

## Why is educational change so difficult and how can we make it more effective?

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### Abstract

One main issue in educational research and policy is educational change. Educational authorities, scholars and teachers working with educational change should ask themselves why educational change is necessary, reflect on its challenges and find ways to make change more effective. This theoretical article explores educational change by starting with the most essential questions, asking what educational change is and why it is necessary. By taking a look at the history of educational change and the processes involved when conducting educational change, grounded in empirical examples from large-scale studies and curriculum development in the Nordic context and educational assessment in England and Scotland, this article contributes to shedding light on the complexities of educational change policies and school-based research projects. The article concludes with various factors that have proved to be effective in the field of educational change.

### Keywords

School development, school improvement, professional development, educational assessment, curriculum development.

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## Introduction

All of us have a relationship to change; either we have tried to change others or ourselves. Change can succeed or fail, it can be good or it can be a disaster, it can make us feel incompetent or it can make us feel mastery, we may want to change or feel resistant to change. An increasing number of educational policies aim at improving education, with students' learning and development as the ultimate goals. There is a lot of literature on educational change, and this theoretical article contributes to the field by answering the questions of what educational change is, why it is so difficult and how we can make it more effective. Recent research literature and the most cited works concerning educational change are reviewed and related to empirical examples of recent educational change initiatives based on large-scale studies of educational assessment in England and Scotland, and on curriculum development in a Nordic context. The empirical examples are selected according to the author's research interest and areas of expertise. England and Scotland are chosen as relevant contexts for large-scale studies of educational assessment, since they can be said to be the hub of educational assessment, spreading research and development ideas post Black and Wiliam's review article on formative assessment (Black & Wiliam, 1998).

The question about the difficulties of educational change and how to make it more effective contains the underlying assumptions that (a) educational change *is* in fact difficult, and that (b) educational change *is* a necessity (hence the desire to make it more effective). Thus, this article argues *for* educational change. However, not all changes are for the better. As pointed out by Biesta (2010), what is fundamental is the normative and political question about the quality of change, rather than merely focusing on change for the sake of change. Schools are accountable to policymakers, parents, students and local communities, and should act on the basis of informed professional judgment, discussing the significance of various kinds of information and how they can be used to make positive changes (Earl & Katz, 2006).

## What is educational change?

Educational change aims at school improvement in one way or another. School improvement is closely linked to the professional development of principals and teachers (Postholm, 2012; Timperley, 2008; Timperley, Wilson, Barrar & Fung, 2007). The ultimate goal for school improvement is the improvement of student learning, learning conditions and/or learning processes (Hargreaves, Lieberman, Fullan & Hopkins, 1998). In the literature, the term 'student achievement' is commonly used, but in this article, 'improvement of the education of students' is preferred, since it better captures the more complex and broader picture of educational instruction than do 'learning' or 'student achievement', as also pointed out by Biesta (2010, p. 18ff). The term 'student achievement' is, at least in a Nordic context, often associated with competence aims in the various subject curricula, or how students perform on tests.

Two oft-cited and influential scholars in the field of educational change are professors Michael Fullan (Fullan, 2007, 2008) and Andy Hargreaves (Hargreaves, 2009; Hargreaves & Fullan, 2012). Hargreaves is also the founding editor of *Journal of Educational Change* and the co-founder and director of the International Centre for Educational Change in Canada. Fullan and Hargreaves' message highlights the importance of honouring and improving the profession of teaching in order to achieve effective school improvement. At the heart of their concern for effective educational change is the crucial role school leadership plays, building a shared vision and collaborative environments for development and learning in and across schools (Fullan, 2007; Harris et al., 2002).

Fullan (2007) operates with three dimensions of educational change. The first one, which is also the most visible one, is when new or revised materials are introduced, such as curriculum materials or technologies. The second one, which is more difficult to implement, is new teaching approaches, that is, teaching strategies or activities. Finally, the third dimension, which is the most difficult one to employ, is changing people's beliefs, for example, assumptions and theories underlying particular policies or programmes. All three dimensions are necessary to achieve what Fullan calls 'real change'. There can be little change if new materials are introduced without being followed by new teaching approaches, or if changes are articulated in terms of beliefs and values without actually understanding their implications for practice (Burner, 2015).

