Towards a New Model for Effective Musical Teaching in Performance-Oriented Settings

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ABSTRACT

There is a discernable growing concern about teaching effectiveness in music education. Current effective teaching models fail to fully describe the phenomenon of effective teaching, and fail to fully serve teacher education. The goal was to find a model that could: (1) help instrumental teachers to measure their own levels of teaching efficacy within a short period of time and in a specific setting, (2) respond to specific needs teachers have, helping them managing and improve their levels of teaching efficacy during their daily practice, and (3) allow teachers to improve themselves through time, even many years after finishing their degree. A model that had the potential to fulfill such goals consisted of a self-analysis tool with 19 effective teaching descriptors to be used along with video-recorded lessons. In this study 45 different instrumental teachers analyzed a total of 180 different instrumental lessons. Results suggest that 98% of teachers were to use this tool to measure their teaching effectiveness, being able to identify areas of their teaching that needed improvement. Results suggest that this model allows teachers to identify clearly what aspects of effective teaching are missing in their practice, and allows them to reinforce good teaching practices. These results indicate that it is possible to improve the quality of teaching in an educational setting where the main goal keeps being to raise the future generation of performers, and where the didactical options taken by teachers are still strongly influenced by tradition.

I. INTRODUCTION

The growing concerns about teaching effectiveness in music education may be explained by factors like: (1) the growing body of research in music education suggesting that the existing teaching and learning models are limited in terms of their contribution to improving pupils' learning outcomes (Muijs, 2006). New research has also brought to light "progressive teaching strategies and styles" (Beheshti, 2009, p. 107; Zhukov, 1999, p. 6) and has defined the "so-called best [teaching] practices" (Westerlund, 2008, p. 91). (2) the fact that each year, only a small percentage of the total number of students attending instrumental lessons in specialist Music Schools and Conservatoires, become expert performers (Sloboda, 1991). Most of the schools report a large number of drop-outs among students within the first two to three years of instrumental tuition (Costa-Giomi, Flowers, & Sasaki, 2005; Mills, 2007). (3) The traditional model of instrumental teaching, one-to-one tuition, tends to be seen as "very expensive" (Bolliger & Reed, 2008, p. 1).

Research has shown that differences in the quality, depth and speed of instrumental learning are commonly attributed to teachers' ability to convey appropriate guidance and to provide the necessary conditions for learning to occur (Duke, 2009; Hallam, 1998, 2006; Lehmann, Sloboda, & Woody, 2007; Manturzewska, 1986; Mills, 2007; Sosniak, 1990). For example, research outlines the considerable qualitative changes which occur in learning when teachers adapt their teaching to students' individual characteristics and needs (Beheshti, 2009; Hultberg, 2002; North & Hargreaves, 2008; Sloboda, 1986); or that successful learning occurs when the teacher can provide the 'scaffold' for the development of skills in the early stages, and then, remove it progressively according to the student's increasingly individual autonomy (Burwell, 2005; Hallam, 2006; Jorgensen, 2000; Lehmann et al., 2007; McPhail, 2010). Therefore, teachers' effectiveness can be said to be at the centre of the learning process and as the main parameter influencing successful learning.

II. EFFECTIVE TEACHING MODELS

Effective teaching can be, to a large extent, identified, observed and measured (Collinson, 1999, p. 10; Gunderson, 2009, p. 16; Kohut, 1985, p. 74). Two well-known effective teaching models are the End Products Model and the Teachers Characteristics Model.

According to the first one - End Products Model - effective teaching can be identified in the form of observable end products (i.e. what students' learn, which skills they acquire) (Muijs, 2006; Tuckman & Tuckrnan, 1995). These 'end products' are in themselves learning goals and vary according to the fundamentals and principles that guide the learning process. Therefore, within this model, teacher efficacy is measured according to the ability displayed in helping their students to reach the established goals (Hallam, 2006; Regelski, 2006; Ryans, 1963).

However, a detailed analysis of the two allow us to see that they fail to fully describe the phenomenon of effective teaching (Cardoso, 2012), and fail to fully serve teacher education, because they are somewhat detached from practice (Madsen, 2003). The key problems of these two models may be summarized in two main aspects: first, the time-scale used, and second, the singular perspective adopted.

Scale Issue - The identification of effective teaching and effective teachers tends to occur as the result of a generalization process. However, the scale involved in these two effective teaching models is considerable.

