EDUCATIONAL RESEARCH IMPACT: IMPLICATIONS FOR UNIVERSITY MANAGEMENT

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Abstract*: Nowadays, the Bologna Process emphasizes qualitative rather than quantitative aspects in scientific research as well as the need to focus on practical challenges. This change entails other changes at all levels, from research scientists` and academics` outlook to the ways in which scientific products are evaluated. Given the inter-relationship between education and research, an excellent system of education presupposes high level research production. Well-prepared researchers and well-defined criteria are needed to evaluate scientific research. In this context, we propose a research project funded by the Executive Agency for Higher Education, Research, Development and Innovation Funding. The aim is to establish ways for the institutions that conduct research to enhance the visibility and impact of the results of research in educational sciences, in society in general, and policies and practices in particular. The study proposes an analysis of the actual models of research impact and assesses the current strategies and mechanisms used by research institutions to promote and make research products more visible to the social community and the educational actors. In this paper we focus on the first phase of the research project which consists in the design of the main indicators of research impact in education sciences. Our model consists of the interaction between three levels of the research impact: the context of the research production (researchers, university staff, research groups, etc), the context of the research use (policy makers, practitioners, etc) and the level of society as a whole (mass media, research transfer and dissemination). The model would help us to identify commonalities of interpretations and practice of all the actors involved in the research impact. Finally we consider that for the future of the research in Education Sciences it is of paramount importance that all actors involved in education impact participate and take an informed and proactive stance that responds to the fast-changing political, institutional and technological environment..*

Keywords: *research, policy, practice, higher education management*

I. INTRODUCTION

Interest in strengthening the impact and value of educational research is increasing lately, as evidenced by the attention given by researchers to this issue. We note in this regard contributions of authors such as Berliner (2002), Feuer, Towne & Shavelson, (2002). This last study presents a new vision of the concept of 'Impact', examines initiatives taken in this area in several countries, and suggests measures that could be taken to support a full contribution to education and learning research.

Even though the debate about the value of research in education is one with tradition, it has increased in recent years. The interest is based on the increasing level of education of the population and on the need to understand more deeply the problems facing society (Homer-Dixon, 2000). Research offers a vision of science and objectivity given that governments are increasingly more to base decisions on evidence. In this context, studies about the new concept of educational research impact are needed in order to provide educational managers with strategies and visions about the topic.

1.1. Theoretical background

Education has a number of features that make research have some distinct and different perspective of analysis from other areas. As a field directly related to society, education has a number

of objectives which make it an especially consistent field. Disagreements regarding research in education are increased by differences in educational policies. Education also has a more limited history in relation to policy and practice than other areas. Research in education has long been disputed. Of the reasons listed: the quality of its results, or insufficient guide policy and practice. Such attitudes have been identified in different countries. For example, in Britain, the debate in this regard has been initiated by Hargreaves (1998) who contests that research in education cannot compare with research in the medical field that is able to guide government decision-making committees (Hillage et al. , 1998). In France Prost, (2001) and in Australia, McGaw et al., (1992) had similar views. In the U.S., similar events have occurred that targeted attacks against the value of educational research (Coalition for Evidence-Based Policy, 2002, Gardner, 2002), and has suggested that research in education is of poor quality because it has no effect on policy and practice. An example is a website directly related to the U.S. Department of Education (www.wwc.org / about.html) who claimed that "Our nation's failure to improve its schools is due in part to insufficient and flawed education research. Even when rigorous research exists, solid evidence rarely makes it into the hands of practitioners, policy-makers and others who need it to guide their decisions."

Criticism is growing when it comes to the records presented to society regarding educational research. This, when research has a direct influence, for example contributions in preschool education (e.g. Barnett, 1996, Haveman & Wolfe, 1994). In the U.S., document evidence has played an important role in creating and supporting programs such as Head Start and Early Start. Canada, in 1999 signed an agreement on how public money was invested in preschool education. In the United Kingdom, the research behind many decisions is based on the political agenda in different ways. Another example lies in the relationship between research and the movement of "School Improvement" (e.g. Fullan, 2001; Hopkins, 2001). Practice in school reform, especially at a local level, shows how the capacity of educators was built to practice their profession and to direct attention to a whole school context. Another example is the type of "top down" strategy, which was the basis of the strategies of the 60s. Other examples come from the inclusive education.

Although "impact" is a concept easily used in different contexts, "there is little literature to examine the impact of research in policy and practice", including "under-representation of language to define the concept" (National Education Research Forum, 2000, 1). Literature uses concepts such as benefits, impact and value in cases of synonymy, although none offers a precise definition of content (Levin, 2004). According to Levin (2004), the impact occurs when research in any of its forms causes a difference in the actions that people make or intend to carry out.

This understanding can be developed if we consider the context of medical sciences (Lavis et al. 2002). Research can be used by people in their private or public life and by organizations.People may base their decisions on research or not. Importantly, research is just one of the aspects that influence human activity and its impact is always mediated by more complex social and political processes. According to Levacic & Glatter, (2001) and Willinsky (2000), the impact is not always positive. Often, the research was used to support positions that were later deemed false. This is why the term "consequences" in often preferred to that of "impact".

How does impact come to be? A significant number of teachers showed that when research has an impact, this usually occurs after a period of time (Weiss, 1979, Willinsky, 2000). Impact also rarely arises from direct contact between researcher and politician or practitioner, but often other mechanisms are necessary to facilitate this contact (Levin, 2004). Mass media and professional networks are some of the means of facilitating this contact. A variety of organisms, such as foundations, professional organizations are also involved in dissemination activities, as "policy entrepreneurs" (Mintrom, 2000), people who pursue a cause and research is part of this process.
These parties use research for various reasons; these mechanisms serve as a means by which new ideas penetrate the policy and practice. These ideas are further filtered by those who use them, according to personal interests and beliefs. Each field of activity, education, health, justice, etc., have their own practices, customs and specificities. Research affects the activity of these professionals as long as they are convinced that the ideas and practices that it suggests will improve their work and life in one way or another (Cordingley, 2000). For example, some important research on change and innovation (Full 2001, Rogers, 1995) helps us understand the complexity of these processes.

