



## **Five dimensions to study teacher education change for improving musical creative learning**

## **Cinco dimensiones para estudiar los cambios de la educación del maestro para mejorar el aprendizaje creativo**

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**Five dimensions to study teacher education change for improving musical creative learning<sup>1</sup>**

**Cinco dimensiones para estudiar los cambios de la educación del maestro para mejorar el aprendizaje creativo**

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**Resumen**

El lugar concedido a la creatividad musical en la formación docente necesita un intenso diálogo entre el mundo de la práctica y la investigación para responder a la constante evolución de los campos educativos, artísticos y culturales. ¿Cómo podemos desarrollar ciertas condiciones favorables para mejorar el aprendizaje creativo de la música? ¿Cuáles son las dimensiones que deben tenerse en cuenta para mejorar las prácticas de enseñanzas innovadoras y creativas en el contexto de la formación docente? En esta reflexión sobre mis diferentes trabajos de investigación, exploro cinco dimensiones de la práctica y la investigación que deberían tenerse en cuenta para mejorar y desarrollar la educación musical creativa. En primer lugar, me referiré a la creatividad como aspecto importante de cambio en reformas educativas, o como innovación pedagógica. Considero las reacciones de los docentes tanto como una predicción de sus acciones que como sus propias representaciones y acciones en el proceso de cambio (actos, roles y conocimientos profesionales). Examinó las interacciones o relaciones entre los individuos y los grupos en la formación profesional del docente. Y, por último, me referiré a las formas de contribución al cambio (adaptación del docente, sus actividades y sus prácticas con fines educativos).

**Abstract**

Today, creative pedagogical practices in Music Teacher Education need an intense dialogue between the worlds of practice and practice research in order to respond to constantly evolving educational, artistic and cultural needs. How can we develop favourable conditions to improve the creative learning of music? What are the dimensions that should be considered to improve creative and innovative teaching practices within the context of Teacher Education? In this reflection, I explore five dimensions of changing practices in teaching aimed at improving and developing creative music education. First, I will discuss creativity as the purpose of the change as educational reform (curriculum) or as pedagogical innovation. I will consider teachers' reactions to change as a prediction of acts or representations of actors and their action in the process of change (acts, roles and skills). I will examine the interaction or relationship between individuals and partnerships for training and developing professionals. And finally, I will discuss the forms of contribution to change (teacher adaptation or adjustment activities or practices for educational purposes).

**Palabras clave**

Colaboración creativa; Formación docente; Cambio docente; Reforma educativa; Creatividad musical

**Keywords**

Creative collaboration; Teacher education; Teacher change; Educational reform; Musical creativity

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<sup>1</sup> This text is inspired by the different analyses developed in my current research and after my text: Giglio, M. (2012b). Epilogue : Cinq dimensions pour l'étude des changements éducatifs : entre innovations et réformes. *Entre innovations et réformes dans la formation des enseignants. Actes de la recherche de la HEP-BEJUNE*(9), 183-189.

## **1. Introduction**

To study an object of research which has not been explored in depth, such as musical creativity in the Teacher Education, we can use concepts that have meaning in the field in which they are initially (or mainly) involved. Our attempt cannot avoid responses overflowing their conceptual framework (individual creativities, creative practices, creativity in scholar contexts, in Teacher Education...). This reflection can be interpreted as the result of my reflection based on my research projects conducted over the past six years on creative teaching and the impact of educational reform in teaching and teacher education in Switzerland. Analysing our studies and different research from various colleagues (Giglio, 2012b), I have noticed that all studies had common dimensions of teaching change. In each study, some dimensions have more emphasis than others. But these dimensions are meaningful for understanding aspects of educational reforms and innovations in teacher education. In this chapter, I analyse the current context of teacher education, the role of creativity in educational innovation and Swiss Educational reform and then try to re-examine the dimensions of my studies on creativity and teaching changes.

