

## Improvising in music: A learning biography study to reveal skill acquisition

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**Abstract:** This poster addresses a learning biography study which aims at analyzing learning histories of both expert and non-expert improvisers (five recognized expert improvisers and five renowned musicians lacking improvisational expertise). It was hypothesized that by choosing both experts and non-experts it is possible to distinguish successful and unsuccessful learning strategies and instructional methods. Results of within-case analyses and cross-case analyses are presented. Further, consequences for two subsequent experimental studies will be discussed.

### Introduction

It is frequently stated that creativity is an important quality for both the individual and society at large, and that educating for creativity should be conceived a key mission in educational practice (Sawyer, 2006). Unfortunately, both education and psychology have not been able to deduce a universal set of instructional guidelines for creativity enhancement (Sweller, 2009). For some, this is reason to believe that creativity is inborn and not the result of training and practice. However, studies on expertise development contradict this belief and point out that differences in early experiences, training, and practice are the real determinants of excellent and creative performance (Howe, Davidson, & Sloboda, 1998). The question is what exactly comprises early experience, training, and practice regarding creativity enhancement.

For the present study the domain of musical improvisational expertise development has been selected to answer this question. Musical improvisation can be described as the creation of musical novelty in real time. It is a performing activity that involves highly skilled responses to an unpredictable reality. This description fits Johnson-Laird's (2002) NONCE definition of creativity which claims that the outcome of a creative process is Novel for the person producing the result, Optionally novel for society at large, the result of a Nondeterministic process that is guided by Criteria or constraints and that is based on existing Elements.

A learning biography study is set up to explore the learning histories of both recognized expert improvisers and non-expert improvisers. Retrospective interviews are used to reveal effective learning strategies, to generate effective instructional methods, and to determine whether improvisation can be learned. The learning biography study is fundamental to two subsequent experimental studies which are framed into the paradigm of deliberate practice (Ericsson, Krampe, & Tesch-Römer 1993) and holistic instructional design approaches to complex learning (Van Merriënboer & Kirschner, 2007).

### Method

*Participants.* We invited ten musical experts to participate in this study. Five experts were renowned expert improvisers in music; five experts were recognized musicians in the same musical domain but not regarded to be expert improvisers. A group of peers, musical scholars, and critics selected the experts. Since it is often stated that expert performance is not reached with less than ten years of intense practice (Ericsson et al, 1993), the experts selected for this study completed at least a 10-year period of deliberate musical improvisation practice. Experts were below the age of forty (range between 25 and 40 years).

*Data collection.* A variant of the procedure for 'autobiographical self-thematization' (Kelchtermans, 1999) has been used for collecting data from the experts. In this procedure respondents are stimulated to reflect on their career (auto-biographical) and narratively share their experiences and the meanings these hold for them. Data collection started with a questionnaire for recording (a) formal and non-formal musical and improvisation learning episodes (see Figure 1) and (b) critical environmental influences (critical incidents and critical persons). The questionnaire was followed by a semi structured interview which consists of two parts: a narrative biographical part where the interviewee is asked to describe his/her 'road to musical excellence', and a thematically structured part, directed at revealing improvisation learning on a detailed micro level. The narrative biographical part focuses on the dynamic dimension of the conversation, where the thematically structured part is more dialogic. The semi-structured interview can be regarded as a cued retrospective, since both parts of the interview build on results from previous data gathering stages (interview part one elaborates on answers questionnaire and interview part two elaborates on interview part one). Due to practical reasons (e.g.,

preparedness and availability of experts) it was decided to conduct one face-to-face interview. Internal validity is addressed by giving the subject the opportunity to reread and evaluate the (adapted) transcripts of the interviews. The results of the interviews were finalized telephonically.

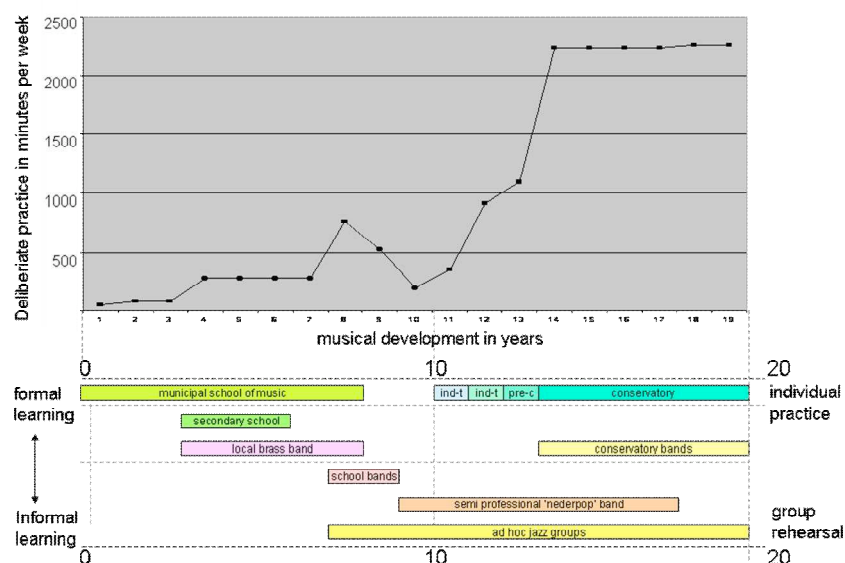


Figure 1. Example of input for semi-structured interview.

**Data analysis.** Interviews are tape-recorded and transcribed. Codes are both descriptive and interpretative (see Miles & Huberman, 1994). In the first phase a vertical or within-case analysis has been conducted. The second phase of the analysis included a horizontal or comparative analysis (crosscase analysis). During cross-case analysis the focus is on a comparison between the expert and nonexpert improvisers.

## Results and Conclusion

A pilot study proved that the procedure for collecting and analyzing data was feasible. Preliminary results of the main study indicate that the amount of practice is probably a decisive determinant for successful improvisational development. Based on the analysis of the some questionnaires and interviews non-expert improvisers seem to spend less time on deliberate practice (i.e., individual and group imitation tasks, completion tasks, and conventional tasks) and goal-free practice (i.e., ‘messing about on the instrument’) than expert improvisers (cf. Ericsson et al., 1993). However, beside (guided) practice, also intelligence is mentioned as an important factor for successful skill learning (cf. Ruthsatz et al., 2008). Further, personality is brought up as the key to creativity with a ‘big C’ (cf. Kaufman & Beghetto, 2009). At the ICLS Conference the final results of the learning biography study will be presented.

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