Perspective Issue - In addition to the adoption of a smaller measurement unit, an adequate perspective on effective teaching should pay attention to approaches other than external ones. Discussion of effective teaching has tended to adopt an almost exclusively external perspective, i.e. those that observe, describe and measure effective teaching are outside the learning process (Coles, 2009; Lehmann et al., 2007; Madsen, 2003; Mills, 2007; Mills & Smith, 2003; Reid, 2001; Wood & Wood, 1996; Zhukov, 1999).

Therefore, the goal was to find a model that could, ultimately, help instrumental teachers to measure their own levels of teaching efficacy within a short period of time and on a specific setting, one that could respond to certain needs teachers have (e.g. challenging learning problems, students that fail in acquire certain skills), and that allowed teachers to improve themselves through time, even many years after finishing their degree. This is especially important considering that musicians become conservatoire teachers usually "without any rigorous preparation for the work" (Kemp, 1996, p. 230).

A model that had the potential to fulfill such goals had already been presented in a previous research project (Cardoso, 2012). Such model had been designed to measure levels of teaching effectiveness in instrumental lessons. And the reliability of such model allowed to identify a "positive subjective experience of teaching effectively" coined there as Optimal Teaching Experience$^{©}$ (Cardoso, 2012, p. 317). The model consisted of a list of 19 effective teaching descriptors, i.e. aspects of the teaching practice that, according to literature, are well-established as powerful contributors to successful learning (Figure 1). These descriptors provided the necessary elements to develop a structured analysis tool that could be used by teachers to analyze their own video-recorded lessons. In order to help teachers to identify in which parts of the lesson they were attained higher or lower levels of efficacy, the model included also the identification of all those descriptors through 5-minute time-units. Finally, teachers were asked to identify 'Effective Teaching Units' (ETU's), i.e. the units that signal effective change in students' performance and skills and that are the result of "the skillful arrangement of performance tasks [...] to facilitate the accomplishment of specific goals" (Duke, 2009, p. 160).

Goal Setting	GS$_1$	Clear (y/n)
	GS$_2$	Appropriate Challenge (y/n)
	GS$_3$	Task/Ability oriented
	GS$_4$	Positive Beliefs (y/n)
	GS$_5$	High Expectations (y/n)
Pace	P$_1$	Fast (y/n)
	P$_2$	Brief instructions (y/n)
	P$_3$	Shrt time btwn intervent (y/n)
	P$_4$	= distrib practice/perf mode (y/n)
Feedback	F$_1$	Frequent (y/n)
	F$_2$	immediate (y/n)
	F$_3$	Short (y/n)
	F$_4$	Precise and detailed (y/n)
	F$_5$	Honest (y/n)
	F$_6$	Relevant/Meaningful (y/n)
	F$_7$	Constructive (y/n)
	F$_8$	High rates of pos and neg (y/n)
Self-Efficacy Beliefs	SEB	High (y/n)
Attention	A	Att pinning/maintaining (y/n)

Figure 1 – Effective Teaching Descriptors

III. METHODOLOGY

Although the model had been successfully tested to identify teaching effectiveness in instrumental lessons by means of an experienced researcher and teacher educator, and although it had also been clear that the model had the potential to be successfully used by instrumental teachers themselves to help them analyzing and improving their teaching, there was still no evidence that the model could effectively work that way. Therefore, it was necessary to design an exploratory study, one that allowed to understand if the structured analysis tool for measuring effective teaching could be successfully implemented by instrumental teachers in their practice.

This study included several research steps: First, each participant, an instrumental teacher, would prepare four one-to-one lessons to be video-recorded. These could be four lessons with the same student, lessons with four different students, or any other combination. Secondly, each participant would analyze each video-recorded lesson with the aid of the structured analysis tool provided. Finally, each participant would prepare a written report with his or her findings on his/her teaching (positives and negatives). No instructions were given to reflect on the research process itself. Thus, in a sense, participants were asked to do participate also as co-researchers of their own teaching practice.

