or providing guidance focusing on raising educational standards, may be termed "research in education" (Burton & Bartlett, 2009). In other words, research in education includes both education research and educational research. In my opinion, this method of categorising research in education has neglected the "enlightenment model" that indirectly informs education development by emphasising intellectual and conceptual development (Finch, 1986, p. 153). In addition, it is contradictory to the understanding of Stenhouse (1981) who claims that research conducted within the educational intention, either providing theories to inform practices or frameworks for action, is called "research in education" (p. 113). Specifically, Stenhouse (1981) argues that research in other disciplines contributing to the development of the education sector, is named

"research on education". This position has been reinforced by a clear distinction between research on education-so called "blue skies" and other related terms, such as educational research, and education research in the Dictionary of Education- Wallace (2009, p. 251).

In summary, it is critical to avoid confusion about some terms concerning research in the field of education before undertaking or evaluating any research. In this paper, the author takes the viewpoint of Stenhouse (1981) in his differentiation between research in education and research on education, as it is clear and encompasses all branches of research. The author adds that *educational research should be understood as research in education which focuses upon generation of theories to inform educational practice, as well as provision of practical guidelines to teachers*. Finally, education research should be considered as a broad term, covering both research in education and research on education as Whitty (2007) proposes.

Discussion

What is the purpose of educational research?

As a contentious term, educational research's purpose has been extensively reviewed in literature (e.g.,Harland, 2001; Oancea, 2005; Briggs & Coleman, 2007; Whitty, 2007; Coe, 2012). Also, there have been heated discussions regarding research conductors and research users who together play a vital role in directing the purpose of research.

In terms of research doers, the viewpoints are substantially varied. Firstly, teachers or other educational practitioners, such as teacher trainers or school leaders are supposed to be actors of this compelling task (Lodico *et al.*, 2006; Burton & Bartlett, 2009). Of these above performers, teachers have been presumed to be the most appropriate for this kind of research, in the form of action research, as they have the greatest opportunity of working closely with students in their daily practice (Stenhouse, 1981; Baumfield *et al.*, 2008; Hopkins, 2008).

Furthermore, most educators are supposed to possess the disposition to be researchers (Groundwater-Smith & Mockler, 2011).

Teacher-as-researcher research is further advocated by other researchers (e.g., Carr & Memmis, 1994; Hargreaves, 1996; 1997; Leat & Lin, 2003), as it is suggested that teaching needs to be based more on evidence. However, to Stenhouse (1981), the dilemma was that, teachers were not usually trained and provided with adequate knowledge and facilities to conduct research. Though this position is no more valid in several developed countries, where initial teacher training and masters programmes encourage reflection and enquiry requiring research skills, it is bitterly true in many developing nations. Additionally, teaching is a challenging career, which calls for not only organisational commitment but also personal time from teachers, thus leading to working/personal constraints. Sometimes the high stakes of tests may result in teachers' remarkable levels of stress and pressure (Yeh, 2005; Valli & Buese, 2007; Amrein-Beardsley et al., 2010; Berliner, 2011). Moreover, as Stenhouse (1981) notes, there are some studies pertaining to personal matters, which tend to produce bias if teachers do research within their own schools. Some research also badly needs experience and confidence, which can only be gained though previous fieldwork. Finally, not many teachers are confident enough to disseminate their findings (Baumfield et al., 2008). Consequently, just a modest number of studies by teachers have been published (see Tooley & Darby, 1998).

Another realistic perspective derives from Sebba (2007) who strongly suggests that policy-makers and funders should be engaged in educational research processes, as this is a good way to improve the understanding of the research content, the constraints within which it operates, and the need for support from sponsors and other users. This idea reflects what has been found in Hillage et al. (1998).

As a local education policy-maker in Thai Binh province, North Vietnam, the author believes that, one more benefit which can be gained from the involvement of policy-makers in

research process is that it can help link research and policy making process together. This, in turn, may result in improved evidence-based policies, meeting the defined demands of both research users and governments.

