Research Knowledge Mobilization in Education

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Introduction and Purpose

The purpose of this report is to provide a context for the IALEI discussions on June 13-15 and for some recommendations to be adopted by the IALEI deans on mobilizing research knowledge in education.

This conference brings together administrators and researchers in universities from ten countries to discuss and present an international outlook for research mobilization in education. The major objectives of this year’s conference include:

1) To catalyze key themes in knowledge mobilization in the field of education across countries that could potentially improve research production, dissemination and use;
2) To build collaborations among academic and other major stakeholders to promote improvement in education research use.

Crossley and Holmes (2001) assert that national issues cannot be understood without considering the global context in education research. Yet, it is equally true that a better understanding of the situation requires full communication of differences, priorities and agendas and this conference is an opportunity for us to do just that. The overarching question for discussion of this year’s conference could be: How can we make research more influential?

This report is based on the 8 national reports that were submitted in advance of the conference. The diverse features of political and economical context in those countries mean that the discussions here are unavoidably contextually bound. It is also the case that despite having common guidelines for the national reports, authors approached them in quite different ways. Our intent is that this summary paper can raise issues to be explored on June 14 and beyond.

Education has been universally considered as a priority area for capacity building and a foundational field for developing effective and integrated economies around the world (King, 1991). The World Bank titled its 1998-1999 World Development Report as ‘the role of knowledge in advancing and developing economic and social well-being’ (1999, v), and has restyled itself as ‘the knowledge bank’ with a huge focus on sharing research knowledge. UNESCO devoted its 2005 World Report (Binde, 2005) to building knowledge societies in developing countries. In the following year, UNESCO published a book looking at the role of higher education in building the knowledge society (Neave 2006a). Tertiary education for a knowledge society (2008), a report done
by the OECD, highlights evidence on some of the major policy changes influencing higher education worldwide today. National governments, too, have recognized, if sometimes more in rhetoric than practice, the importance of sound knowledge bases to better inform educational policy and practice (Levin, 2010; Nutley, Walter & Davies, 2007).

Yet around the world there continue to be concerns about the degree to which education research contributes to education policy and practice. Many of the national reports (e.g. UK, US, Canada, South Africa, Denmark) point out the criticisms made of education research over the past few decades.

The eight national reports have mapped the patterns of research activity and capacity across their nations to provide better understandings about the place of education research and its use to shape policy and practice. To various degrees, the reports followed the structure provided below:

1) background about the larger context of the country’s institutional framework for translating educational research into policy, including the way funders or government agencies produce and mobilize knowledge and any institutions set up specifically for the purpose of knowledge mobilization;

2) the current state of university-based research in education, including amounts, funding sources, research structures, capacity and any indicators of quality;

3) strategies and mechanisms currently used by universities, faculties of education, and various researchers and research centers to share their research and to increase its impact.

4) major policies, data or research that have been influential in forming the current arrangements; and

5) further prospects regarding major research universities better promoting research information to the profession and the wider public.

In addition, most of the papers included some more conceptual discussion of issues related to knowledge mobilization in education from the standpoint of the author and the specific country.

**Different Terms and Models**

Empirical studies in the field of knowledge use are scattered across different disciplines, though with health having the largest share (Nutley, Walter & Davies 2007). Many terms are used in this
field in a rather loose manner, each with somewhat different connotations. Knowledge translation is probably the most frequently used term. Other terms found in the literature include knowledge transfer, knowledge utilization, knowledge sharing, research dissemination, research implementation, etc. (Graham et al. 2006).

In health, the process by which research is conducted, produced and applied is often described as the ‘research to policy and practice cycle’. Many descriptions treat this cycle as a standard process. For example, the Alliance for Health Policy and Systems Research (2004) identifies four key phases in this cycle:

1) managing the research agenda: setting research priorities and allocating resources to them
2) producing evidence both through original research and a synthesis of existing knowledge
3) promoting the use of evidence through, for example, advocacy channels and specific mechanisms designed to link producers and users.
4) utilizing evidence in decision-making (p.26).

However most analysts recognize that the process is rarely that straightforward. Many websites and studies cite a definition provided by the Canadian Institutes of Health Research: “the exchange, synthesis and ethically-sound application of knowledge –within a complex system of interactions between researchers and users-to accelerate the capture of the benefits of research …through improved health, more effective services and products, and a strengthened health care system” (http://www.cihr-irsc.gc.ca/e/29418.html).