The use of videos seemed to be appropriate for this study because video not only allows the capture of events with a stronger sense of reality but also allows the researcher to look into those events in a more diverse and detailed way which would be impossible with a real in vivo observation (Crano & Brewer, 2002; Knoblauch, Schnettler, & Raab, 2009; Potter, 2003), enhancing "the quality and detail of virtually any research study" (Ratcliff, 2003, pp. 113, 128). And this is particularly true for a setting that it is so difficult to penetrate and study like the one-to-one tuition setting. Similarly, asking a written reflection as part of the study seemed also to be appropriate because this kind of data is seen by many as having immense educational potential to promote growth in student teachers, to help the work of teacher educators and to add depth to the studies of educational researchers, and has been included as part of most teacher education programmes (Check & Schutt, 2012; Hammersley, 2002). Written reflection may be produced after the occurrence of an event or phenomenon, or as in this case, it can be generated through the analysis of previously collected data, for example, a video-recorded lesson (Marecek, 2003).

Regarding the structured analysis tool provided, that was actually an Excel file with all the parameters aligned to the left and grouped by descriptor. Time-slots were also clearly identified. Along with the file were given instructions as to what variable really meant, and what things should the participants be able to see to validate each variable in each slot of time. As for the written report, instructions were given to write upon any patterns of behaviour observed (either positive or negative) from the structured analysis.

Participants included 47 different Portuguese conservatoire teachers that video-recorded and analyzed a total of 188 different lessons, held with 134 different instrumental students. Participants were mainly male teachers (53%), and although participants' age was mainly between 18 and 30 (74.8%), they displayed different levels of teaching experience (Charts 1).
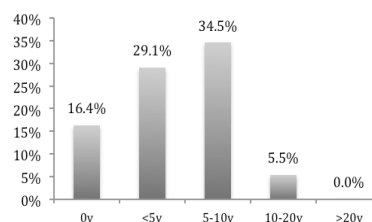
Chart 1 – Participants Teaching Experience Distribution

Data was analyzed both quantitatively and qualitatively. One of the methods adopted for qualitative analysis was 'content analysis', which "involves the making of inferences about data [...] by systematically and objectively identifying special characteristics (classes or categories) within them" (Gray, 2004, p. 328). After delineating the 'sampling unit' and the 'unit[s] of analysis' (Kalof, Dan, & Dietz, 2008, p. 105), data are then systematically classified, i.e. through a process of coding, raw data are transformed "into a standardized form" (Babbie, 2005, p. 355). In this study the 19 variables of the structured analysis tool provided the units for this kind of analysis. The second method adopted for qualitative analysis was 'thematic analysis', "a method for identifying, analyzing, and reporting patterns (themes) within data" (Braun & Clarke, 2006, pp. 6, 7). This was important to collect participants perceptions about the usefulness of this tool to improve their teaching efficacy. In addition, data was also analyzed quantitatively by means of 'quasi-statistics', which involved "simple statistical procedures" for the purpose of helping to identify "singularities, regularities and variations", aiming to "enhance the rigour and the power of qualitative analysis" (Dey, 1993, pp. 29, 54). This kind of quantitative analysis method seemed adequate considering the fact that the sample chosen had no inferential goals, nor were there any attempts to make it represent the entire population of instrumental teachers and students in Portuguese specialist Music Schools (Robson, 2002).

IV. RESULTS

The analysis of written reports allowed us to see that by using this tool to measure their effective teaching, 98% of teachers were able to identify areas of their teaching that needed to improve. Among the aspects that were more easily identifiable by teachers (either as positive or as needing improvement) were: the pace at which the lesson moving (P1), the clarity of goals set (GS1), the adequacy of goals in terms of the amount of challenge it involved (GS2), and the frequency at which feedback was given. Inversely, the variables that were more difficult to identify or less obvious for the teachers were: identifying a short period of time between teacher's interventions (P3), information about timely given feedback (F2) and relevant or meaningful feedback (F6) (Chart 2).
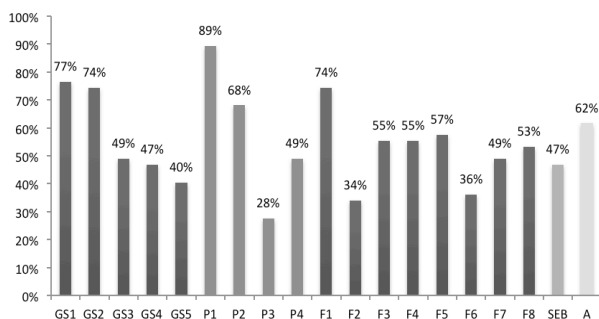

Chart 2 – Variables Identified by Teachers in the Written Report[1]