In respect of research users, there seems to be more academic agreement. From the shared viewpoint of Bassey (1995) and Sebba (2007), the first user group must be researchers themselves, who utilise the findings from their studies as well as from colleagues to promote their future studies. The next audience should be practitioners working within the education sector. Seen from these scholars' perspective, the final group encompasses policy-makers at different levels and people/organisations providing financial support to educational projects. In my opinion, another important group of users are students at all levels of schooling. It is obvious that the purpose of any educational research, direct or indirect should be the successful application of theories or practical guidelines from which our vulnerable children benefit. That is why researchers should be more wary in considering the potential effects of research on its users and those persons educated.

Returning to the main research question of this section: What is the purpose of educational research? As with any kind of research, it should carry two primary purposes: generation of new intellectual knowledge and provision of guidelines to practice or policy making process. These purposes have been correspondingly termed by Finch (1986, p. 153) as the "enlightenment model" and "engineering model". What needs discussing here is which mode should educational research centre upon? What is considered as relevant and effective research? These questions will be addressed later in this paper when determining what "works" in education, as we now move to the matter of quality in educational research.

What does quality in educational research look like?

Educational research is a form of social research, conducted in the field of education. Thus, in order to judge a piece of educational research, one needs to follow general criteria set by social researchers. One of the widely agreed set of criteria belongs to Punch (2007). In his book **'Introduction to social research'**, Punch claims that, to evaluate a social study, one needs to focus on five main areas of research. They are the setup of the research, the design of the study, the quality of the data, the findings and conclusions, and the presentation of the research. Besides meeting the general criteria of social research as above, a good piece of educational research should also:

(1)- Pay serious attention to ethical issues

The issues of ethics can arise at any stage of educational research, especially when the subjects are highly vulnerable populations like children (Strike, 2006; Cohen *et al.*, 2007). Ethics in general, mean that the research and researchers do no harm, mental or physical, to the participants and the environments where they live or work (Busher & James, 2007). Within the UK, educational research should be conducted under the ethical guidelines from British Educational Research Association (BERA, 2011) with respect for people, knowledge, democratic values, the quality of educational research and academic freedom; and full responsibilities to its participants as well as stakeholders (p. 4-5).

Practically, Tobin (2008) recommends that, when conducting research, researchers are obliged to make research beneficial to its participants. Research in education, considered as ethical, should also help develop a society's knowledge base. To do so, it must be trustworthy and of desired quality, because failing to meet these criteria will result in wasting resources and labours of researchers and other participants, which then is unethical (Busher & James, 2007; Gorard & Cook, 2007). More importantly, if findings of poor quality research are

applied, they may exert adverse influence upon the development of the younger generations. Therefore, ethical educational studies must be those that care for both participants and users' benefit. It should contribute to individual as well as social betterment (Strike, 2006). This perspective is further supported by Groundwater-Smith and Mockler (2007; 2011) and Bryman (2008) who assert that good research cannot be studies conducted unethically.

Nevertheless, it should be acknowledged that, it is not always possible to ensure full ethics in some research situations. A good example is the author's recent study - Du (2011), investigating the influence of local education policies on teacher and school leader development. Though the researcher had no intention of mentioning specific districts where research was conducted, release of minor pieces of information, such as number of schools and teachers may lead to readers in the region being able to guess which districts were involved. Consequently, it may affect the reputation of several local government leaders in the districts, where the scores were determined as low.

(2) - Employ different strategies and techniques to improve reliability and validity

As educational research is becoming increasingly complex (Greene, 2007; Creswell *et al.*, 2008; Waring, 2012), it requires researchers to show their endeavour in strengthening the reliability and validity or trustworthiness of the research findings. For instance, if questionnaires are utilised as an instrument for data collection, there should be a pilot phase to check for irrelevant items, design problems and level of difficulty (Fogelman & Comber, 2007; Denscombe, 2010). Similarly, if semi-structured interviews are conducted, it is necessary to have a task to achieve respondent validation, a significant aspect to ensure data validity (Cohen *et al.*, 2007; Creswell & Clark, 2007; Bryman, 2008; Denscombe, 2010). In so doing, one can not only reduce the risk of the researcher's bias (Morrison, 2007) but also contribute to the development of democratic participation in research (Torrance, 2012).