The Social Science & Humanities Research Council of Canada defines knowledge mobilization as:

moving knowledge into active service for the broadest possible common good. Here knowledge is understood to mean any or all of 1) findings from specific social sciences and humanities research, 2) the accumulated knowledge and experience of social sciences and humanities researchers, and 3) the accumulated knowledge and experience of stakeholders concerned with social, cultural, economic and related issues. (http://www.sshrc.ca/web/apply/program_descriptions/knowledge_impact_e.asp)

The Australia report stated at the beginning that “the term “knowledge mobilisation” is relatively unknown in the Australian context.” (p.2), and it offered another term “engaged scholarship” used in Australia context to describe “knowledge generation, use, application and exploitation outside academic environments” (Wallis 2006). In England, efforts to improve the impact of research generated substantial opposition in some quarters. In the South Africa report, the
concept of ‘engagement’ is connected with the changing situation of the country after 1994, while “the hard-nosed business of ‘research mobilisation’ is as yet a novelty in educational academic circles” (p.8).

It is possible to make some distinctions among these various terms. For example, knowledge diffusion is explained as efforts being passive and unplanned. In contrast, dissemination is a much more active process that tailors research messages to targeted audiences (Lomas, 1993). Implementation is viewed as a more active process than dissemination which involves making systematic efforts to encourage the application and overcome barriers. While these terms can be, and sometimes are used in an interchangeable way, we shall use the term knowledge mobilization in this summary report.

Taking into account the subtle differences between those terms, researchers have come up with different models of research-practice linkages, including the “push” and “pull” models (Lavis, McLeod, and Gildiner, 2003) and “linkage and exchange,” models (Lomas, 2000). Many conceptual models have also been described; many are discussed in the important book by Nutley, Walter & Davies (2007), and a number of them can be found on the Research Supporting Practice in Education (RSPE) website (www.oise.utoronto.ca/rspe). The model conceptualized by Levin (2004; 2011) suggests three contexts – of research creation, research use, and mediation between the two – as being a useful way of conceptualizing the relationships. This approach also emphasizes the importance of relationships among these contexts.

In our view, knowledge mobilization is a broad term which embraces all the steps between the generation of research knowledge and its full use in the real world. We do not restrict this concept only to instrumental or direct use; knowledge can be used in a variety of ways.

Current State of University-based Research in Education

While not all education research is produced in universities, they are still very much central institutions in that world; in most countries they are the single largest producers of education research, and often by a very large margin.

There is plenty of criticism about the current research system in universities. Witty (2006) in the UK points out major issues as follows:

a) lack of rigour,
b) failure to produce cumulative findings,
c) theoretical incoherence,
d) ideological bias,
e) irrelevance to schools,
f) lack of involvement of teachers,
g) inaccessibility and poor dissemination,
h) poor cost effectiveness (p.161).

Nor are these new criticisms, having been made many times before as noted in the UK and US reports, among others. However our focus here is less on the mechanisms of doing research inside universities than it is on how research gets shared and used. For purposes of this paper we will simply assert that there is an urgent need to increase our research evidence base in education, which will require improving various aspects of the way research is conducted.

One issue that did emerge from the national reports, however, is the degree to which research in universities should be focused on what might be seen as ‘practical’ problems or issues in schools and school systems. Several reports noted the fears of researchers that funding is driving research in narrow directions, to the detriment of the long-term interests of advancing knowledge. Concern about this issue is significant in the US report. The Australia report noted that the difficulty in translating research into practice had its origins in the structure of the funding opportunities themselves, with difficulties arising from the fact that so much research is commissioned and narrowly conceptualized…which suggest that a significant proportion of educational research funded in Australia is commissioned research rather than research which has been conceptualized and submitted for funding by educational researchers themselves (p.15).

While acknowledging the determining impact of policy priorities on the direction of research, education researchers have to be careful about being too focused on research issues defined only by policy-making and public funding agendas. There is a need for pure or ‘blue sky’ research. On the other hand, as stated in the Canadian report, there is often public skepticism about public spending on research. In education, research programs are under pressure to demonstrate value for money. It is relatively easy for the public to criticize research results as vacuous or obvious, as has been the case in the United States and England.
Organization of Higher Education

Neave (2006, p.28) defines governance in the context of higher education as “a conceptual shorthand for the way higher education systems and institutions are organized and managed’. Built on this, OECD (2008) synthesizes a broader definition in the following words:

…the structures, relationships and processes through which, at both national and institutional levels, policies for tertiary education are developed, implemented and reviewed. Governance comprises a complex web including the legislative framework, the characteristics of institutions and how they relate to the whole system, how money is allocated to the institutions and how they are accountable for the way it is spent, as well as less formal structures and relationships which steer and influence behaviour (p.28).

