

# Problems with the implementation of Research-Based Teacher Education Reform<sup>1</sup>

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*Work in progress*

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## 1. Introduction

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The point of departure of the present paper is that it is generally to be preferred to base policy decisions on available evidence, but also on critical reflection on daily operations. This applies inter alia to the arena of teacher education. But respecting this view is not without problems which must be understood and tackled if the constant reform of teacher education (TE) is to be based on inquiry and evidence.

The present paper argues that there are a number of fundamental problems with the notion of research based teacher education reform, all of which should be addressed by those who want research to make an impact, even if the scope of the problems varies considerably between systems of education.

Some of these might be general problems of research based policy whereas other may be confined to TE. We will briefly refer to a conceptual problem but then discuss three categories of issues, i.e. issues related to the general problem of basing policy on evidence; a family of issues, here called the fragmentation problems and lastly issues that are related to educational issues in particular even though they are certainly to be found in other arenas.

## 2. A conceptual problem – the notion of research

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### Issue 1 The notion of research

There exist generally two very different conceptions of the term research in the context of the idea of research based practice or policy formation. Related to policy development, research based policy is often understood as synonymous with evidence based policy or data driven policy. Research based then means that some research is carried out and some action or policy is informed or based on it. But another interpretation of the terms research based practice would imply practice based on probing, on critical self-reflection; i.e. on what might be called inquiry based practice, in the case of TE perhaps, structural or curricular reform. The former interpretation often seems to be implicit in normal parlance, i.e. the evidence based interpretation but we suggest that the inquiry notion may be as relevant and perhaps as easy to defend. A third interpretation of the move to make any discipline research based is to make its

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<sup>1</sup> The paper was prepared for A TEPE (teacher education policy in Europe) conference in May 2011. Thus the emphasis is on TE but the general argument applies to most educational issues.

content interwoven with research, i.e. the courses taught should have a research component thoroughly characterising all the teaching. With more and more professional disciplines being moved to the university level, the push for their academization, or universitization becomes steadily stronger.

### **3. The general problem of evidence based policy**

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#### **Issue 2**

Various general problems relating research or research evidence and policy abound, but we will largely eschew elaborating on these in general terms even though some will appear in the subsequent discussion. A recent volume (Bridges, Smeyers, & Smith, 2009) on the relationship between policy and research makes the complexity of the issue transparent in its title, *Evidence-Based Education Policy. What Evidence? What Basis? Whose Policy?* All of these problems are important for our discussion. And there are more questions to be asked and we will return to these presently.

But we want to keep in mind some very important aspects of the relationship between practice and policy and maintain that these are issues to be contended with, certainly in education in general and perhaps very directly in TE.

#### **Issue 2.1      General - ethos**

Some policy is driven by various forces within the educational or social systems rather than determined by implicit or explicit policy. There seems to be a general consensus that teacher education should be research based, but it is not certain to what extent that view is driven by informed policy or by critical analysis of the nature of TE or by the very general demand by the university system that every discipline within the system must adopt this stance.

#### **Issue 2.2      General – simple and concrete**

Apparently one facet of policy or rather the political game is that problems must be simplified, so they can be both comprehended by politicians (who have to be active in debates about an enormous variety of issues), and can be couched in a relatively simple language as to make their discussion manageable. The discussion about inclusive education is sometimes couched in terms of the question if special schools should be operated or not and the discussion about the quality of a national school system couched in terms of the rank of the nation in the PISA studies. Those who want to weave together research and policy at a sophisticated level may have to take this reductionist tendency into account.

#### **Issue 2.3      General – different discourses**

Thus academics, who want politicians to respect research and academia, must also respect and understand politicians. The latter have a job and a mission which is different from those of the academic researcher, but no less important. The two worlds must be able to communicate and the onus is probably on the academic to reach out, because of his or her background, understanding and professional obligation and standing. The same applies to a host of other important stakeholders in the educational arena, such as parents, industry and the pupils themselves.

#### **Issue 2.3      General – mechanisms of interaction**

Even if there were no general or conceptual problems with the idea of basing action on research there is a huge practical problem of channelling research into practice. This is acknowledged in

the discussion about the entrepreneurial university, the notion of mode 2 research, the establishment of research parks for the natural or technical sciences and more recently about the triple helix (or quadruple or even ntuple helices). The idea of the triple helix is precisely to foster the interaction between research, government and industry.