International and national perspectives work together to form policy and practice. However, not all changes are for the better. Take educational student assessment as an example. International tests such as the Programme for International Student Assessment (PISA) and national tests that test students' skills in Reading, Mathematics and English, for example, have an undeniable impact on schools. Since the turn of the millennium, these high-stakes tests have improved schools, in that more focus has been directed towards improving the skills that are tested. In addition, for the first time in history, international tests have enabled reliable comparisons of students' test results across countries. On the other hand, the same focus has had a negative wash-back effect on schools, commonly referred to as 'teaching to the test' (Zhao, 2011). Other, sometimes more important skills, are then not dealt with in the same manner since they are not tested – for example, listening skills (the skills most used by humans), or intercultural skills, which are highly relevant in our increasingly globalised world (Miller, Kostogriz & Gearon, 2009). Politicians and the media sometimes misuse test results by not taking into consideration the premises and the intentions behind such tests (Biesta, 2010). Thus, these high-stakes tests eminently illustrate the fact that changes occurring in education can be positive or negative. As pointed out by the International Centre for Educational Change, whether any particular educational change is good depends on what it is, how solid its base is, who benefits from it and how well it is managed.

In the following, the need for educational change will be explained before taking a closer look at why educational change is often very difficult and, finally, how to make it more effective.

### Reasons for educational change

Times change and the ways we teach and learn change accordingly. In his book, *Good Education in an Age of Measurement*, Biesta states that “[w]hile there is a lot of change and innovation going on at classroom, school and policy levels, the focus is often more on the *how* – “How can we introduce these new ideas in the classroom?” – than on the *why* – “And why should we actually do this?”” (Biesta, 2010, p. 3). There are at least three reasons why educational change is necessary: increased globalisation, advancements in technology, and developments in research into teaching and learning approaches. Increased globalisation leads to a more culturally and linguistically diverse population (Miller et al., 2009). Education has to meet the needs of the globalised classroom. Advancements in technology lead to new ways of doing, learning and to new types of knowledge. It is increasingly difficult to predict what type of businesses will emerge in the job market of the future. Thus, what is required are unique talents, skills and knowledge, the ability to adapt to changes and creativity, – and of course educational change that aims to cultivate this diversity and encourage students to pursue their strengths (Zhao, 2011). Developments in research lead to increased knowledge about the effectiveness of teaching and learning approaches. An example from the field of educational assessment is Black and Wiliam’s seminal review of formative assessment in 1998. Since this review, educational authorities and schools have seen the importance of shifting focus to what is called ‘assessment *for* learning’. There have been, and still are, numerous international, national and local projects aiming to link assessment and learning more closely. Klenowski and Wyatt-Smith claim that teachers need to be ‘assessment literate’, meaning they should have a repertoire of skills and understanding to design high-quality assessments that serve the changing needs of a more culturally and linguistically diverse society (Klenowski & Wyatt-Smith, 2014). However, any school teacher or researcher conducting school-based development work will agree that educational change, despite its necessity, is often very difficult. In the following, some reasons for this difficulty will be discussed.

### **The difficulty of educational change and lessons learned from large-scale studies**

Timperley and Parr (2005) point out that educational change, whether it involves policy or what goes on in schools, often fails to achieve the desired impact. Why is that the case and how have initiatives for educational change developed over time? Looking back, we can learn from educational change initiatives in the past in order to shape the future. Great intellectuals of the progressive education movement, most notably the American psychologist, philosopher and educationalist, John Dewey (Dewey,

1916/1997), were preoccupied with educational change. In his *Democracy and Education* from 1916, Dewey claims that:

A curriculum which acknowledges the social responsibilities of education must present situations where *problems are relevant to the problems of living together*, and where observation and information are calculated to develop social insight and interest. (Dewey, 1916/1997, p. 107, my emphasis)

Thus, already more than 100 years ago, he argued for the importance of relevance, inquiry and reflection for educational change. However, attempts at change have been on a small scale and there have neither been systematic evaluations nor a research field covering educational change to shed light on the difficulties of change.