## **2. Creativity and teaching change: five dimensions**

We will consider five dimensions for study teaching change. First, we will begin by discussing creativity as the purpose of the change, either as educational reform (curriculum) or as pedagogical innovation. As professional reactions, actions and interactions, we will consider teachers' reactions to change as anticipations and representations of actors and the action in the process of change which roles and skills of the teachers. We will examine the interaction or the relationship between individuals and partnerships for training and developing professionals. And finally, we will discuss the forms of contribution to change (teacher adaptation or adjustment activities, practices or technological resources) in educational purposes.

### **2.1. Creativity as the purpose of the change**

According to consensual definition of creativity of Amabile (1996), a musical production will be judged as creative to the extent that it is both novel and appropriate to the task; in relation to their specific field (Gardner, 2001; Mayer, 1999). Creativity is a transformation during a process that involves playing, imaginations, fantasies, emotions, meaning and cognitive symbols (Vygotsky, 1925/1971; John-Steiner, Connery, & Marjanovic-Shane, 2010). As a general domain or a specific musical domain, research about creativity must consider different musical creative practices and be linked to other "cross-domain": collaboration, communication reflection. On the one hand, Burnard (2012) shows how musical creativity manifests itself in real practices in the contemporary practices of originals bands, singer-songwriters, DJs or interactive sound designers, among other practices such as listening to music as a creative act. On the other hand, inspired on recent studies (Burnard & Younker, 2008; Miell & Littleton, 2008, Moran & John-Steiner, 2004; Sawyer, 2008; Young, 2008, and other...), our studies show that collaboration is very linked with creativity due to the relationship that evolves between individuals with a common purpose of producing music (improvisation, composition, or arrangement) through certain ideas and shared understanding of something new and a common goal: "creative task and learning" or, most of the time, "creative task without learning" (Giglio, 2010; Giglio & Perret-Clermont, 2010). Teachers need to address a completely different task to try to encourage creativity and learning in their pupils (Vygotsky, 1925/1971; 1930/2004; 1931/1994). Recent Educational reforms in Switzerland, as well as other countries, have associated practical and academic innovations and cross-curricular competencies such as students' productive, collaborative, communicative, creative and reflective practices... These innovations and competencies proposed to children learning in the curricula and it's a challenge for students, teachers and teacher educators. During some creative acts, a student can admit that his or her idea was not necessarily the only possible one. Different researches on the socio-cognitive conflict show that, interacting, novices are likely to learn by creating new knowledges, under certain specific conditions (Perret-Clermont, 1980; Ames & Murray, 1982; Doise & Mugny, 1981; Schwarz, Perret-Clermont, Trognon, & Marro Clément, 2008; Littleton & Howe, 2010). Moreover, some creative acts can remain at "conflict" or unsolved as such but worked around in order to reach the goal: a common creative music (Giglio & Perret-Clermont, 2010). In this sense, we consider that making creative music is not automatically learning music if there is not a "community of mutual learners" as (according to Brunner, 1996) the modes ways of doing and thinking. The teacher has an important role in building and supporting a space which is conducive to creating music and learning about music. However, several studies (Cattonar, Lessard, Blais, Larose, Riopel, Tardif, & al, 2007; Lenoir, 2006; Lenoir, Larose & Lessard, 2005) show that through the introduction of educational reforms, a

difference between the adherence of the teachers to the reforms and their teaching practices can arise. These contradictions can cause a "fundamental breakdown" (Lenoir, Larose, Deaudelin, Kalubi, & Roy, 2002) or a "hiatus" between representations and practices (Berman, Hultgren, Lee, Rivkin, and Roderick, 1991; Giglio, Melfi & Matthey, 2012).

## 2.2. Reactions, action and interaction in the process of teaching change

Research on creativity sheds light on the various dimensions of change, with some nuances that I intend to develop. What differentiates innovation from educational reforms is that innovation can emerge from the actors while educational reforms emanate from authorities and governments and involve fundamental changes in the policy guidelines of the school and teacher education (Cros, 1996). Different studies on creativity become educational reforms or innovations and they are viewed as a change by the teaching community, i.e. as a transformation of practice or as a transition from one state to another. For example, exploring the *Twenty First Century Competencies*, which are necessary for thinking differently about our current educational system to ensure creative futures, McWilliam (2008) shows that creative workplaces are very significant for student learners, with implications for employers and also employees. It is with a creative workforce that we can build learning environments in educational situations in real and credible ways.