#### 4. The fragmentation problems

It is suggested here that the field of education (perhaps TE in particular) has to contend with being fragmented to an unusual degree. Of course most fields divide into subfields. The discipline of psychology, as an example, is divided not only into subfields but must also acknowledge some other division, i.e. into widely different cultures, discourses and research traditions, that cast doubt on the usefulness of treating it as one field. The fragmentation of education as a field is even greater but that of teacher education is different, perhaps not as obvious, but nonetheless a very serious one.

##### 4.1. The fragmented levels of discourses

###### Issue 3 Fragmentation – area, categories, content

When talking about teacher education there are a number of different discourses that must be respected, and these can be described along at least three dimensions, which we here classify as the agency dimension, the categorical dimension and the content or curricular dimension, see Fig. 1. The agency dimension refers to the different agents or players involved in teacher education; the politicians, the civil servants, the teacher unions, the public, the academics and the students. The category dimension refers to different levels of the schools system, for which teachers may be prepared, the different stages in the education or professional training of teachers. The content, setting or curricular dimension refers to the content and structure of TE programme itself.

Agents			Categories		Output and setting			
Stake-holders	Institutions	Groups of teacher educators	School level	Level of education (pre-, in, CPD)	Values	Skills	Setting	Knowledge
Ministries	Universities	Subject specialists	Pre-school	Pre-service	Educational values	Educational skills	Academia	Content knowledge
Teacher unions	Schools of Ed	School teachers	Primary	In-service	Operational values	Professional development	The field	Professional knowledge
Unions of school principals	Departments	Pedagogues	Secondary	Continuing education	.....	.....		.....
Parent associations	Schools		VET	CPD				
			Tertiary					
			Adult					

**Figure 1. The three dimensions of the discourse, agents, categories and content or curriculum. The table is not meant to be exhaustive by any means.**

Thus when we want to move to make teacher education research based, it may be important to note at which vantage point one is standing (who is the agent) and what is the level of the school system (i.e. the category) in question and what curricular issue is at stake. We suggest that this is in some sense obvious to everyone talking about TE, but we also suggest that people tend to

forget this in the discourse and have instead in mind an example or a prototype as a point of departure which governs their discourse.

## **4.2. Who plans teacher education?**

### **Issue 4 Fragmentation – lack of communication between hierarchies**

One problem of basing the formulation of teacher education on research stems from the distance between the researchers on teacher education and the modulators of teacher education, whether these are politicians or institutional leaders. Teacher education is often formulated by ministries, but also by university authorities, who are in many instances far removed from both those who do the research and those who implement it in practice. Thus a crucial question is who are in the driving seat when formulating the format and curriculum of teacher education? And what is their competence to assemble and make use of the available research? What is their expertise and what are their vested interests? A recent study on who makes the decisions in English education, suggests that politicians who apparently decreasingly rely on substantive expertise are very influential (Perry, Amadeo, Fletcher, & Walker, 2010). The concern may also be related to the host of national, international and recently in particular European initiatives in the field of teacher education. A number of groups are working on the reformulation of teacher education, but it is unclear what is the relationship between these groups (which are here assumed to do excellent work) and the national policy instruments, but in particular the institutions implementing these policies.

## **4.3. Fragmentation of cultures of Higher education**

### **Issue 5 Fragmentation – theory or practice**

Another fragmentation concern relates to the different cultures within academia, i.e. the high esteem culture of academic research and the culture of professional training. Heggen, Karseth and Kyvik (2010, p. 58) conclude a chapter on the relevance of research for teacher education by asking for a pragmatic stance from those wanting to relate research and practice of teacher education. They suggest when discussing the differences between professional and academic oriented programmes that

*...these programmes are embedded in different value and reward structures, creating tensions concerning what counts as valuable knowledge and appreciated competencies and skills. These tensions have to be recognised in higher education policy aiming at making research relevant for the improvement of professional education and professional practice (p. 58).*