National systems differ substantially in the organization of their higher education sectors. The literature offers discussions of the collegiate model, the bureaucratic model (Dill, 1999), the political model (Baldrige, 1971), the model of organized anarchy (Cohen and March, 1974) and the professional model (Mintzbery, 1979). More recently, researchers added other models including the entrepreneurial model (Clark, 1998), the model of the service-oriented university (Tjeldvoll, 2002), the corporate university model (Marginson and Considine, 2000) and the managerial university (Deem, 1998). Each of these offers different possibilities for making use of knowledge from research.

The ten participating counties vary greatly in terms of the larger policy context and funding channels for research, all of which influences the national enterprise of research and its mobilization. The size and scope of the systems varies – from essentially one major institution in Singapore, to a small number in some of the other countries, to more than 1100 institutions offering graduate studies in education in the United States. In almost all countries the higher education sector is also diversified to some extent, with differing roles and relationships for various kinds of institutions.

Federal systems also shape the university world. Structurally speaking, in Canada, the higher education sector is marked by its large size (approaching 70 institutions and roughly 50 faculties of education) and its diversity in terms of size, origins and programs. Most universities are independent organizations with their own governing bodies and enjoy a high degree of autonomy even though most of their financing comes from the state. As in all areas of education in Canada, the primary responsibility for higher education lies with provinces, though the federal government is a main funder of research. In Australia, there are 39 universities of which 25 have education units. Higher education is funded and administered by the Commonwealth Government, in spite the fact
that the states have the constitutional responsibility for education. In the US, which has large public and private sectors in higher education, an enormous variety of institutions of all sizes, with many different missions are increasingly reliant on non-government funding, although both states and the national government do provide some financial support.

It is difficult in most settings to determine how many active researchers there actually are in education. The Canadian report suggests that there might be 3-400 active researchers (meaning people with externally funded research) in faculties of education across the entire country. Denmark has a roughly similar number, either full or part-time. The UK report notes that many university staff are part-time or contractual so less likely to have active research programs. Overall it seems likely that in most countries the number of active researchers in education is very small number given the size of the sector and the multiple areas of interest within it; there are likely, in most cases, only a few researchers working in any given area of education in each country, which works against substantial research programs or the accumulation of results over time. A further issue here is the relative lack of researchers who can work with large data sets at the same time as such data are increasingly available and powerful.

An important aspect of all the systems is that relatively small number of institutions dominate the research landscape. In some cases, such as England, this disproportion is actually created through policy, which is designed to focus funding for research on a few institutions. However the hierarchy of institutions in terms of research exists in virtually every country. The Australia report states that major research projects actually “were conducted by a relatively small number of researchers in a relatively small number of institutions”, but an interesting feature in Australia is that the universities that receive the most funding for applied research are not always the same as those receiving the most funding for interest-driven research. Another important feature is found in South Africa, which has 23 institutions in the public higher education sector but more than 75% of expenditure on research is allocated to six of them (Pandor, 2010). And “the nature and extent of education research in South African universities is uneven…the highest publishers are formerly white institutions … the majority of former black institutions produce less than ten articles in education per year and in some cases none” (South Africa Report, p.13).
Funding for Research

All reports pay attention to funding of research, but in few countries was it possible to quantify expenditures on education research, either generally or in universities. This is an area calling out for further empirical work. What can be said, consistent with earlier evidence from the OECD (2008), is that education research funding remains very small as a share of total education spending. It appears unlikely that research reaches anywhere near 1% of expenditure on schooling in any of the ten countries.

Although funding is an important element in research, we need to be cautious about any assumption that more funding necessarily leads to better research performance. There is very little research concerning the different ways in which research funding programs are monitored and evaluated, and hardly any evidence on the connection between funding and research capacity. Liefner (2003) compared six well acknowledged universities in four countries and found that the connection between these two aspects are actually very weak. Payne and Siow (1999) found in the U S that when the federal funding increases, “as a first approximation, universities buy more federal research funding and produce more but not necessarily higher quality research output” (p. 3).