Regarding the way they saw their teaching, it was interesting to see that, generally speaking, teachers tended to identify as positive their ability to maintain high levels of attention in their students (A), and to do well on setting goals (GS), in particular in setting clear goals (GS1 - 40%). The descriptor most recurrently identified as needing improving was related with teaching or lesson pace (P), in particular the ability to imprint a fast pace for the lessons (P1 - 43%) and to balance the two teaching modes across the lesson (P4 - 38%). Another descriptor recurrently identified as needing improving was feedback (F), in particular the ability to give high rates of both and corrective feedback (F8 - 43%), the ability to give frequent feedback (F1 - 38%) and the ability to give precise and detailed feedback (F4 - 36%).
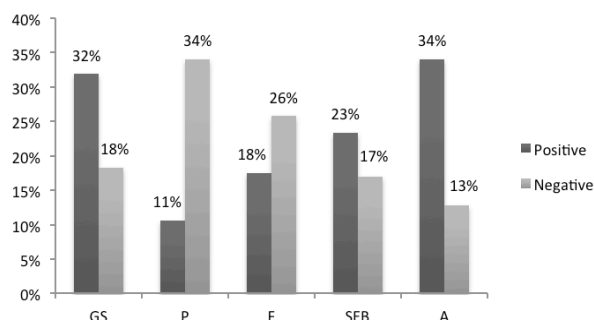

Chart 3 – Descriptor Tendency Analysis

The analysis of written reports allowed us to learn about the impact of using such tool to their teaching effectiveness, to help them improving as teachers. And in this regard, it was interesting to see that, 49% of the participants ($N = 23$) decided to add to their written report some comments on how doing this kind of analysis had helped them to improve as teachers (by highlighting the positives and exposing those areas needing improvement), how they saw the benefits of using this tool to reflect on their teaching, and how they would see themselves using this tool in the future again. Some even mentioned positive things such as: 'doing this kind of analysis represented a "turning point in the way they saw the teaching process"' (P24), or "this kind of self-analysis tool was extremely enriching due to the number of parameters it involves and the kind of assessment it promotes" (P32), or even "the analysis of these video-recorded lessons made me start a period of reflection upon my teaching practice" (P46).

Moreover, this tool seems to be useful for all kinds of teachers regardless their level of teaching experience. These positive comments were produced by inexperienced teachers (P2, P3, P30), by teachers that had few years of teaching experience (P5, P24, P29, P32, P38, P42), and by teachers that had more than 5-years of teaching experience (P9, P16, P17, P25, P33, P34, P40, P43, P46).

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[1]GS^1 - Clear Goals, GS^2 - Goals with the appropriate amount of challenge, GS^3 - Task/Ability oriented Goals, GS^4 - Goals displaying positive beliefs, GS^5 - Goals displaying high expectations, P^1 - Fast

Pace, P^2 - Brief instructions, P^3 - Short time between teacher's interventions, P^4 - Balanced distribution between practice and performance mode, F^1 - Frequent Feedback, F^2 - Immediate Feedback, F^3 - Short Feedback, F^4 - Precise and detailed Feedback, F^5 - Honest Feedback, F^6 - Relevant/Meaningful Feedback, F^7 - Constructive Feedback, F^8 - High rates of both positive and corrective Feedback, SEB - Help students to display high Self-Efficacy Beliefs, A - Ability to activate and maintain high levels of Attention in the students.

V. DISCUSSION

Results indicate resulting benefits of using this structured tool to identify effective teaching by teachers themselves. It not only allows teachers to identify clearly what aspects of effective teaching are missing, but allows them also to reinforce good teaching practices. Teachers were able to use the tool themselves and, more importantly, they were able to draw conclusions from what they saw.

Therefore, it can be said that this model of effective teaching that consists of identifying and measuring effective teaching descriptors through the systematic analysis of 5-minute slots in video-recorded lessons represents a powerful tool for instrumental teachers to measure their own levels of teaching efficacy within a short period of time and on a specific setting, to respond to specific pedagogical and didactical needs, and to allow teachers to improve themselves through time, even after many years of teaching experience.

In order to be able to generalize these findings and to prove this model even more useful, this study should be replicated to a larger number of conservatoire teachers. Additionally, it would be interesting to measure the level of accuracy that teachers display in the identification of effective teaching descriptors through video-analysis. Adding this extra element to the findings may result into an additional layer of perception about this model.

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