Good large-scale educational studies draw the participation of different groups of actors, such as teachers and policy-makers or people providing fund to the projects. This is because 'the relationship between educational research and practice is not one of application, but of cooperation and coordination' (Biesta & Burbules, 2003, p. 107). Research undertaken in this manner can enhance its inter-observer consistency (Bryman, 2008) which in turn makes research findings more valid. Nonetheless, as academics, we should bear in mind that, in some circumstances, there may be conflicting interests in different groups when planning, doing research and disseminating findings (Sebba, 2007).

Good educational research employs multiple methods to examine complex educational research issues. It encourages the researcher to investigate the problem from different viewpoints. In so doing, it allows the researcher to gain more comprehensive understanding of the research problem (Creswell & Clark, 2007; Gorard & Cook, 2007; Greene, 2007; Bryman, 2008), avoiding bias of a single method (Teddlie & Tashakkori, 2003; Creswell & Clark, 2011).

(3) - Be accessible to the group(s) of users it intends to serve

As users of educational research may include young students and newly-recruited teachers, it is important that researchers use a readable writing style to maximise the number of people who can read and understand the research report. Regarding statistical data, drawing from Sammons (1989), Busher and James (2007) argue that data should be presented in such a way that makes them deception- free, and comprehensible to lay people. Nevertheless, it should be kept in mind that, it is not always feasible to simplify numerical data to make people without basic knowledge understand because of the complex nature of some data. In addition, different audiences may have different expectations of the research presentation meanwhile priority is usually given to those who are the main target audiences.

For instance, students' doctoral theses will focus on the general expectations of supervisors and examiners while a government-funded project will focus on the demands of policy-makers. Dissemination strategy is an integral part of research, and it should be planned carefully to make the research work. Good educational studies, therefore, must show researchers' immense effort in communicating with their readers to promote individual and social welfare.

What evidence would convince one that an educational study "works"?

The question about "what works" in education has been the focus of significant amounts of discussions among education academics, and others working outside the field of education (see Hillage *et al.*, 1998; Atkinson, 2000; Hammersley, 2001; 2002; Sanderson, 2003).

As regards perspectives, these researchers can be divided into two major groups: one supporting the engineering model whilst the other favouring the enlightenment model. Proponents of the former model criticise current educational research for its irrelevance to schools and policy-makers, wasting money and resources, and not being based fully on evidence. They suggest linking research findings to practical activity (Black & Wiliam, 1998). Critically, Hargreaves (1996) strongly recommends that teachers must take an active role in setting the agenda for educational research and in carrying it out.

On the contrary, advocates of the enlightenment model, for instance Whitty (2007), counter that it is impossible for all educational research to be relevant to schools since not all studies in education have the same focus or purpose. If research is narrowly defined to provision of practical guidance to teaching and learning, there will be poor evidence to support education. Furthermore, as we are living in a rapidly changing and complex world, there is hardly a "one size fits all" formula which works in every situation. In other words,

research needs to ask and answer different sorts of questions not only what works in the current context of education. This viewpoint is then reinforced by Hoveid (2012).

In light of this understanding, Whitty (2007) proceeds to argue that, there is no need to force research to influence policy-making directly, for it can exert impact in different ways – often indirectly and sometimes not intended. This position mirrors those found in previous studies (e.g., Hammersley, 1997; Webb & Ibarz, 2006). Also, research carries other purposes, such as helping people reconsider issues and think differently to address a problem effectively. In line with Whitty's (2007) perspective, Hammersley (2002) forcibly argues that Hargreaves (1996) has adopted a narrowly instrumental view to evaluate research's practice relevance, showing an interest in the engineering model. He further claims that, it is the commitment of some educational researchers to addressing the short-term targets of education by meeting the expectations of funders or policy-makers that contributes to several low quality studies condemned by Hargreaves. Educational research does not need to focus on providing direct solutions to a problem, generating rules. Instead, it should provide people with information, knowledge relating to the field (Hammersley, 2003).

