The Challenges and Strategies of Nexus among Educational Research, Policy and Practice: Others' Experiences

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Abstract: This study examines the relationships among educational research, policy and practice from the historical and contemporary perspectives with the purpose of identifying strategies for better approaches to improving school practices. The research paper presents a brief history of educational research, challenges of rigor and quality of educational research, complexities of the relationships between researchers and practitioners, between policy makers and researchers, among research, policy and practice, and strategies to overcome the underlying constraints. Among the strategies are examinations into the options of the establishment of major research institutions that sort out what works best and provide standards of rigor for quality educational research; and the formulation of national education research policy that supports better forms of partnership and collaboration among policy makers, researchers and practitioners. To this end, the study explores some experiences from the U.S., Europe and others, and demonstrates how these experiences can be used as valuable lessons to advance a culture of partnership and collaboration among policy makers, researchers, and practitioners to improve education of the Ethiopian schools. The conclusions of the paper underline the need for the three parties to work as a team for the common goal of improving the quality of education that can contribute to the development of the country.

Keywords: educational research, policy, practice, research-practice nexus

1. Introduction

This study explores the state of the relationship among educational research, policy and practice and the ways that relationship can be enhanced to the effect of improving education at schools. It examines the state of educational research in terms of quality, relevance, and usability; and investigates the relationships between research and practice, research and policy, and among research, policy and practice. While examining the problems of quality and relevance of research and the disjuncture among research, policy and practice, the study looks into the strategies for overcoming the problems in terms of promoting quality research that is relevant to practice and informative to policy decisions and for enhancing a healthy nexus among research, policy and practice. The study, moreover, identifies strategies of research facilitation, capacity building, mediation and models of impact. In order to

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strengthen the role of research in informing policy and practice to improve education, the study presents the importance of institutions of educational research at various levels that can serve as centers of excellence. These institutions would be sources of guidelines for research standards, evidence to inform policy decisions, and intervention programs to improve educational practices. The study, moreover, considers the role of educational legislation that reinforces the nexus among research, policy and practice.

Education is a public trust that involves accountability. An investment in education should bring return to the public. This fulfillment is met when educational outcomes meet the aspired needs of the society. Through educational research, we can account for the money, time, and efforts invested in the educational enterprise. Educational research plays a critical role in harnessing the benefits education offers. Research is a tool that serves to continuously learn about what works best to improve practices and provide the evidence base to inform policy decisions. Research helps address problems of practice, provides better ways of handling educational matters, enables to find out effective and efficient ways of utilizing limited resources, identifies best practices, produces new knowledge, and tracks progresses.

In order for educational research to be instrumental to improve practices at schools, it has to meet measures of higher quality, rigor, relevance, usability and impact (Reeves, 2011). This calls for queries into the state of educational research in terms of these attributes. Quality educational research should meet the desired level of standards of excellence (National Council of Research, 2002). Nonetheless, a question arises whether or not the research output made available is utilized to improve practices. Likewise, a related question is whether policy makers use research findings to formulate evidence based and informed policies pertinent to the realities of education on the ground. Inversely, a question can be raised whether or not researchers engage practitioners and policy makers while formulating, planning and conducting researches. In addition, it is important to ask the question as to what strategies can be employed in support of research capacity building, research facilitation, partnership, collaborations, and availability of educational legislations and institutional support systems that can contribute to strengthening a research culture for quality education. Overall, one would wonder if there is a healthy and supportive nexus among research, policy and practice that can bring together researchers, policy makers and practitioners to team up in collaboration and partnership to improve education that contributes to development. This study which aims at addressing the aforementioned questions is important that it can contribute to the efforts made to improve educational research in terms of relevance and quality so that it can inform policy decisions and practices.

Statement of the Problem

The quality, rigor and relevance of educational research have been sources of concerns and critique (Farrington 2003). On the condition that the quality, rigor and relevance of educational research are questionable, then the meaningful impact of such research on policy decision and practices becomes doubtful (Lagemann, 2002). Thus, it is apparent that the

quality, rigor and relevance of educational research are subjects of significance for investigation. The prevalence of lack of partnership between researchers and practitioners, between researchers and policy makers, and absence of informed policy decision practices constitute the challenges that stand in the way of utilizing research to improve education (Sebba, 2013). A disjuncture among research, policy and practice poses a constraint on the best use of research findings to improve practices and inform polices that are reflective of available evidence and problems of practice at schools (Ozga, 2004; Penuel & Fishman, 2012). An investigation into the nature of nexus among educational research, policy and practices and the strategies of improving the synergy is an important contribution to improving education. The purpose of this study, therefore, is to examine the challenges of the nexus among educational research, policy and practice, and the strategies to enhance a healthy nexus therein, for an effective utilization of quality educational research to support practices and inform policies reflective of schools.