According to Fullan (2007), the history of *intensive educational change* goes back to the 1960s – a decade that witnessed large-scale reforms but which did not pay sufficient attention to the culture of schools. An evaluation known as ‘The Coleman Report’ concluded that the family background of students plays a much more important role than earlier beliefs in terms of success in school, meaning that schools can do little to alleviate social inequalities among students. Researchers were puzzled by the fact that schools are so different despite similar populations, curricula and locations. As a result, schools were considered to have their own culture (Lieberman, 1998). Thus, the focus shifted to innovative schools in the 1970s, but the innovations turned out to be sporadically placed. Implementations were adopted on the surface – and not put into practice. Growing internationalisation led to large-scale accountability reforms in the 1980s which did not pay enough attention to what was needed to achieve change (Fullan, 2007, p. 9). The 1990s is described by Fullan (2007) as the decade of pressure and support. He exemplifies this with the case of England, where a few core areas were prioritised in the National Literacy and Numeracy Strategy (NLNS). Instructional materials, external inspections and so-called change agents were used at all levels of education. Even though the efforts made in England have received considerable critique, along with increasing emphasis on standards and target-setting worldwide (Biesta, 2010; Gardner, 2010; Sugrue, 2008), proponents could refer to a 15% improvement on national assessments in literacy and numeracy, which – to use Fullan’s words – can be described as an ‘impressive accomplishment’. The focus at the turn of the millennium shifted to the so-called core subjects, the development of centralised curriculum standards and the use of high-stakes testing to enforce standards of core academic subjects (Zhao, 2011). Thus, change towards a more centralised curriculum, meaning that the government and ministry of education prescribe what students should learn – as in Korea, Singapore and Scandinavia – has gained momentum in countries that traditionally have had a decentralised curriculum, like the US, Canada and Australia. Even though change may seem effective through standardisation, it is not. As argued by Zhao, what we need is change for diversity in a diverse world, not sameness (Zhao, 2011):

A child who may be extremely talented in art but cannot pass the reading test at the time required by the government is deemed inadequate. A child who can write very imaginative essays or fiction but cannot write the way standardized tests prescribe is also deemed inadequate. A child who does not have strong home support and does not arrive in school with the same set of skills and knowledge as her classmates is also considered at-risk, while she may just need a bit more time. These “at-risk” children are then forced to fix their “deficiencies” instead of developing their strengths. As a result, other talents are devalued, suppressed, and left to wither. (p. 273)

In sum, there have been various attempts at change and innovation since the beginning of intensive educational change in the 1960s. However, the attempts have been rather unsuccessful when it comes to implementing and sustaining change that caters for the local and global needs of education.

One of the main challenges of change, according to Hayward (2010), is to sustain change on a broader scale, beyond that of individual teachers. In the book *Developing Teacher Assessment*, she describes two models of dissemination: a traditional one called ‘transmission’, based on a belief that change happens through the dissemination of information; and a recent model called ‘transformation’, which is more complex and more collaborative. In the following, the focus will be on a few large-scale assessment studies that have been launched, implemented and evaluated in the wake of Black and Wiliam’s review of formative assessment in 1998 (Black & Wiliam, 1998), and which have used a transformation model to implement and sustain changes. Black and Wiliam’s review provided solid evidence of the positive effect formative assessment has on students’ learning and learning processes, and has had great influence on assessment policies and practices in various countries, not least in Scandinavia. By taking a look at formative assessment studies that have been evaluated, we can learn to what extent educational change has been successful and *to some extent predict* how we can make it more effective. It is important to emphasise this ‘to some extent predict’, since education is highly contextual and the future will always stay unknown. Three large-scale educational assessment studies will be used in the following to understand which factors impeded or enhanced educational change initiatives.