Two levels are placed in a *Systematic Teacher Exchange Process* according to the literature review conducted by Virginia Richardson and Peggy Usher: the teacher feels these educational changes at an individual level as well as an organizational level at the heart of perceptions, practices, professionalization and training of teachers. Many changes in the artistic, scientific and industrial contexts advise modifications with adult creativity in educational and institutional organisations with general and social factors (Amabile, 1996). With different uses, and different constraints, it might appear likely to teacher educators that the challenge of change will lead to more creativity in their professional work. Teacher change is described in terms of "learning, development, socialization, growth, improvement, implementation of something new or different, cognitive and affective change, and self-study" (Richardson & Placier, 2001, p. 905). In this sense, we consider the creative teaching change as learning and implement the new teaching practice for improve learning in the creative setting.

Teaching music is influenced by the characteristics of teacher educators, by the nature of the work they do the teachers, and by how they are prepared for teaching.

## 2.3. The forms of contribution to creative teaching change

The systematic program of research about the social psychology of creativity by Dean Keith Simonton (1977; 1997) shows the potential influences of history, culture, society, and biographic conditions on creative production. But maybe, vice-versa, creative experience in Teacher Education can have potential influences on the biographical situations of the students, on the circle of musicians and music education teachers from the institution (workplace) and consequently in society, and also in the historical and socio-cultural evolution. For example, McDruy and Alterio (2003) propose a reflective process to improve practices by identifying links between learning and storytelling:

*Through these connections we construct new knowledge and advance our understanding of the relationships we construct and are constructed by. For these reasons we're convinced that storytelling can, and should, be viewed as a theory of learning. (p. 172)*

Olsson (1993) emphasises the impact of institution on social influence and control. In the teacher's perspectives of Olsson (1997), we can think that creativity in the school can have an impact with informal and implicit rules considering attitudes towards and skills to make creative music. Creative and informal rules can constitute a source for social influence as well as powerful inspiration rules regarding musical, artistic and socio-cultural creativities in constant evolution. In these perspectives, we must develop innovative pedagogical sequences to offer students opportunities for agency, collaboration and creativity in their learning environment; to offer teachers and researchers opportunities to observe how trainee teachers (in the Teacher Education) and pupils (in context of schools) react and learn in pedagogical sequences; to give teachers and teacher educators opportunities to contribute to scientific research investigating teaching-learning processes.

### **3. Three studies on creative teaching and teaching change**

In this section, we will re-examine three studies under these five dimensions. We will start with a description of our Swiss and institutional context. Then, we will start with the studies, which are a pedagogical sequence development to be observed later. Finally, two studies re-examined representations of trainers and teachers with curriculum change in Swiss and changes to teaching. In Switzerland, over the past two decades, the socio-political tendencies have altered the environment of Education in Switzerland. Two types of institutions have been created: the Hautes Ecoles de Musique (for the professional musicians and vocal/instrumental pedagogy) and the Hautes Ecoles Pedagogiques (Universities of teacher education for primary and secondary music education teachers). Therefore, higher music education for teaching in primary schools is separated from Higher Music Education for professional musicians. The new vision of the schools music program [Plan d'études romand] for French-speaking cantons introduces creativity as new cross-curricular competencies and new cross-musical expertise. In this context, teacher education must provide training on new cross-curricular competencies focusing on creativities linked with the other cross-curricular competencies such as communication, collaboration, critical sense, and meta-cognition of the students. Consequently, creativity has a very important role in the curriculum of teacher education.

In our institution Haute Ecole Pedagogique BEJUNE (HEP-BEJUNE), music teachers for primary school teachers are generalists. This leads to different approaches, which at the same time provide content for musical creativity, knowledge of pedagogical situations, creativity in the classroom, and creative teaching, learning and assessment. We will discuss three approaches to musical creativity that students take during their teacher training at the HEP-BEJUNE. During the first year of preschool and primary education, students carry out some work on improvisation and musical composition. During the second year, they consider pedagogical sequences which prioritise the creative activities in the classroom and the R&D about collaborative and reflective creativity in school. In the third year, they must compose, produce and record a song with all the students in the class. These creative experiences are based on various research projects.