Research Questions

1. What are challenges of the nexus among educational research, policy and practice for an effective utilization of quality educational research to support practice and policy reflective of problems of practices at schools?
2. What are the strategies for creating the healthy nexus among educational research, policy and practice for an effective utilization of quality educational research to support practice and policy reflective of problems of practices at schools?

The Challenges of Nexus among Research, Policy and Practice

Educational Research

Troubling Early Start: The history of educational research is about a century old and it has passed various stages of development. At its early start, educational research was no more than an effort to collect census data on schools and condition of education. By the end of the 19^{th} century and early 20^{th} century, an element of educational research, mainly collection, collation and distribution of facts (Knox, 1971), was carried out. Educational research had a low status at its early start. Due to the divorce of education from subject matter disciplines, education struggled for recognition. Education was labeled as a female preserve, as school teachers were dominantly women. Thus, educational research was considered "women's" work which was then associated with low status. At its start, educational research did not enjoy recognition of academic stature (Lagemann, 2002).

In order for educational research to get recognition and improved status, efforts were made to make educational research scientific with the use of quantitative data and the focus on behaviorist approaches. Universities became sources of knowledge for the schools to improve practices. This had a gender character as the university researchers were males while school teachers were females. Stanley Hall, Edward Thorndike, Josef Rice and John Dewey are among the prominent figures who laid the foundations of educational research in the United

States (Lagemann, 2002). Developments in Germany, France and UK and other European countries also had such a significant influence that they provided a solid foundation of educational research in child development, intelligence testing, measurement and quantitative methods. Influential figures in Europe include notable authorities such as Alfred Binet and Francis Galton (Nisbet, 2000).

Paradigms and Controversies. The earlier effort to rely on quantification of the conditions of education to constitute the methods of research in the field continued from 1930s to 1950s which gave rise to positivism. Positivism maintained the position of the observer and observed independence with the argument that no bias of the researcher should influence the outcome of the research investigation. Post-positivism also grew in the late 1950s and early 1960s and maintained the position of reliance on quantitative approaches as the primary method of education research. However, post-positivism held the position that the researcher can have influence on the outcome of the research unlike the position of positivism. The 1960s became the onset of different perspective on the approaches to educational research. Later, when interpretivism emerged with a qualitative methodology, an emphasis on constructivism, subjectivity of the researcher and qualitative tools of inquiry formed the basis of the new paradigm. This opened the door for debate and controversies between quantitative and qualitative approaches to educational research. The debate has led to the current practice and trend of educational research that has come to be known as mixed method (Niglas, 2011).

Quality and Relevance of Educational Research

Low Quality: Despite its growth and expansion over 100 years, one of the notable aspects of educational research is a contestant critique directed at it regarding value and validity. It is also argued that educational research has not produced as big impacts as research in other fields such as medicine (Reeves, 2011) has. Concerns are reported about the questionable quality and rigor of educational research in terms of methodology, reliability of measures, questions and objectives match, depth of analysis, "scientific" rigor and quality of reporting (Farrington 2003).

Irrelevance: The relevance of educational research is under scrutiny. The concerns include that educational researches done in universities are driven by the interests and theories of the researchers and unreflective of the needs and problems of practice at schools. This widens the gap between research and practice (Easton, 2010). The problem involves a confrontational relationship between researchers and practitioners. Such relationships are reported to be not respectful of the wisdom of practice and direct knowledge of students on the ground. Thus, researches at universities are criticized for being less relevant to what is actually happening at schools. Also, a research framework that is too "theoretical" and not grounded in problems of practice as experienced by teachers constitutes part of the challenges of relevance of educational research (Penuel & Fishman, 2012).

Disjuncture

Research and Practice Gap: A tendency not to involve practitioners and policy makers at the early stage of the design and formulation of research projects is part of the problem of the gap between research and practice. Such a gap adds to the problem of the relevance of research findings to practice and policy formulations (Easton, 2010).On the part of practitioners, their state of being too busy and being unable to locate relevant research evidence for use to address problems of practice, and lack of confidence to 'judge' research are the underlying conditions of the gap between research and practices (Sebba, 2013).