### Example 1: Assessment 5-14 and Assessment is for Learning, Scotland

According to Hutchinson and Hayward (2005), the Scottish programme, *Assessment 5-14*, lasting from 1991 to 1999, had failed in several respects because of the influence of accountability – questioning the idea that measuring standards in themselves served to improve student learning (colloquially known as ‘weighing the pig doesn’t make it fatter’), plus a lack of understanding of the processes of change and the separation of curriculum and assessment. It was followed by the Assessment is for Learning (AifL) programme from 1999 to 2005, which aimed to enhance formative assessment

in schools. In this programme, all major stakeholders at local and national levels were involved: organisations, policy-makers, researchers, parents, students and practitioners. The collaborative, project-based approach led to an increased involvement of schools and educational authorities but, at the same time, there was a danger of losing sight of the unity of the programme (Hutchinson & Hayward, 2005, p. 236). Black and Wiliam's study, as well as research and practice relating to learning portfolios in Finland and Queensland, Australia, were important sources of inspiration and justification in the project. Some factors that made the project successful were honesty about the difficulties of change and trust in the professional development of teachers. The main challenge was to reconcile the accountability test regime with formative assessment.

### Example 2: The Learning How to Learn project, England

Another project is The Learning How to Learn (LHTL) project, which involved 40 schools, over 1,000 teachers and 4,000 students in England, and had as its ultimate goal the learning autonomy of students (Marshall & Drummond, 2006; Pedder & James, 2012). The teachers in the project faced difficulties because they were attempting to change classroom cultures using formative assessment strategies. Only about 20% of the observed lessons could be identified as capturing the *spirit* of formative assessment, rather than – to use Marshall and Drummond's words – 'only the "script" of it'. The conclusion was that changes are not merely a collective responsibility but also the responsibility of each student and each teacher (Pedder & James, 2012).

### Example 3: The King's Medway Oxford Formative Assessment Project, England

A third project aiming at change is The King's Medway Oxford Formative Assessment Project (KMOFAP) (Black, Harrison, Lee, Marshall & Wiliam, 2003), which also provided insight into the Scottish project Assessment is for Learning (AifL). The Medway Oxford project was a direct application of Black and Wiliam's influential review of the potential that formative assessment has for student learning and learning processes. The project started in 1999 and ended in 2001, involving 24 science and mathematics teachers in six secondary schools. The aim was to investigate how the research findings from the review (Black & Wiliam, 1998) might be realised within the normal constraints of curriculum and external testing. Teachers, senior staff, local education authorities and researchers from King's College were all involved. The teachers were involved in planning the design for the implementation of ideas from the review of formative assessment. The conclusions from the study were that support is needed when teachers are to transform research results into new and effective practices, particularly from the school leadership or head teachers, and that changes occur slowly; for example, halfway through the study, there were only small changes in the way teachers practised formative assessment. Even though the small changes might have

seemed significant to some teachers, others might have been tempted to conclude that the study had been unsuccessful and, in the worst case, give up. However, the changes became more visible as time went by. Further conclusions were: that teachers follow different trajectories of change and have to find their own ways through problems; that not every teacher travels the same distance; that insecurity is a natural part of change; that the students need support as they learn to become more active and responsible learners; that parents have to be consulted so that they understand the effects of change on their children; that teachers' reflections need to be structured (for example, in workshops or journal diaries); and that changes should start on a small scale with a few groups before they are scaled up to whole departments or schools. In addition, in contrast to the need expressed by teachers of a recipe for how to change, something that researchers working with development work in schools may experience, the researchers concluded that:

We do not think such wholesale and lasting changes would have occurred if we had been able to provide recipes for successful lessons. The changes in beliefs and values are the result of the teachers casting themselves as learners and working with us to learn more. (Black et al., 2003, p. 98)

In sum, educational change initiatives need to be evaluated carefully and systematically, in order to provide insight into factors that are in the way or make change difficult and factors that lead to qualitatively more effective change. The next section attempts to point out the latter factors by also including empirical examples of curriculum development in a Nordic context.

