

## Developing and Testing a Questionnaire of Music Memorization and Practice

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**Abstract :** Memorization has long been recognized as an arduous and anxiety-evoking task for musicians, and yet, it is an essential aspect of performance. Research shows that musicians are often not taught how to memorize. While memorization and practice strategies of professionals have been studied, little research has been done to examine how student musicians learn to practice and memorize music in different cultural settings. We present the process of developing and testing a questionnaire of music memorization and musical practice for student musicians in the UK and Brazil. A survey was developed for a cross-cultural research project aiming at examining how young orchestral musicians (aged 7-18 years) in different learning environments and cultures engage in instrumental practice and memorization. The questionnaire development included members of a UK/US/Brazil research team of music educators and performance science researchers. A pool of items was developed for each aspect of practice and memorization identified, based on literature, personal experiences, and adapted from existing questionnaires. Item development took the varying levels of cognitive and social development of the target populations into consideration. It also considered the diverse target learning environments. Items were initially grouped in accordance with a single underlying construct/behavior. The questionnaire comprised three sections: a demographics section, a section on practice (containing 29 items), and a section on memorization (containing 40 items). Next, the response process was considered and a 5-point Likert scale ranging from 'always' to 'never' with a verbal label and an image assigned to each response option was selected, following effective questionnaire design for children and youths. Finally, a pilot study was conducted with young orchestral musicians from diverse learning environments in Brazil and the United Kingdom. Data collection took place in either one-to-one or group settings to facilitate the participants. Cognitive interviews were utilized to establish response process validity by confirming the readability and accurate comprehension of the questionnaire items or highlighting the need for item revision. Internal reliability was investigated by measuring the consistency of the item groups using the statistical test Cronbach's alpha. The pilot study successfully relied on the questionnaire to generate data about the engagement of young musicians of different levels and instruments, across different learning and cultural environments, in instrumental practice and memorization. Interaction analysis of the cognitive interviews undertaken with these participants, however, exposed the fact that certain items, and the response scale, could be interpreted in multiple ways. The questionnaire text was, therefore, revised accordingly. The low Cronbach's Alpha scores of many item groups indicated another issue with the original questionnaire: its low level of internal reliability. Several reasons for each poor reliability can be suggested, including the issues with item interpretation revealed through interaction analysis of the cognitive interviews, the small number of participants (34), and the elusive nature of the construct in question. The revised questionnaire measures 78 specific behaviors or opinions. It can be seen to provide an efficient means of gathering information about the engagement of young musicians in practice and memorization on a large scale.

**Keywords :** cross-cultural, memorization, practice, questionnaire, young musicians

**Conference Title :** ICMPC 2020 : International Conference on Music Perception and Cognition

**Conference Location :** Madrid, Spain

**Conference Dates :** March 26-27, 2020