It is suggested here that the same claim applies to the relationship between research and the reform of teacher education. This is interesting for at least two reasons. One is that we see here a driver of change which in some ways is extrinsic to the programme it is attempting to influence. Thus we see a demand for making research more visible within the field of TE (admittedly within the arena of moulding it) but as the quote suggests also in its *modus operandi*. Thus a huge field within the HE sector is being affected and it may not be clear to what extent it can be justified solely or largely by intrinsic substantive reasons or to what extent it is affected by the general call for stronger research orientation within HE. Thus even if it were concluded that considerable part of teacher education should be pursued out in the schools or in other practical settings or that the students should be preoccupied with other issues than theoretical or purely academic tasks, the prevailing ethos of the universities would push in the opposite direction. The same goes for the teachers in teacher education programmes; they would be motivated or urged to occupy

themselves with academic tasks rather than development of teaching practice in schools, but we must note that there are ways of combining the two (see also 2.1).

#### **4.4. Fragmentation of expertise within the system**

##### **Issue 6 Fragmentation – confined discourses**

A further fragmentation problem related to basing the formulation of teacher education on research stems from the literal or effective fragmentation of the establishment of teacher education.<sup>2</sup> Teacher education is run by a host of often very different interest groups who have very different views of the nature and essence of teaching and thus teacher education. This makes it especially difficult to introduce anything near a coherent influence of research on teacher education. The different expertise stems often from the diverse academic disciplines of the traditional school subjects, of pedagogy, psychology of sociology and even other disciplines. These specialists may not be experts in education nor have training as teachers, nor be experts in the role of their disciplines in the education of teachers. They would in particular not be experts in curricula development which would enable them to become sophisticated partners in moulding the curriculum of TE. To the extent that these experts mould teacher training e.g. with reference to research from their own fields, this might present a very disjointed programme, both in a practical but primarily in an ideological sense. Thus evidence based formulation of teacher education from such fragmented background of expertise would present substantial difficulties. There are arguments that suggest that initial training of teachers should be conducted in close co-operation with schools (i.e. their future working ground), which in turn demands a close relationship between the two, which may in turn accentuate the fragmentation of influences. The dominance of a strong relationship with schools would also be at odds with the notion sometimes held, that the basis of TE should be with academic subject disciplines which of course would plan their course work according to a different agenda from educating teachers.

#### **4.5. Pre-service, in-service or life-long education**

##### **Issue 7 Fragmentation – pre- vs. in service professional training**

An interesting problem of basing the formulation of teacher education on research stems from the confinement of the normalized discussion to pre-service education. Much of the discussion on teacher education in general is confined to pre-service education, whereas it can be argued, the major impact should be on professional development. It is quite clear that the thrust of reports on the reforming of education (Fullan, Mckinsey reports, ...) suggest that changes must be engineered through teachers, i.e. through their professional development and re-education. At the same time most of the discourse on TE seems to be aimed at pre-service TE.

#### **4.6. Various supporting fields and research traditions**

##### **Issue 8 Fragmentation – different research traditions**

One problem of basing the formulation of teacher education on research, stems from the many and very different research fields and traditions within the arena of education which makes a

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<sup>2</sup> The term *literal* suggests here that there are formal or explicit divisions of responsibilities and expertise within the establishment of TE. Effective means that even though there are no formal divisions, they tend to be in practice, large due to different cultures of staff brought up (educated) in different disciplines.

coherent effort to influence the construction of teacher education somewhat difficult. Education is a very heterogeneous area, that is traditionally influenced from many different directions, most notably psychology, sociology and philosophy but also from other fields. These disciplines have adopted many widely differing research paradigms, which are not only very different but also fundamentally at odds. Thus there is a two dimensional problem right from the beginning.

One dimension relates to the issues and the vocabulary that is seen to be important. To take an example, the different perspectives of sociology and psychology are well known within the discourse field of "school for all" or the arena of special education. The psychological perspective typically focuses on the learning problems besetting individual children and how they should be diagnosed and grouped according to their disabilities and then attended to by professional expertise of the highest calibre. The sociological perspective is more concerned with how they become members of a group, how they form friendship and learn to cope with the complexities of society. Thus research derived from these different disciplines may point in very different directions, notably in the field of special education. The issue is then further complicated by adding other disciplines and other perspectives and research based construction of teacher education may become somewhat complex.