### **How can educational change become more effective?**

Fullan reminds us that 'The interface between individual and collective meaning and action in everyday situations is where change stands or falls.' (Fullan, 2007, p. 9) Thus, we need to understand that educational change is highly complex and involves various stakeholders. In one of the very few studies using Cultural-Historical Activity Theory (CHAT) to investigate formative assessment (Burner, 2016), the complexities were the driving force of development. The argument from CHAT is that the activity system is a suitable way of studying educational change, since it is dialogue-based, emphasises the collective and the individual, the historical and the situational, and makes use of tensions and contradictions to address changes. During the processes of change, tensions and contradictions are the rule rather than the exception and in order to make change more effective, the tensions and contradictions have to be used as an asset rather than a hindrance.

In line with Dewey's philosophy of education, it should be noted that research can only supply us with hypotheses. Research cannot give us the definite answer as to how



educational change can be made more effective, but it *can* give us some hypotheses as to what has worked in certain contexts. Drawing on the large-scale assessment studies mentioned above, the factors that *can* make educational change more effective will be discussed in the following. These are factors that seem to strengthen the implementation and sustainability of educational change.

Ongoing professional development for teachers and leaders of teachers that is collaborative and incorporated into teachers' schedules is one factor. Some countries are better than others at integrating the professional development of teachers into their teaching schedule: Belgium, the Nordic countries and Singapore, for example, as opposed to the US – as reported by Darling-Hammond's research (2009). Time for reflection on changes is a crucial factor for embedding and sustaining developments (Harlen & Hayward, 2010). Inquiry-based approaches focused on classrooms and classroom practice, for example, action research and action learning can be effective ways of bringing about educational change (Earl & Katz, 2006; Pedder & James, 2012; Timperley, 2008). In these approaches, practice is the starting-point for change and it is questioned and scrutinised by the practitioners. Recently, teacher leadership has been found to be an effective contributor to educational change. Teacher leadership is site-based and ongoing and has as its goal to lead professional development work, ultimately enhancing the practice of other teacher colleagues (Conway & Andrews, 2015; Poekert, 2012). Basically, leaders of teachers are school-based professional developers. Timperley suggests that teachers ask themselves questions similar to those asked in formative feedback practice: 'Where am I going? How am I going? Where to next?' In this way, she says, teachers develop self-regulatory enquiry skills for sustained development (Timperley, 2008), which are crucial when developmental studies end and, for example, researchers withdraw from the field of practice.

Instead of pushing change all the time, we need to be pulling change, which means drawing people in to what interests them and challenging them through leadership. Core ingredients in pulling change, as found in good examples from Canada, Finland and Queensland, Australia, are: collective responsibility, testing a bit but not too much and trust (Hargreaves & Fullan, 2012). It is important to acknowledge the subjective sides of change, like ambivalence and uncertainty, and also the following: that when change works, it leads to a sense of mastery and professional growth; that all the three dimensions of change mentioned earlier – materials, teaching approaches and beliefs – have to be addressed; and that 'change agents' are humble, not thinking or giving the impression that they know the 'right' answers (Black et al., 2003; Fullan, 2007; Timperley & Parr, 2005). Furthermore, we need a focus on acknowledging that teachers need motivation and justification to change (Fullan, 2007; Harlen & Hayward, 2010). As spelled out by the team behind the Medway and Oxford Formative Assessment Project, '[f]ew of the changes introduced for school improvement have such compelling research evidence in their support as does formative assessment.' (Black et al., 2003, p. 103). Educational change needs to be justified, as does any other kind of change, so

that those who are going to change will see the relevance of change. A couple of examples from curriculum development in the Nordic context may exemplify the point about relevance – or the lack of relevance – of educational change.