In most countries, government is the largest provider of research funding. For example, in Korea government funds 28% of all research studies in education, but provides 66% of the research funding. However governments do not necessarily fund education research directly. In most countries (Canada, US, Australia, South Africa, England) governments operate some kind of granting council to support research with public funds. In other cases (US, Korea, Singapore), government funds research institutes of various kinds which in turn may contract with universities to conduct research. In a few countries, other organizations are also important funders of research. In the U S, philanthropic foundations play that role, while in South Africa, and presumably in much of the developing world, most of the research is undertaken with external donor funding.

The Australia paper reported that universities in Australia provide early career researchers with grants and indicated that “internal university funds and the state education departments were the most commonly cited sources for funding educational research in the universities surveyed”.
Relations with Government

In all systems the state plays a significant role in assessing the use of public resources, setting strategic goals, and shaping the autonomy of the university. Varying arrangements for higher education reflect different dynamics between universities and the government. In some cases such as South Africa, how the research work carried out by universities also signals the trust built up (or not) between these two parties.

An important feature of some national research systems is that “the linkage between researchers, ministry officials and professors is very tight…”, while many professors have held positions within the Ministry of Education as well as in top universities or national research institutes (Korea report, p.2). The same close connection appears in Singapore, but is not evident in any of the other countries. Indeed, in some cases, such as the UK and South Africa, researchers may see themselves as a kind of unofficial opposition to government policy.

Research Mobilization Structures and Capacity

The Canadian report points out that the research mobilization endeavour is not just a dialogue on research, but also requires understanding of institutional, national and local capacity. In fact, research capacity building has increasingly been a central concern highlighted in the literature. Increasing attention as well as funding is being devoted to the strengthening of this capacity in many countries.

The examples provided by the national reports show that the process of strengthening a nation’s capacity in this area has challenges, in part because there is no agreed definition in the education sector about what is meant by research mobilization capacity. In other words, to seek ways to strengthen something that itself is hard to define is an extremely complex undertaking. The capacity to make effective use of research is embedded in different levels of the national education system including individual, institutional, and national levels, and involves research producers, research consumers, and the various intermediaries that link them.

Based on the country papers, strong research mobilization capacity seems to require strong leadership, appropriate infrastructure, sufficient funding, effective communication facilities, and the ability to network among researchers, policy makers and other research users (Nchinda, 2002). Munn (2008) suggests that strengthening mobilization is not only something to consider on the
research supply side, it is also closely related to the demand side’s ability to select and apply available research evidence; what Schuller (2007, p.3) called the ability ‘to be able to formulate effective demands for further research”. The national reports all verify these points by introducing the range and purposes of improvement made by policy-makers and other stakeholder groups.

These efforts appear to be most coordinated in Singapore and Korea, consistent with a generally stronger connection between government and higher education. Korea, in order to address structural problems in coordinating national research and development, launched a strategy by reorganizing governmental agencies, forming a Ministry of Education, Science and Technology and a Ministry of Knowledge Economy (Park and Leydesdorff, 2010). Moreover, the Korean report emphasizes research up-take ability of the public over the years. Since 2008, the government has funded a program called “World Class University Program” which is designed to attract top scholars worldwide to conduct research and share research knowledge in Korea.

In Singapore, NIE and MOE have also approved a million dollar project to collect baseline data on school leadership and organizational change. This school leadership baseline research is still in its planning stage. In addition, over the past decade, the Ministry of Education has introduced an alternative career track for a key group of 200 education officers to build their research knowledge and skills by spending about 20% of their time carrying out research and development work. It is expected that they will play the role of knowledge brokers to bring advanced research to impact on policy and practice.

In England, the Labour government after 1997 introduced a variety of mechanisms to strengthen the role of research and evidence. As noted in the UK report, that country has increased its emphasis on innovation in social research and has established various structures for that purpose, including several new applied research centres as well as various efforts to coordinate the sharing of research in education. There has also been an increased attention paid to training and improving the impact of social research (Coffey, 2010). As the UK paper reports, this has led to a wide range of initiatives, though not necessarily with sufficient coherence or sustainability.

In Canada, national organizations are relatively weak due to its large territory and sparse population and the lack of national government input to education. Canadian education research is also heavily influenced by US academic work. The province of Ontario has just launched an interesting initiative named the “Knowledge Network for Applied Education Research”
(www.knaer-recrae.ca) which is funded by the Ministry of Education and led by two universities. This is an attempt to bring together researchers and practitioners in Ontario to strengthen research-practice connections.

