In the introductory chapter of this work, listening was identified as an essential activity that underpins musical experience. It was observed that one of the principal goals of music education is to promote an attentive approach to music listening that facilitates musical communication. Attentive music listening rests at the core of many contemporary theories of music learning, which are founded on a belief that the quality of musical experience depends substantially on the level of a listener’s cognitive and affective engagement with musical stimuli.

The impetus for the current investigation arose out of these contemporary theories of music instruction which emphasise the fundamental importance of listening in music learning. An underlying concern was that the widespread presence of recorded music in contemporary society, and in particular the increasing utilisation of recorded music as a component of computer-mediated communication, may be contributing to the formation of inattentive music listening habits which stem from an overexposure to recorded music. A related consideration was that the abundance of media stimuli in IMMI may frequently overwhelm human information processing capabilities and lead to cognitive overload in IMMI participants. Cognitive overload and inattentive music listening habits may, both individually and when combined, act to restrict participant interaction with IMMI Music examples. Moreover, while the instructional flexibility afforded by interactive multimedia offers considerable educational potential, the idiosyncratic behaviours of individual participants can result in disorientation and unexpected interactions with the media components of IMMI programs that may compromise instructional outcomes. User control of instructional sequencing in IMMI likewise allows participants to interrupt
Music examples, but the interruption of Music examples may diminish participant attention to music listening in the IMMI setting.

The Review of Related Literature identified prevailing limitations in the understanding of how participants interact with IMMI audio components and emphasised the urgent need for research. If the educational potential of interactive multimedia is to be fully realised for music instruction, music educators and IMMI software designers need empirically-based knowledge of how participants interact with IMMI audio components, not only when audio is intended as the primary focus of participant attention, but also when it occurs in combination with information presented in other sensory modalities. A robust understanding of how participants interact with IMMI media components is essential in the development of research-based guidelines for IMMI sound design. Knowledge of how participants interact with IMMI audio components is also crucial to the successful instructional integration of IMMI into curricula that encourage cognisant music listening.

The objective of the present study has been to analyse and explain participants’ interactions with three audio components that commonly occur during IMMI sessions, namely, Music, Voice, and Silence. Employing a novel procedure that extends the use of digital audio recording technology, the researcher documented IMMI session sound activity and conducted an analysis using Sound Designer (1987) software. The role of Sound Designer was critical in the investigation as it afforded a high level of precision and the flexibility required for an accurate assessment of IMMI session sound activity. Sound Designer graphs and subsequent statistical analysis of session sound usage provided a foundation for the Sound Activity Profiles (SAPs) that characterised participant interactions with IMMI audio components.

Preliminary scrutiny of session sound activity graphs and associated summary statistics prompted further investigation which took the form of a detailed reconciliation of visual
and aural records of the study sessions to determine the extent of participant activation
and interruption of Music examples. With the aim of triangulating data collection
procedures, follow-up interviews were conducted with selected participants in a process
that enabled the researcher to cross-reference computer analysis of session sound activity
with participants’ perceptions of the occurrence of sound in their study sessions. A pre-
session questionnaire was administered primarily to establish the extent of participants’
previous computing experience so that relationships between prior computing experience
and IMMI session sound activity could be explored. A post-session questionnaire
examined participant reactions to the selected IMMI programs for further cross-
referencing with the aforementioned dependent measures of session sound activity.

Principal Findings

The principal findings of the study will now be summarised with reference to each
research question. The synopsis includes comments which provide a foundation for the
ensuing discussion of the implications of the study findings.

Research Question One
What percentage of total session time does each of Music, Voice, and Silence occupy
when participants engage in a twenty minute session with each of the selected IMMI
programs?

The occurrence of audio components in the study sessions was summarised in Table 4.1.
MDQ participants spent an average of 28 percent of session time with Music playing, 13
percent of session time with Voice sounding, and 58 percent of the session time in
Silence. As shown previously in Table 4.4, marked variations in the occurrence of Music,
Voice, and Silence were observed in the MDQ sessions. For example, while Music
occurred for 48 percent of one MDQ session, another MDQ participant spent just five
percent of session time with Music playing. The occurrence of Voice in MDQ sessions
ranged from a high of 76 percent of session time to a low of just two percent. The amount of Silence that occurred in MDQ sessions ranged from a maximum of 88 percent of session time to a minimum of 20 percent. Twenty-five percent of MDQ participants spent 70 percent or more of their session time in Silence.

MMI participants spent an average of 34 percent of session time with Music playing, less than one percent of session time with Voice sounding, and 65 percent of the session time in Silence. Individual participant variations in the extent of the occurrence of Music, Voice, and Silence in MMI sessions were marked. For example, the occurrence of Music ranged from a high of 58 percent of the session time to a low of 15 percent of session time. The brevity of MMI Voice excerpts universally limited the occurrence of Voice to less than one percent of MMI session time. The occurrence of Silence in MMI sessions ranged from a maximum of 85 percent of session time to a minimum of 42 percent of session time. Overall, 40 percent of the MMI participants spent 70 percent or more of their session time in Silence.