#### Example 4: Curriculum development in the Nordic context

In Norway, teachers frequently complain about trends that require them to change. It is no wonder if some of them reject change when ‘next year’s new ideas’ are introduced. In 2006, the most recent curriculum in the Norwegian school (Ministry of Education, 2006) introduced five basic skills that were to be implemented in and across all subjects: reading, writing, speaking, numeracy and ICT skills (Norwegian Directorate for Education and Training, 2012). Almost ten years later, the government-initiated Ludvigsen Committee (NOU, 2015: 8), aiming to define a construct for students’ future competences, suggested that numeracy and ICT skills should no longer be part of these basic skills. The committee claims that numeracy skills are part of the subject mathematics and that ICT skills should be integrated into the subjects rather than being considered as a basic skill across subjects. In English as a school subject, for example, there has been considerable confusion about the relevance and the didactic implications of numeracy as a basic skill. It could be argued that the justification driving the designers of the curriculum has not been good enough for practitioners. The average performance of Norwegian students on international tests, such as TIMSS (Trends in International Mathematics and Science Study), has not been convincing enough for practitioners. This is only *one* of several cases in which ideas for educational change have been top-down and not well justified, underlining the importance of justification, which in turn can lead to increased motivation for change. Initiators of change should start where the people who are going to change currently are, pay attention to the political and emotional background and the educational context, and involve various stakeholders (Hayward, 2010; Hayward & Spencer, 2010). For example, in Finland, teachers create the curriculum *together*.

In the case of assessment, there may be tensions between quantitative accountability-driven systems with frequent testing and ongoing, qualitative assessment for learning systems (Hayward & Spencer, 2010; Klenowski & Wyatt-Smith, 2014). These tensions have to be addressed in terms of the various stakeholders, as illustrated by the formative assessment studies mentioned above. Students are one of the stakeholder groups. Seeing students as partners in change, as proposed by Hargreaves and others, is crucial to make educational change more effective. This breaks with the traditional view of students as *targets* of change (Zhao, 2011). Instead, students are invited to co-construct what it is important to do and to know. The idea is very much in line with student-centred learning, taking diversity seriously by respecting and acknowledging the strengths of every student.

Timperley and Parr (2005) report from a large literacy project in New Zealand and one important factor they mention is a shared understanding, between the initiators

and the implementers of change, of the problem the change in question is going to address. They also mention the importance of an agreement that change is possible or, at least, that there is some merit in trying. This means that sufficient time should be spent on justifying change.

### Concluding remarks

This article has explained the nature of educational change and has also addressed the question of why it is so difficult to change and how to make changes more effective. The article is by no means exhaustive but serves as a contribution to the field of educational change by scrutinising the term, its historical roots and its justifications. Furthermore, the article uses four empirical examples to underpin and understand a number of factors that seem to be successful in making educational change qualitatively more effective. These factors are: honesty about the difficulties of change; trust in the professional development of teachers; insisting not merely on a collaborative journey of change but also on an individual one, involving each student and each teacher; ensuring support during transformations (particularly from the leadership); acknowledging different trajectories of change and including parents by explaining to them the nature of change and its effects on their children; starting with small-scale change and then scaling up; accepting insecurity/tensions/contradictions as natural elements of change; spending sufficient time in reflective environments to justify change and to obtain a shared understanding of change. Thus, educational change *can* become more effective, in order for education to better meet the needs of the world outside school, and allowing policy, practice and research to become better aligned. However, it should be noted that professional practice is in the nature of a hypothesis and, thus, has to be formed, developed and tested continuously (Biesta, 2010). Thus, educational change is complex and contextual. There are so many different parts that have to work together to make it effective. One last point that should be made is that education forms people, who in turn form the world around them. There is a linear aspect to the title of this article: educational change has been treated as the object, and ‘we’, the subject, can make *it*, ‘educational change’, more effective. But ‘we’ are also an object, being affected by the subject ‘educational change’. Thus, the relationship between education and people is mutual and circular rather than linear. Nelson Mandela’s famous words, reminding us of the power education has on its surroundings, make it clear why educational change is so important and needs further research to develop and become even more effective: ‘Education is the most powerful weapon which you can use to change the world.’

### About the author

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