Research and Policy Gap: Another area of the challenges of the gap is the disconnected link between research and policy. Policy makers are criticized for being reluctant to use research outcomes. It is reported that policy makers rank academic research below special advisers, media andthink tanks as sources of evidence (Campbell et al., 2007; Rich 2004; Rigby, 2005). This does not help the effort made to bring research and policy formulation into harmony. The critique includes that policy makers regard research findings as impenetrable, ambiguous, conflicting, insignificant, untimely, and only partially relevant. A climate of confusion about what constitutes as evidence among the public is part of the problem of the gap between research and policy (Brown, 2012; Rickinson, Sebba & Edwards, 2011). A culture that gives less value to the contribution of educational research to development of informed and evidence-based policy widens the gap between research and policy.

Complex Relationships: One of the sources of the constraints for the utilization of research findings and evidence for the improvement of the educational practices and evidence-based policy lies in the complex relationships between researchers and policy makers. The problem is rooted in the divergence of goals that researchers and policy makers work towards; i.e., policy makers pursue policy agendas whereas researchers pursue academic ones. Thus, technical solutions researchers propose may not be appropriate to answer questions of value emanating from political positions. This leads to the inevitable challenges of ideological differences. On the other hand, research comes after policy is formulated and put in place. Then, researchers are called upon to support and justify policy positions (Ozga, 2004). This leads to conflict and mismatch between policy agenda and research outcomes. Policy makers want their policy agenda at a certain time whereas researchers can wait as long as it takes to come up with scientific research findings that policy makers cannot afford to wait. Such a difference in interest contributes to the gap between research and policy (Ferguson, 2015). The gap between research and policy also widens the disjuncture among research, policy and practice.

Research Transfer into Policy and Practice

"Take It" Approach: The transfer and application of research findings and knowledge is not straightforward phenomenon. The nature of teaching being a practical rather than a technical matter makes the transfer of research less easy. Research findings may not have direct application into teaching which requires teachers' judgments than following rules (Hammersley, 2002. On the other hand, research findings may not be answers to all specific

problems, and such findings are interpreted differently depending on contexts and particular circumstances. Lack of preparation and discussion on both sides of the researchers and practitioners, one way flow of ideas, and lack of collaborations and partnership contribute to the failure to successfully apply research findings into practice (Ozga, 2004).

Strategies of Overcoming the Challenges

Quality and Rigor

One major way of addressing the concern over the quality and rigor of educational research requires clarity with attributes of quality research. Such features of high quality research include clear questions, proper methods, reliable instruments, and multiple data sources for the integration of quantitative and qualitative methods. These features of a quality research are checked through a systematic and rigorous review process (Sebba, 2013).

It is a long standing tradition of research practice in other fields such as medicine that research undertakings are measured against rigorous standards. Such standards entail use of controlled trials, close match between the intervention and comparison groups in certain major traits, measures and instruments of proven validity, and adequate sample size to achieve statistical significance. Such marks of golden standards are also the marks of high quality research in education (Shelley, 2005).

In light of the critical role of measures of quality and rigor of educational research, National Research Council formulated standards of quality of research in education (National Research Council, 2002). According to NRC, a quality educational research should

1. pose a significant, important question that can be investigated and contributes to the knowledge base
2. test questions that are linked to relevant theory
3. apply methods that best address the research questions of interest
4. use clear chains of inferential reasoning supported by relevant literature
5. provide the necessary information to reproduce or replicate the study
6. ensure that the study design, methods, and procedures are sufficiently transparent
7. ensure an independent, balanced, and objective approach to the research
8. provide sufficient description of the sample, the intervention, and any comparison groups
9. use appropriate and reliable conceptualization and measurement of variables
10. evaluate alternative explanations for any findings
11. assess the possible impact of systematic bias
12. submit research to a peer-review process, and
13. adhere to quality standards for reporting (i.e., clear, cogent, complete).

Adherence to the standards listed above can enhance the quality and rigor of educational research that can contribute to improving practice and informing policy. The quality of

educational research can also be improved through the application of various forms of triangulation including data triangulation, researcher triangulation, theory triangulation and methodology triangulation. These forms of triangulation involve the use of different sources of data, participation of two or more researchers, application of multiple theories, and use of different methods respectively to tackle an educational problem under investigation (Niglas, 2011).