#### **3.1. PIO: Predicting, implementing and observing method for developing new pedagogical sequences**

Based on recent studies in social psychology of cognitive development (Perret-Clermont & Carugati, 2004), and Activity Theory (Engeström, 1987; Engeström, Riettinger, and Punamäki, 1999; Hakkarainen, Ilomäki, Paavola, Muukkonen, Toiviainen, Markkanen, and Richter, 2006; Damsa & Ludvigsen, 2011), we have developed a method called "PIO: Predicting, Implementing and Observing" (Giglio & Perret-Clermont, 2012) to fulfil four goals: to develop innovative pedagogical sequences to offer students opportunities for agency, collaboration and creativity in their learning environment; to offer teachers and researchers opportunities to observe how students react and learn in pedagogical sequences; to give teachers and teacher educators opportunities to contribute to scientific research investigating teaching-learning processes; to improve creative learning in the teacher education. This methodology is based on the effort to predict what will happen, then record the event and compare what really happened with what was initially predicted. Using interactive processes with teachers, students and researchers, we try to understand how to provide space for collaborative creativity in music education in schools. We focus on creativity in music education, paying special attention to the design of adequate collaborative settings to promote creativity and class discussion reflecting on what they have created. This research aims to develop pedagogical sequences which were designed to offer students opportunities to create simple pieces of music, in small groups, and then to play these at a recital and finally to discuss them in class (Giglio, 2010; 2012a; 2013). These pedagogical sequences were trialled by six teachers in different institutional and cultural contexts (280 pupils aged five to twelve) in four countries Argentina, Brazil, Canada and Switzerland and by music trainee teachers in Switzerland.

These trials were filmed and analysed in order to improve them from one trial to the next. This allowed them to be gradually consolidated by a researcher and practitioner. Before each trial, the teacher tried to imagine the implementation of the sequence and attempted to predict the reactions of the pupils during the implementation process. These predictions were written down and then compared to what actually took place when these pedagogical sequences were used. The differences between the "predictions" and "performance" allowed the directions to be adjusted and made them more easily transferable, meaning that the educational sequences could be led by teachers other than their original author.

Regarding our synthesis of previous studies (Giglio & Perret-Clermon, 2012; Breux, Giglio & Perret-Clermont, 2013) it is interesting to the possible outcomes of this PIO Method on the task, teaching and pupils. I present some examples of our own results.

First, regarding the task, some teachers noted that it is complexe but possible to place the pupils' creative activity at the centre of the teaching if they reorganise the classroom space.

Second, regarding the teaching, some teachers noted that it isn't easy to consider himself "open" at the surprise at the students' focus and creativities. Some teachers realised that they could not refrain from making or creating instead of their pupils.

Third, regarding the pupils, some teachers thought that pupils would have more difficulties with certain tasks. Other teachers discovered how observe where students can have difficulties concerning some knowledge need to create.

In terms of dimensions of the teaching change, in these studies we perceive the teacher reactions (predictions) and actions, by a relationship (interaction) between teacher and research for contributing at tree level:

- Level 1: the teacher interacting with the class of pupils (object of practitioner)
- Level 2: the larger context including the researcher (designer of the teaching sequence) in interaction between schools and students of teacher education (shared object).
- Level 3: the student of Teacher Education can take a position outside of the process of practitioners when they put the sequences into practice in context.

The design of this type of activity with multiple levels of context can provide an interesting way to innovate forms of learning and teaching by combining the views of researchers and practitioners.