Once this dynamic is conscious, there are other important points. The most important is that research is packaged within a series of personal beliefs, complicated practices and deeply rooted beliefs, both at a personal and organizational level, such as organizational standards or culture or

personal predispositions. At the macro level of public policy, there are other processes and constraints (Levin, 2001). Organizations that have an important role at a government or public level are inevitably sensitive to its internal participants visions and current political trends.

To these dimensions is added the social dimension. We believe that knowledge is influenced by a range of phenomena and research is important since it is seen as part of this broader context. Recognition of social and political dimension of research impact and its capacity to mediate various mechanisms opens new possibilities. Understanding the impact of research as a long term issue serves to create bridges between research and researchers and the other social processes.

1.2. Objectives of the study

In this context the present work that aims to identify a model impact analysis research in science education. For this we start from the model proposed by Levin (2004) identify three contexts impact analysis research, namely: the context of scientific production at the implementation and that of dissemination. Here is what contains the author's conception, each of these contexts:

a. The context of research production, including issues relating to how such research arose, who made it, how it was made, what communication activities were used, etc. Production research is located at the university but may also occur in other institutions;

b. The context of implementing research (research use), includes those issues involved in applying research. This context includes government agencies, educational organizations of all kinds, teachers of all levels, parents, students and other education stakeholders.

c. Dissemination of knowledge, involving all types of direct and mediated means: face to face, print, electronic, formal and informal. While some of these relationships take place directly between the two contexts, many of these relations occur through a number of mediating factors.

By exploring these contexts our objectives are:

- Get closer to the interpretations and concepts of each actor involved in the study of education, regarding the notion of impact of research;
- To identify common and divergent points in the interpretation of the concept;
- To analyze different perspectives on the transfer of scientific results at the level of practices and policies.

At the end of the analysis we'll be able to identify the consequences that research has at a researcher level, at an institutional and social level.

II. METHODOLOGY

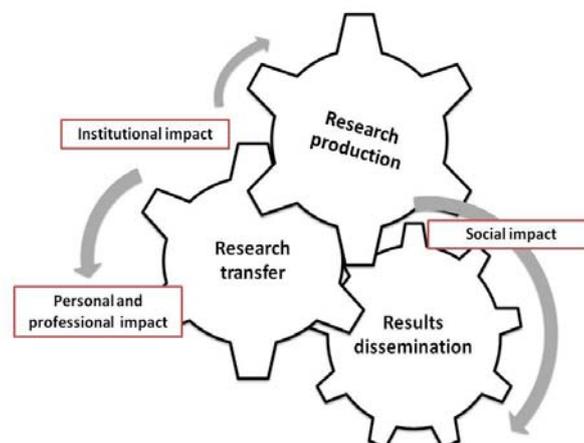**The research impact model is illustrated in the image below:**

Figure 1. Model of the educational research impact

Therefore the model we propose includes three types of fields of analysis, to which we are associating a number of sources of information and techniques for obtaining data. We are situated in the area of scientific production.

We are taking into consideration the people involved in producing scientific research, such as university professors, researchers and students in the final stages of their thesis. On the other hand we are interested to analyze the transfer of research results. In this case we are interested in the opinion of practitioners and policymakers in education. For complete information, the third level is the dissemination of science products, and here the actors involved in providing information are researchers and practitioners in education.

Participants in the study appear in the table below:

Table 1: Participants of the study

Level of impact	Context	Participants involved
Research production	Universities, research centres and groups	Researchers Master and PhD students
Research transfer	Professional associations, schools, etc.	Professionals Personnel involved in decision making
Research dissemination	Universities, Research centres	Researchers, master and PhD students, Professionals involved in the educational field, Mass media professionals

III. DISCUSSION AND CONCLUSIONS

The design impact analysis focuses on several categories of analysis that, together, are designed to provide a complete picture of the concept and how it is interpreted by each of the educational actors.

The main categories which are built around data collection instruments are:

- How is research defined and the interpretation is given based on the analysis;
- Innovations, developments that are implemented at institutional level and that is their source;
- Responsiveness to the research results;
- Responsibility of the scientists for the transfer and dissemination of research;
- The role of different institutions for dissemination and implementation of research results;
- Definition of impact according to the level of analysis or context studied.

The model we propose is in line with other experiences in the area of impact, and bring complementary elements. The impact of research is, according to Backer, (1993) a subset of what is known as transfer research.

This includes dissemination of information under the same author and implementation, innovation diffusion, mass communication and interpersonal, organizational change and improvement, developing programs and policies. General area of research transfer also includes the creation and dissemination of knowledge.

Creating knowledge is fundamental to the impact study. Literature talks about different types of knowledge production: a traditional one (Gibbons, 1994), applied research controlled by the researcher and benefit oriented research.

The model which we propose incorporates the contributions and move forward toward the implication research has on researchers, their institutional and professional context, and on the social level as a whole.

On the one hand it will allow them to understand what the place a role of research in researcher's academic career. On the other hand will provide important data on what is the skills transfer. Another contribution that the concept of impact of research has for educational mangers refers to knowing the perception that both researchers and practitioners have on new ideas and development. This information will allow the guidance of research related policies to those domains that are vulnerable or less visible in the research themes of researchers.

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