The U.S. federal government American Recovery and Reinvestment Act of 2009 (ARRA) provided a large amount of one-time funding to education. The aims of this large but short-term investment were to “improve schools, raise achievement, drive reform and produce better results” (U.S. Department of Education, 2010). A small part of this funding has been focused on strengthening research capacity. Starting in 2009, under the lead of John Q. Easton, the Institute of Education Sciences, the research arm of the US Department of Education, has worked to strengthen capacity for education research rigour but also became more serious about improving research relevance. In 2010, five “big ideas” for IES have been set up to support education research “that matters to schools and improves educational outcomes for children.” including:

(a) making research more useful and relevant,
(b) shifting from a model of dissemination to a model of facilitation,
(c) creating stronger links between research development and innovation,
(d) building state and district capacity to use longitudinal data systems for research and evaluation, and
(e) developing an understanding of schools as learning organizations (Easton, 2010).

Many aspects of research impact also require collaborative work of academic researchers engaged in various research initiatives. The Danish paper shows how difficult relationships among and between universities complicate this work and interfere with policy intentions.

**Strategies and Mechanisms for Sharing and Disseminating Research**

Although universities are central in producing research knowledge, the extent to which they take strong measures to share and mobilize this knowledge is less evident. Since the whole enterprise of active efforts to share or communicate research is relatively recent, it would be surprising if these were already well integrated in the structures and systems of universities which are, after all, conservative institutions.

A fundamental change in the research world has been the astonishing impact of new information technologies on the ways that people find and share information, including research
information. The US report noted the increasing role of the internet as a vehicle for sharing research.

Innovations in technology have changed the patterns of communication as well as the quality and quantity of research dissemination. Online resources and universal access to the Internet have contributed to the growth of traditional scholarly education research outlets, such as increasing the number of peer-reviewed and specialized journals, enabling distribution of conference papers, increasing access to digital libraries, and encouraging a proliferation of small publishers. Innovations have also led to an explosion of online dissemination tools and networks: online publishers, digital libraries, blogs, websites, professional networks, specialized information clearinghouses, newsletters, and online versions of traditional print media such as newspapers and magazines.

However this new capacity is not necessarily well used. Of course all institutions have websites, and all make attempts to share findings from research on those sites. However that remains a limited view of what is possible. Indeed, on many websites of universities, including some of those in this network, it is very difficult to find out what research is being done, let alone what its implications might be for policy or practice. Growing knowledge about the importance of interpersonal connections in creating research take-up is not generally reflected in the work of universities, which still tend to value products such as reports. Social media, becoming a major means of dissemination of ideas in the broader society, are still infrequently used as mechanisms to share university research.

The Knowledge Mobilisation research team at OISE conducted a study specifically around the strategies used by the Faculties of education in large research universities and identified those commonly used including: traditional academic knowledge dissemination channels (particularly publications and conferences); establishing connections between researchers and potential users; and providing institutional supports and incentives (Sá et al. 2010). In general this study found that most universities are staying with traditional forms of academic dissemination with efforts to reach out to different audiences or in different ways remaining the exception rather than the rule. The country papers from Australia and South Africa also looked at mobilization practices on institutional websites and found a similar low level of effort reflected. Two of the universities at this conference – London and Melbourne – were found to have more extensive approaches to sharing research, including building them into university reward systems. Systems such as those that are in place in the natural sciences or engineering to support commercialization of research are notably absent in education, although the US paper speaks about extensive commercialization of education
research in that country.

At the same time, much of the on-the-ground research mobilization work in universities, in terms of ongoing contact with schools or school systems, is done by individual faculty members rather than at the institutional level. A new study by the OISE team (Cooper, Rodway-Macri & Read, 2011) looking at the mobilization practices of education researchers found a wide range of efforts and a considerable degree of interest in this work, though academic communication still dominated.

NIE in Singapore has taken concrete measures to involve practitioners during the conduct of the research studies, to make sure “that teachers and students are not merely research subjects, but research is also honed and informed by classroom practice” (Singapore report). Also, NIE has a dedicated publication unit (housed in the Office of Education Research) to translate and disseminate its research findings through regular print and online media.

An important element in mobilizing research knowledge is the extent to which it is integrated into the teaching programs of the university. Several national reports talk about this connection in the training of teachers. For example, in Singapore there is a strong and explicit emphasis on connecting research work to the education of new teachers, which is easier given that most of the country’s teachers are trained in a single institution.