### **3.2. Observing interactions between teacher and pupils in musical creative contexts: Learning to teach**

In this second reflection, we focus on the detailed examination of the lesson recordings given by the teachers using these sequences, again in various countries (Argentina, Brazil and Switzerland), in order to describe and better understand how the activity was deployed by pupils (aged 11 to 13) and teacher, whether in collaboration or in parallel (Giglio, 2013). We propose that students should analyse any problems encountered with the activity and the learning opportunities it offered. Thus, on the one hand, boys and girls aged 11 to 13 work together to compose a short piece of music and, on the other hand, the teacher sometimes supports the creative flow or sometimes interrupts it. These analyses by teacher trainers aim to understand that this type of activity required the teacher to adopt a whole range of approaches to adapt both the educational sequence used and each of their actions during the creative lessons. For example, according our results (Giglio, 2010; 2013), to teach in the musical creative setting, the teacher must learn:

- to focus the pupils' attention on the creative work set,
- to confirm them that their creative work is going in the right direction, and
- to provide certain information at the right moment to help them write their composition, etc.

The students can discover that it is not easy to listen before taking pedagogical action in a creative setting, and that they were often tempted to take over the pupils' work for them!

### **3.3. Teacher educators: adherence to reform vs. real changes**

The changes to the curriculum in Switzerland make provisions for the child's abilities to develop communication, collaboration, critical sense, meta-cognition and creativity, which are developed via multiple activities in the classroom in all school disciplines. To what degree do teachers and teacher educators expect to change their practices? We analysed teacher reaction concerning Switzerland educational program in general teacher educators' practices (Giglio, Melfi & Matthey, 2012). We compare the initial representations (in 2010) and the recent representations (in 2012) of teacher educators before and after the introduction of educational reforms in Switzerland. We are conducting a survey of 280 teacher educators. In this longitudinal and descriptive study, the questions deal with the interpretations made by teacher educators regarding the new cross-curriculum in relation to their pedagogical or training activities. The questionnaire was administered one year before (pre-test) and

six months after the curriculum changes (post-test). We have analysed the data with quantitative methods, and more particularly by means of paired comparison tests.

The score (on a Likert scale) of adherence is significantly different from the score of their teaching modifications. Furthermore, the teacher educators who have already made modifications to their training activity, based on the proposed new curriculum, plan to modify these activities further. And, the teacher educators who had not yet modified their activities anticipate making "no" or "very little" modifications. This study may help to understand and prevent a "fundamental breakdown" (Lenoir, Larose, Deaudelin, Kalubi, & Roy, 2002) or a "hiatus" between teacher representations and practices (Berman & al. 1991). This study is an opportunity to understand and improve different dimensions of teacher education: what the reaction and action of teacher educators is in reform context. Anticipating the degree of impact will enable us to better understand the initial situation in teacher education and, perhaps, to realise if the Teacher Education will find new solutions, new practises to test, implement and consolidate teaching changes, or if it will not.

#### 4. Reflection: five dimensions to explore or study a creative teaching

In our perspective, musical creativity in Teacher Education can be explored or studied by considering five dimensions:

1. The purpose of the change as challenge – creativity in educational reform or pedagogical/technological innovations
2. The reaction to change - the prediction of creative practices or the representations of creativity by teachers
3. The creative action, the practices to improve creative learning - the roles and skills of the actors (their awareness, but also their pedagogical practices, teaching changes, research, R&D ...)
4. The social interaction - the relationship between individuals and partnerships for training
5. The forms of contribution to creative music education - adaptation and adjustment of practices or new technological resources for creative educational purposes.

The creative practices and teaching changes examined in this reflection do not, of course, cover all of the possible dimensions of creative music education perspectives. It is obvious that as a practitioner and/or researcher, these dimensions can be related to each other. These different ways of understanding the representations of actors over creativity, how they anticipate their creative actions, how their roles are changing, what the new creative competencies that reforms or innovations require with or without awareness are, what relationships between individuals exist and how they can help to create change within Teacher Education and finally, how the actors of change take ownership, adjust, adapt and consolidate is a new creative activity, new tool, or a new technology resource.

We conclude by postulating that creativity is part of the change as an evolution of different aspects: sociocultural, artistic, scientific, political, educational, institutional, technological, etc. That is to say, innovations and reforms in creative music education and Teacher Education cannot be studied separately, but are part of the change produced (or not produced) or that will occur (even if difficulties will occur) in a situated context.

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