The above diverse attitudes towards the value of educational research may stem from researchers' adoption of different criteria while paying inadequate attention to the educational context. To judge educational research more precisely, one probably needs to consider the perspective of Carr and Memmis (1994) who argue that the role of educational research is to develop theories of educational practice. This implies that educational research not only produces theories but also attempts to confront educational problems happening in actual educational settings. Personally, I believe that both the enlightenment and engineering models are indispensable within educational research, as they are 'complementary' (Bartlett & Burton, 2007, p. 57), two sides of the same coin. One cannot undervalue a piece of

research just because it merely focuses on generating theories or providing guidelines for an educational problem because we need both *studies of education* and *studies for education.*

Moreover, as educators we are aware that, some learning outcomes may appear by the end of a given course whilst others may manifest themselves in the longer term. If we just focus upon short-term goals, such an important goal of modern education like critical thinking (Bono, 1982; Bailin *et al.*, 1999; Dam & Volman, 2004; Ku, 2009) for example, will be definitely neglected in future research. Furthermore, how a piece of research works also depends on the ways its findings are interpreted and applied (Hammersley, 2001). Thus, good research should be studies containing sufficient and strong evidence, critical and bias-free values; being conducted in a rigorous and scientific manner.

When evaluating educational research in terms of the balance between its two major purposes, one should seriously take the context of education into account. For example, developing nations with modest numbers of highly qualified teachers and critical problems in education like the author's home country (see Government, 2006; VMOET, 2006; WB, 2006; CCCPV, 2011) require more studies providing teachers and policy-makers with practical instructions and recommendations. On the contrary, developed nations with well-trained teachers who can do research, interpret, and apply research outcomes independently, such as the USA or the UK, greater amounts of enlightenment research studies should be encouraged.

The author shares the point with Hargreaves (1996) that, research should be closely coupled with policy-making, as it is often political in purpose, and necessitates cooperation between researchers and policy-makers. To some extent, however, researchers need a certain level of independence in order to fully explore the diversity of the education world. It is also worth noting that even if research knowledge tends to be more valid than knowledge from other sources, not every question can be answered by research, and that research is not infallible (Hammersley, 2001). It is only one source of information that can be used indirectly for decision-

making and policy-making (Hillage *et al.*, 1998; Gorard & Cook, 2007). In summary, efficient educational research should demonstrate that it largely meets the requirements of good studies, provide its intended users with short-term or long-term benefits, helping them tackle an uncertain future (Atkinson, 2000)

Conclusions

In this article, apart from offering a definition of educational research, the author has attempted to provide answers to three fundamental questions within the current education research debate. The research findings indicated that educational research aims to serve two major purposes: generating new intellectual knowledge and providing practical guidelines for teaching and learning processes. Thus, it does not deserve such serious criticisms as stated the Introduction. Apart from meeting the criteria of social studies, a high quality piece of educational research must pay full attention to ethical issues, employ different strategies and techniques to enhance reliability and validity of its findings, and be of access to its intended user group(s). A piece of research that "works" is one that the majority of its wished-for users find useful for their professional or private life, either for the short or long-term.

Despite the author's considerable effort, the exploration of the relationship between educational research and policy-making is beyond the scope of the current paper. Therefore, future studies may examine this relationship issue, as researchers may require greater levels of understanding, support as well as cooperation from funders and governments. Through this study, it is recommended that before making judgement on educational research, one should have explicit understanding of the key terms, purposes and the context of the research. In addition, as Levi (1992, p. 131) suggests, 'argument must occur within a framework' so as to

avoid using inappropriate criteria during critical evaluation. Though it is not always practicable, where possible, researchers should endeavour to present research findings in an understandable way to non-researchers, to avoid confusion and ambiguity.

Notes:

[1] The three government-funded studies include Hargreaves (1996), Tooley and Darby (1998), and Hillage et al. (1998).

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