The results pertaining to Research Question One are consistent with one of the underlying assumptions of the investigation, namely, that participant interactions with IMMI audio components are highly individualised. Perhaps most striking is the extent of variations in the occurrence of Music and Silence, which indicate that the Music listening behaviours of study participants were diverse. While subjects spent as much as 58 percent of the session time with Music playing, participant interaction with IMMI Music examples was frequently low, and many study sessions were characterised by lengthy periods of Silence that accounted for up to 88 percent of the session time.

Research Question Two
What is the frequency of occurrence and mean duration of discrete Music, Voice, and Silence Events when participants engage in a twenty minute session with each of the selected IMMI programs?

Summary statistics relating to the frequency of occurrence of discrete Music, Voice, and Silence Events were shown in Table 4.2. The mean durations of discrete Music, Voice, and Silence Events were shown in Table 4.3. MDQ participants activated an average of 33.70 Music Events, 10.65 Voice Events, and 45.50 Silence Events per session. MDQ Music Events had an average duration of 10.85 seconds, while MDQ Voice Events lasted an average of 39.49 seconds. On average, MDQ Silence Events lasted for 18.55 seconds.

MMI participants activated an average of 69.10 Music Events, 5.45 Voice Events, and 76.25 Silence Events. The average duration of MMI Music Events was 6.62 seconds, while MMI Voice Events had an average duration of less than one second. MMI Silence Events lasted for an average of 13.05 seconds.

The wide ranging variations in the extent of participant activation of discrete Audio Events, which were illustrated in the comparison of extreme cases shown in Table 4.5, indicate that individual participants approached the activation of IMMI audio components in markedly different ways. For example, one MMI participant activated 174 Music Events, while another participant activated only 31: this result represents a ratio of more than five to one. Likewise, while one MDQ participant activated 56 Music Events, another subject initiated only 16: this result represents a ratio of more than three to one. As indicated previously in Table 4.5, similar disparities existed between extreme cases in the occurrence of Voice Events and Silence Events in both MDQ and MMI sessions. The number of discrete Audio Events observed during the study sessions, and the duration of those events, are measures of the extent of participant interaction with the
audio components of the selected IMMI programs. The results indicate that MMI participants tended to listen to a relatively high number of short segments of Music, and this finding reflects the brevity of the Music examples provided by the MMI program. The smaller number of more lengthy Music Events observed in MDQ sessions indicates that Music listening in MDQ sessions was considerably less fragmentary than in MMI sessions. However, despite the provision of a complete recording of the Dissonant Quartet in the MDQ program, the average duration of the MDQ Music Events was just 10.85 seconds, while the average length of MMI Music Events was 6.62 seconds. These results suggest that while the availability of more lengthy Music examples in the MDQ program contributed to an increase in the average duration of MDQ Music Events, music listening in sessions with both IMMI programs remained relatively fragmentary, regardless of differences in the length of the Music examples provided.

In examining participant interactions with IMMI audio components and their effect on music listening behaviours, consideration needs to be given not only to the frequency of occurrence and duration of Music examples, but also to the extent of participant interruption of Music examples. A subsidiary goal of the current investigation was to assess the extent of participant interruption of IMMI Music examples through an analysis and reconciliation of the visual and audio recordings of the study sessions. The issue of participant interruption of IMMI Music examples is addressed in the following discussion of results relating to Research Question Three.

Research Question Three
How frequently do participants interrupt the playback of Music examples during a twenty minute session with each of the selected IMMI programs?

As shown previously in Figures 4.28 and 4.32, a high level of participant interruption of Music examples was observed in some study sessions. Forty percent of participants interrupted MMI Music examples either "Frequently" or "Very Frequently", while 20 percent of participants interrupted MDQ Music examples "Frequently" or "Very Frequently". A high level of participant interruption of Music examples was, however, by no means universal in the study sessions. Thirty percent of MDQ participants and 25 percent of MMI participants interrupted Music examples "Very Infrequently".

Consequently, the present findings again support one of the central tenets of the investigation, namely, that participant interactions with IMMI audio components are highly individualised. The high level of variation in the extent of participant interruption of Music examples is indicative of the diversity of participants' music listening behaviours. The participants who frequently interrupted Music examples did not listen attentively or comprehensively to the music component of the IMMI programs. Many study participants exhibited fragmentary music listening behaviours by activating Music examples only momentarily before moving to the next multimedia encounter. Such fragmentary listening behaviours occurred in at least 20 percent of the study cohort. In marked contrast, 25 percent of the study group rarely interrupted Music examples and many of those participants demonstrated attentive music listening behaviours by listening to each Music example they activated until it concluded.