While maintaining the standards of high quality educational research, efforts should be exerted to support research activities in educational institutions. Such efforts are strengthened through mechanisms and strategies including periodic research review, identification of centers of excellence, periodic goals, faculty development funds, research embedded culture, training and workshops, grant writing, sponsored research from industry, government, foundations, and other sources, collaboration across departments, schools, campuses, joint work in partnership with industry, universities, and school districts, and identification of resources.

Relevance and Usability

To make research relevant to schools, it is critically important that researchers engage practitioners and policymakers at the planning stage of a research that is being done. In the process of the effort to engage practitioners, researchers should be watchful of the dynamics and complexity of the relationship and should never drop findings on schools in the form of "Here's good stuff that you need to use." This approach is repulsive and not helpful. Instead, researchers need to invite practitioners and policy makers to the table from the beginning. This approach helps researchers target relevant problems of practice and enables users understand the project and embrace the outcomes for use (Easton, 2010).

Developing the culture of engaging policy makers and practitioners in research undertakings contributes to the formulation of informed policy and implementation of evidence-based practice. To address the challenges of disjuncture among research, policy and practice, there needs to be a closer collaboration among researchers, policy makers and practitioners. Such efforts can be achieved through steering research towards problem-solving, consolidating knowledge about what works at schools, developing evidence-based policy, promoting research informed practice, and supporting interventions that improve practices at schools (Ozga, 2004). These approaches call for collaborations among leaders at various levels and between researchers and practitioners, and emphases on projects that investigate local problems of practice, gather information about problems and solutions, and support informed policy decision and classroom instruction (Penuel & Fishman, 2012).

A Shift from Research Transfer to Facilitation

The conventional practice of knowledge dissemination and transfer of research findings to support school practices has not been effective. The practice of saying to policy makers and practitioners "here is a research finding, take and use it" is less respectful and disengaging

(Easton, 2010). A different approach to knowledge and research transfer is needed to support policy and practice. The new approach should involve a shit from transfer and dissemination to facilitation. In the process, it is essential that considerations be made for the complexity of the process. That is, it is critical to have an understanding of the role of context and judgment in knowledge transfer, and the need for preparation from both partners in the process. It is important to have the awareness that knowledge transfer is not linear process that happens through a giving and receiving relationship. Rather, it requires processes of discussion, problem solving and joint development involving all participants (Ozga, 2004).

Models of Research Impact

Mechanisms can be sought to encourage and promote the relevance, engagement and impact of research on policy and practices. Sebba (2013) recommends different models that can incentivize and support all parties to work towards promoting collaboration and partnership to achieve a healthy and productive nexus among research, policy and practice. The following are the models:

a. *Push Model* In this model researchers are incentivized to undertake relevant and robust research that meets the highest standards for quality as well as relevance. This can be made possible through funding and other forms of encouragement.
b. *Pull Model* It is a model whereby practitioners are incentivized to use research findings to address problems of practice. Under such schemes, teachers and other school practitioners can be offered various forms of awards and recognition for trying innovations and interventions obtained from research undertakings.
c. *Capacity Building Model* This focuses on providing training for policy officials to develop awareness on research related issues and ways of utilizing and interpreting findings in order to use them in policy formulation.
d. *Liaison Model* It emphasizes the role of "insider-researcher" in government in strengthening partnership and collaboration among researchers, policy maker and practitioners. Such systems allow individual researchers who are in government and have links with academic institutions and schools. This can be accomplished through two-way secondment whereby individuals can be temporarily transferred to a government office for some time and strengthen the partnership efforts. This can also be reversed in which case a government employee can be temporarily transferred to a school setting for research purposes. In both case, the liaison persons can play the role of cementing the nexus among policy makers, researchers and practitioners.
e. *Network and Brokerage Model* It aims at bringing together researchers, users and policy makers. By doing so, the three parties play roles to influence on design, research questions, verifying findings, and dialogue about making research relevant and usable to improve practice and policies.

The above research impact models are strategies that can support the efforts to bring together educational researchers, policy makers and practitioners to partner and collaborate for the common goal of maximizing the impact of research to improve educational practices.