Similarly, graduate studies is a major activity for all universities, but is not always well connected to the mobilization of research knowledge even though many graduate students are practitioners who are also learning about research. The Canada report points out that graduate programs currently lack connection between students’ experiences as practitioners and their graduate research. The Danish report notes the degree to which the continuing education of teachers is seen as a key field for sharing research, but in general there was little mention of this in the national reports. It seems that more efforts could be made in bridging graduate students and local systems as research mediators.

Barriers and facilitators identified by national reports included the accessibility of material in academic journals to non-academic audiences; lack of encouragement or support given to researchers around dissemination to practitioners; and absence of time and support to help practitioner access research and current promotion structures in for academics in universities. In general, tenure and promotion policies in universities do not recognize research mobilization work.
Although this situation appears to be improving gradually, there is still heavy weighting in the academic world towards academic rather than professional or lay publications. On the other hand, recent work by the OISE team has found that the scholars who are most productive in traditional academic forums are also most likely to be active in other forms of knowledge mobilization, such as working with practitioner groups (Cooper et al., 2011). An exception for the University of Melbourne is reported by the Australian national paper, in “which knowledge transfer is viewed as a key indicator in staff performance development frameworks …counting towards an individual staff member’s overall workload, along with teaching and research. It is also one of the four criteria to be used by academic staff in preparing applications for promotion” (p.13).

A further important issue for universities is the role of research syntheses. The importance of cumulative knowledge is widely recognized, and almost all research begins with a literature review, but research communication still rests heavily on reporting the results of individual studies rather than the kinds of careful syntheses being done by, for example, the EPPI-Centre in England.

Several country papers note the existence of incentives such as awards or small grants to support better research dissemination by faculty. However for the most part these remain rather marginal and the work of research mobilization is born primarily by individual researchers.

In terms of costs associated with the research sharing and the strategies suggested the higher the dissemination efforts of the research results, the more important the adaptations of the research products, the higher the transaction costs supported by the researchers. This interpretation suggests that knowledge utilization of the social science research results could be increased by creating incentives targeting dissemination. It could be achieved by compensating and even rewarding the researchers for the transaction costs incurred by their dissemination activities (Lomas, 2000, p. 238).

One of the major difficulties for universities is to have a clear consensus about what should be counted as research dissemination efforts and how to match individual efforts with institutional supports and commitments at the faculty and the university level. This is an area in which the IALEI might produce some leading work.

**Conclusions: Towards a Future for Research Capacity**

In fields such as health, agriculture, transportation and technology, advanced research has progressively and systematically contributed to the development of our economy and society and is, indeed, taken for granted as a key part of these fields. Although it is largely accepted that education
research has the potential to contribute to educational policy and practice in a profound way (Shavelson & Towne, 2002), knowledge mobilization in the field of education is still a relatively new area. In spite of the many research efforts taken by people in the field, we are at the early stages of knowing about how best to identify, target and affect the many factors that are key for effective and efficient research use.

Of course, the right options for research mobilization work will vary from country to country and even between institutions within a country. However, given the current patterns and infrastructure, those who are heavily involved or interested in improving the quality of education worldwide need to adopt a more open position to partnership and collaboration, and establish an international research community that fosters better practices around the communication of robust research evidence to inform educational policy and practice. If we want educational research truly to contribute to the improvement of national education systems, and ultimately to be integrated into the overall knowledge economy, then it is key to challenge conventional ways of thinking regarding appropriate research mobilization channels for various purposes (OECD, 2004).

**Recommendations for the IALEI and Partners**

Based on the national reports and this synthesis report, the research group proposes the following recommendations to the deans of the International Alliance and its partners.

First, faculties of education should share effective practices for mobilizing research knowledge, learning not only from each other, but from other parts of the university and from other partners who do this work more effectively, in education and in other fields. This goal also implies evaluating the effects of existing efforts. The IALEI should promote exchange and adoption of such practices across its member institutions in areas such as website design, creation of networks, incentives for faculty, supports and infrastructure for research mobilization, and effective partnerships.

Second, faculties of education, whether individually or collectively, should build external partnerships with ministries of education, teacher organizations, school districts, education leaders and others to increase the connections to meaningful research and its thoughtful application to policy and practice. Open dialogue around differing forms of knowledge should be built to ensure
that the work of universities is widely and deeply understood so it can be used as effectively as possible.

Third, faculties of education should reexamine the ways in which their graduate and professional development programs, as well as initial teacher education, build lasting connections between research, policy and practice, so that graduates understand how to create the necessary structures and practices to this end.
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