The other dimension relates to different research traditions, which need not follow the disciplinary division. There are the analytic traditions of philosophy, and the qualitative and quantitative traditions of the empirical disciplines. These need not point in different directions but the inherent distrust between them may make it difficult to adopt a stance derived from the opposite camp.

## 5. Nature of research into education

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Above we noted the conceptual problems of defining research, but also some difficulties with the idea of deriving policies from research. We will now turn to some of these.

### 5.1. The non-conclusive characteristic of (educational) research

#### Issue 9 Nature – non-conclusive

A problem of basing the formulation of teacher education on research stems from the non-conclusive nature of educational research. This is not a problem when the research is meant to contribute critical, reflective or inspiring perspectives to a discussion on educational development; when it is meant to challenge accepted beliefs, to question time-honoured attitudes or ways of operation, or to spur and inspire new ways of thinking about issues or do things or even to suggest completely new things to do. But it is an old cliché that all research begs more questions than it answers; a researcher always suggests that further research is needed to clarify a number of points raised by the current research even when it gives strong and often apparently conclusive results. The meta-analysis routinely presented in the journal *Review of Educational Research* shows this quite clearly but in contradictory ways. First of all it shows that when different studies are pooled together a general conclusion can sometimes be drawn in the light of a net effect, even though individual studies point in very different directions. Individual studies can thus only be taken as hints even though they are large scale and apparently quite robust. Because of the variability, even though an overall direction is obtained the diversity of results suggests a complication that must be taken seriously. An example of this can be found in

highlights 4 and 5 in the 2010 McKinsey report, where different structural patterns accompanied kindred results.<sup>3</sup>

## **5.2. The pseudo-causal discourse characterising discussion of educational change**

### **Issue 10 Nature – pseudo causal**

One of the most prominent lessons taught in a social science methodology course centres around causality, and in particular how problematic it normally is in the social world to infer causality from strong relationships. Nevertheless examples of this abound, and even though warning lights are flashed by presenters we are still presented with pseudo-causal discourse. Studies characterising nations that perform well or badly on the PISA tests would probably fall into this category, even though the experts themselves would not be guilty of unwarranted assertions. Descriptions of the education systems that do well on the PISA studies abound, often implying the casual factors. As teachers are considered to be perhaps the most important casual agents in education, it is understandable to infer that their basic education might make the most important difference and hence the teacher education programmes of these countries should be emulated. This causal inference is, however, is not acceptable. The executive summary<sup>4</sup> of the recent McKinsey report, is perhaps also a case in point. In some of the conclusions, characteristics of the successful systems are described, implying, but not saying, that if other systems would be changed and adapted to the model systems they would similarly become more successful. That might be the case, but cannot be inferred. In the argumentation it is often forgotten that even though an education system is a huge system, it is still alongside or interacting with other cultures that might be equally or even more powerful. These cultures, and the changes occurring there, might have as much explanatory power as those made in the educational system itself. The present paper does not suggest that system descriptions that are then tied to educational improvement or decline, are at fault, but the implicit causal relationship should always be treated with great caution.

## **5.3. The non-prescriptive nature of (educational) research**

### **Issue 11 Nature – non-prescriptive**

A serious problem with basing the formulation of education on research stems from the non-prescriptive nature of educational research, which partly relates to its non-causal character. The nature of research, in particular educational research does not allow much prescriptive influence or directive, even if it can induce reflection and thus have constructive influence. The notion that research is to a certain extent inherently prescriptive is a part of a fundamental misconception often to be found in the information society, namely that data, information, gives direction for action. Some people think that if they don't know what to do, the best step is to collect some information, do some research, and that will in some way solve the problem. It is perfectly true that often the decisions may hinge on data, perhaps on data that is missing, but obtaining the data does, in itself, not solve the problem, unless it had been decided on other grounds that if the new data showed a certain pattern certain decisions would follow. Thus even when two settings are being compared, i.e. two very different programmes of TE and one is found to be superior on

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<sup>3</sup> See 2010 How the world's most improved school systems keep getting better, [http://www.mckinsey.com/client-service/Social\\_Sector/our\\_practices/Education/Knowledge\\_Highlights/Ho\\_w%20School%20Systems%20Get%20Better.aspx](http://www.mckinsey.com/client-service/Social_Sector/our_practices/Education/Knowledge_Highlights/Ho_w%20School%20Systems%20Get%20Better.aspx)

<sup>4</sup> Ibid.

some clear criteria in a set of studies, it cannot be inferred that one should move from one to the other; i.e. the programme showing superior results on these criteria should be adopted. The criteria being used might be debatable, .e.g. criteria that some people think are crucial were not included, or that for economic, pragmatic or moral reasons one would not want to change programmes. And even though there was no debate at this level, it is easily conceivable that yet other options would be far superior to those being studied, options that were not being considered at the time the study was planned. Data in itself gives far less direction for action than is sometimes thought.