Capacity Building Mechanisms

For the ultimate purpose of strengthening the research culture that supports relevant research supported by informed policy provisions, more work needs to be done to develop capacities. The capacity building takes place in various forms. Sebba (2013) presents various forms of such efforts. These are the mechanisms:

a. Teaching and Learning Projects are research undertakings directly focusing on the teaching and learning practices and challenges.
b. Research Review is a practice of reviewing research outputs with summaries which can provide resources on relevant and usable research findings.
c. Teachers Joint Projects involve teachers' collaborative research that can promote team work and sharing of experiences among teachers while strengthening research culture.
d. User Engagement is a practice that requires researchers to engage users as a funding requirement which can encourage collaborations among researchers and practitioners.
e. Researchers in Residence Scheme is another form of capacity building in which researchers partner with teachers, or researchers spend block time at schools, conducting research and proving training for teachers.
f. National Teachers Research Panel is a form of capacity building which enables teachers to find forums where to participate in research undertakings.

The above identified mechanism are instrumental in supporting teachers acquire capabilities in research undertaking. The strategies also support teachers with useable research outcomes to use them for improving practices. Also, the approaches can be helpful in creating links and partnership between researchers and practitioners.

Mediation for Research Use

Mediation takes place through individual liaison between policy makers and researchers (Martinez & Campbell, 2007).It bolsters the nexus among research, policy and practice for maximizing the use of research to improve educational practices. Mediators can be funders, media, policy analysts, educators, policy advisers and other stakeholders. Mediation efforts aim at knowledge brokering to link decision makers and researchers. Knowledge brokerage facilitates understanding, forges new partnerships and promotes the use of research. Mediators can have multiple positions as trustees for each other's organisations, sit on each other's councils and participate at each other's events (Ball & Exley, 2010).

Through mediation, efforts are directed towards problem definition, expansion of public debate, innovation and knowledge brokerage (McNutt & Marchildon, 2009). Mediation can support efforts to establish constructive nexus among educational researchers, policy makers and practitioners. Specifically, linking researchers with users throughout the research process increases research impact (Rickinson et al, 2011; Ward, House, & Hamer, 2009).

Educational Act and Institutions of Research

One form of reinforcing the commitments to harness harmony and nexus among research, policy and practice is the passage of educational act that supports the establishment of national and regional institutions of educational research. This is what happened in the US in 2002 in which the Congress passed an Educational Sciences Reform Act that supported the establishment of Institute of Education Sciences (IES), whose mission is to expand knowledge and provide information on practices that improve academic achievement with the goal of transforming education into an evidence-based field and providing best available research and data before adopting programs or practices (Shelley, 2005).

The Institute of Education Sciences (IES) established What Works Clearinghouse (WWC), which plays the role of providing educators, policymakers and the public with scientific evidence of what works in education. It also reviews and reports on existing studies of interventions. What Works Clearinghouse gets support from its Technical Advisory Board on which experts from various areas serve in matters of educational research, reviews and evaluations (Shelley, 2005).

Conclusion

The purpose of this study has been to explore the challenges involved in the nexus among educational research, policy and practice and the strategies for improving the nexus therein in order to make improvements in educational practices at schools. The challenges identified include questionable quality and relevance of educational research, gap between educational research and practice, between educational research and policy making, and disjuncture among research, policy and practice. Factors identified underlying the challenges are researchers' lack of engaging practitioners and researchers, practitioners' reluctance to use research outputs, and policy makers' lack of interest to use research as evidence base to formulate policies. Moreover, the complexities of relationships between researchers and policy makers in terms of the divergence of their notions of evidence and goals contribute to the disconnection and gap among research, policy and practice. Part of the challenges is also the model for research dissemination that is based on "take it" approach which is one directional, not contextual and disengaging.

The strategies for enhancing the nexus among educational research, policy and practices in order to improve education at schools include various approaches. The problem of quality of educational research can be addressed with the application of established standards of quality of research. Educational research can be made relevant and usable by focusing on problems of practices at schools and through engaging practitioners and policy makers in the design and planning of research projects. Best practices to enhance a healthy nexus among educational research, policy and practice include strategies that support partnership and collaborations such as research facilitation, research impact, incentivizing, knowledge brokerage, residence in schools, national and regional research panels, teaching and learning research projects, liaising, secondment, user engagement, capacity building, mediation,

enacting educational legislation and establishing institutions that support educational research that can provide evidence to inform policy formulations and implement interventions to improve teaching and learning practices at school.

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