The Relationships Between Genre Preference, Aural Skills, and Tonal Working Memory

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Abstract

Previous research suggests that academic success, musical aptitude, and musical experience affect aural skills achievement (see Harrison, Asmus, & Serge, 1994). However, measurements of academic success are often limited to course grades or aptitude tests, and researchers seldom investigate musical experience beyond quantifying years of musical involvement. Findings from recent studies warrant the inclusion of memory tasks and a closer examination of previous musical exposure in the study of aural skills proficiency. Musicians have been found to perform better than nonmusicians in memory tasks, especially those with tonal stimuli (Talamini et al., 2017), and the mere exposure to music –specifically, the exposure to specific genres– can affect one’s performance of musical tasks (Honing & Ladinig, 2009). In this study, we examine aural skills experience as it relates to measures of tonal working memory and musical sophistication, and we explore aural skills proficiency as it relates to musical experience through genre preferences. Participants completed a number of tests measuring cognitive ability, musical sophistication, aural skills experience, and musical genre preferences. Variables collected include: working memory capacity for tone recall as measured by a tonal working memory task (ToneSpan); melodic memory and beat perception accuracy as measured by the Goldsmiths Musical Sophistication Index (Gold-MSI; Müllensiefen, et al., 2014); aural skills experience as measured by self-reported number of courses in aural skills and/or number of years of private instruction in melodic dictation, harmonic dictation, and sight-singing; and genre preferences as collected by the Short Test of Musical Preferences (Rentfrow & Gosling, 2003). Genre preferences were then scored for compatibility with common practice basic tonal patterns. Preliminary results (N = 76) reveal a significant and positive correlation between performance on the ToneSpan task and General musical sophistication from the Gold-MSI, r = .38. The participant range of aural skills experience is limited; however, primarily first-year music students and non-music students have participated at this point. Targeted data collection with more experienced music students is in process. This study suggests that tonal working memory is related to musical sophistication and aural skills experience, and genre preferences correlate with aural skills proficiency.

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Introduction

Recent research has examined the relationships between musical sophistication and various cognitive abilities, and the findings warrant the inclusion of working memory tasks in the study of musicianship (see Silvia et al., 2016, Slevc et al., 2016, & Swaminathan et al., 2016). Musicians have been found to perform better than nonmusicians in memory tasks, especially those with tonal stimuli (Talamini et al., 2017). The mere exposure to music—specifically, the exposure to specific genres—can affect one’s performance of musical tasks (Honing & Ladinig, 2009).

A large component of the core curriculum in undergraduate music degrees is the instruction of aural skills, which includes the instruction of melodic and harmonic dictation. One way of thinking of dictation is as a tonal working memory task: students are presented with tonal stimuli which they must retain in their working memory as they re-compose the tonal stimuli onto staff paper.

In this study, we examine musical sophistication and aural skills proficiency as predictors of tonal working memory, and we explore aural skills proficiency as it relates to musical experience through genre preferences and applied instrument.

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Method

Participants completed a number of tests measuring cognitive ability, musical sophistication, aural skills experience, and musical genre preferences. Variables collected include: working memory capacity for tone recall as measured by a tonal working memory task (ToneSpan); melodic memory and beat perception accuracy as measured by the Goldsmiths Musical Sophistication Index (Gold-MSI; Müllensiefen, et al., 2014); aural skills experience as measured by self-reported number of courses in aural skills and/or number of years of private instruction in melodic dictation, harmonic dictation, and sight-singing; and genre preferences as collected by the Short Test of Musical Preferences (Rentfrow & Gosling, 2003). Genre preferences were then scored for compatibility with common practice basic tonal patterns.

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Results

Preliminary results (N = 76) reveal a significant and positive correlation between performance on the ToneSpan task and General musical sophistication from the Gold-MSI, r = .38. The participant range of aural skills experience is limited; however, primarily first-year music students and non-music students have participated at this point. Targeted data collection with more experienced music students is in process.

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gv_figure_4

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Figure 2. Example of an unacceptable low-resolution image

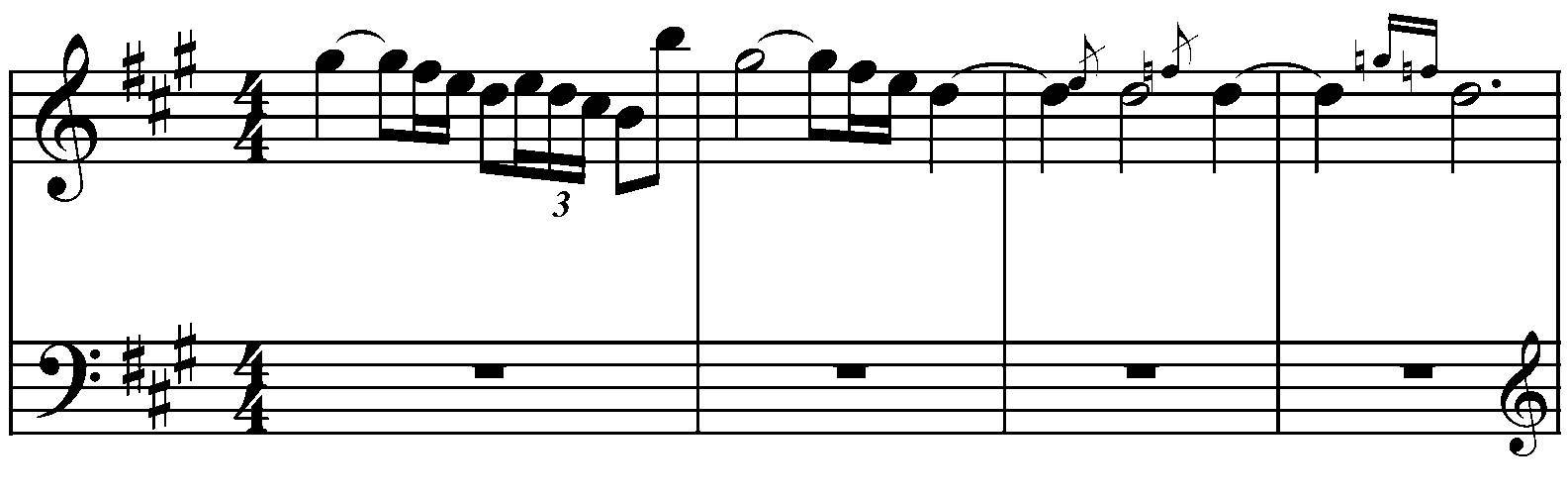


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Conclusion

This study suggests that tonal working memory is related to musical sophistication and aural skills experience, and genre preferences correlate with aural skills proficiency.

This template was inspired by previous ICMPC and ESCOM templates. Since many conference participants are familiar with APA style, we also followed that as closely as possible.

**Acknowledgements.** If you wish to include acknowledgements in your proceedings contribution, start with a regular level-3 heading and place the text just before the reference list. We thank everybody who has shown interest in ICMPC15/ESCOM10 and submitted to the program. We look forward to seeing you in La Plata, Sydney, Montreal, or Graz.

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