#### **5.4. The inherently conservative aspect of research into practice**

##### **Issue 12 Nature – implicitly conservative**

Yet another problem of basing the formulation of education on research is perhaps the most intriguing and needs to be further explored. The rationale for the argument that research is important for the enhancement of professional practice has two very different types of support, two very different pillars, both have been referred to above.

One is that practice should be evidence based, based on well established or well tried methods or operational environment. This is the evidence pillar and fits with the understanding of evidence based practice accepted in this paper. The other is the inquiry pillar which assumes that research invites critique of established procedures, invites reflection and informed and inspired development. Both sound eminently sensible to the enlightened research oriented academic. But there is a serious catch, however, because this approach invites either a mildly conservative or a very conservative stance, where both pillars may present this problem, the evidence pillar perhaps even more.

This might be clarified with reference to two quite important arenas of education, the curricular arena (or the content or aims of education) and the operational arena (or the methods of education). We can take this to refer to education in general or TE in particular.

The curricular point will be simply put, even though a much more dramatic case could be made. There is a considerable discussion that the 21<sup>st</sup> century demands new skill or competencies; these are often called the 21<sup>st</sup> century skills or the modern key competencies. Most of the discussion about these skills is somewhat speculative, even futuristic even though it is both interesting and well grounded. And the simple question is, in the light of a discussion of evidence based policy: would it be unreasonable to adopt the curricula options often suggested before their application would be well tried and their relevance for the future had been tested? Or what kind of evidence would be needed in order for the new curricula to be introduced? This is particularly relevant for the curricula of teacher education, as teachers have to be educated for the curriculum of the future in a double sense: i.e. they will be teaching for decades, and educating students who have to cope many years, even decades, after their education is completed. When evidence is demanded in this context it is of considerable interest to discuss what kind of evidence would be both necessary and sufficient. Essentially the same points apply to teaching practice; there are arguments that teaching might be done very differently to our current methods, e.g. using extensively the various aspect of the available and foreseeable communication technology. But we still have to ask, what evidence must be accumulated until we can use any new methods?

We suggest three levels of conservatism inherent in the pervious discussion.

Level 1. Most conservative. The evidence requirement. Policy is based on accumulating evidence and no grand scale changes should be made until it had been proven that new context or



methods had been shown to be superior to those already in place. This sets the focus on the present and people get bogged down in current problems to an alarming degree.

Level 2. Less conservative. The inquiry level. Policy is based on reflection about existing practice which constantly suggests various improvements and allows continuous incremental development.

Level 3. Least conservative. The future oriented level. Ideas about the future are being discussed and bold, but solid suggestions about changes are implemented on that basis.

## 6. Conclusions

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We suggest that there are a number of important issues, of various types that should be addressed when arguing for research based teacher training or research based education in general. Many of these issues can be faced and tackled; they should not be shunned. Pushing them aside would lead to intolerable confusion and it would be to the detriment of the development of education. Thus we must work at refining our discourse; we must be meticulous in defining and moulding both the general and academic discourses. And we should also be quite precise about the terms we use: in the normal parlance about research-based TE; perhaps the term *based* is the most problematic? We should be very precise about how we use all these terms, but also when considering what other terms we might put in their place. I suggest that perhaps we might talk about evidence or research *inspired* policy concerning education in general or TE in particular? The evidence may suggest directions or warn that some present practices are ill advised, or open up new venues for contemplation or experiment, it does not determine in which direction to go, and cannot in that sense be a ground on which the policy is based. But then we have to go through the problem of delineating what is meant by inspire, as well as evidence, research and policy.

We stress that all these issues and arguments need still to be considerably developed.

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