Therefore, while Berz (1995) found that IMMI participants rarely listen to Music examples in their entirety, the present findings indicate that the extent of participant interruption of IMMI Music examples is highly variable. While many study participants frequently interrupted Music examples, a substantial number of participants did not.
Since twice the number of participants frequently interrupted the already brief MMI Music examples compared to the number of participants who frequently interrupted the more lengthy MDQ Music examples, the present findings also suggest that the duration of the Music examples the IMMI programs offered may differentially have influenced the extent of participant interruption of Music examples.

**Research Question Four**

How do participants' perceptions of IMMI session sound activity compare with objectively verified measures of their session sound use?

Participant perceptions of the time they had spent on listening activities were often inaccurate and there was a strong tendency towards an overestimation of the amount of time spent listening to Music. For example, one MMI participant, who estimated that Music had occurred for 60 percent of session time, had spent only 23 percent of session time with Music playing. A marked discrepancy was also observed for an MDQ participant who estimated that 40 percent of session time had been spent with Music playing, while the Sound Designer analysis of audio activity indicated that Music had occurred for only five percent of the session time.

Participant perceptions of the time they had spent in Silence were often substantially lower than the amount of Silence measured in their sessions. For example, one MMI participant estimated that 30 percent of the session time had been spent in Silence, while Sound Designer analysis indicated that she had spent 76 percent of the session time in Silence. Likewise, an MDQ participant who estimated that 30 percent of session time had been spent in Silence, registered 73 percent of the session time in Silence.

The present findings that relate to participant perceptions of IMMI session sound activity endorse concerns raised by Lucas (1992) and Schwier (1995) that participants may be
poor judges of the extent of their interaction with the media components of computerised instruction. While further research is essential to consolidate the current findings, this preliminary information suggests that IMMI participants would often benefit from a more guided instructional approach. Such guidance could assist participants to assess the extent of their interaction with IMMI audio components and encourage them to listen more attentively and comprehensively to the music content of IMMI programs. Interventions designed to enhance music listening in IMMI are proposed in a subsequent discussion of the implications of the study findings.

**Research Question Five**

What degree of association exists between participants’ prior computing experience and the extent of participant interaction with Music, Voice, and Silence during twenty minute sessions with each of the selected IMMI programs?

The relationship between participants’ prior computing experience and the extent of participant interaction with Music examples was moderately strong in sessions with the MMI program. No strong relationships were detected between prior computing experience and the extent of participant interaction with audio components in MDQ sessions.

In MMI sessions, the amount of Music that occurred per session showed a moderately positive correlation with three of the measures of participants’ prior computing experience, namely, the overall measure of previous software usage (r = .51), self-rating of the level of computer skill (r = .44), self-rating of confidence about using computers (r= .43). Participants with higher levels of previous software usage listened to more Music during their MMI sessions than participants with lower levels of previous computing experience. Likewise, participants with higher levels of skill and confidence in using computers tended to listen to more Music during the MMI sessions and to have
had less Silence in their sessions than participants with lower levels of skill and confidence in using computers. The finding that prior computing experience may influence the extent of participant interaction with IMMI audio components has important ramifications for computerised music instruction, which are examined in the ensuing discussion of the implications of the study findings.

Implications of the Study Findings

The most striking finding of the current investigation was the extent of the variability in participants' interactions with the IMMI audio components. The participant who devoted 58 percent of session time to Music listening engaged in a distinctly different musical experience when compared to the subject who spent just five percent of the session time with Music playing. The participant who spent 20 percent of the session time in Silence had a markedly dissimilar aural encounter compared to the subject who spent 88 percent of session time in Silence. The participant who activated 174 Music examples had a pattern of interaction which was widely divergent from that of the subject who activated just six Music examples during his session. Participants who frequently interrupted Music examples engaged in fragmentary music listening behaviours that were in marked contrast to the attentive music listening behaviours exhibited by the participants who rarely interrupted Music examples.

While the extent of participant interaction with IMMI audio components varied widely, many study sessions were characterised by the presence of brief, fragmented Music excerpts and lengthy periods of Silence. Fragmentary music listening behaviours and the widespread occurrence of Silence raise concerns about the quality of participant music listening in the study sessions. Music educators who place a strong emphasis on music listening as a fundamental component of music instruction may be concerned about the low level of interaction with Music examples that some study participants demonstrated. While the mere occurrence of Music during IMMI sessions does not ensure participant
attention to Music, nor guarantee that music learning will occur, a low incidence of Music in IMMI sessions precludes such attention and learning. Furthermore, since subjects were frequently inaccurate in their self-assessment of session sound activity, and therefore unaware that they had exhibited a low level of interaction with Music examples, many participants would be unlikely to consider the implications of their limited interaction with Music examples unless the issue was somehow brought to their attention.

Despite frequent participant assertions of a preference for user control in the selection of IMMI media components and instructional sequencing, the inconsistency of participant interactions with Music examples indicates that a high level of user control in IMMI does not always lead to attentive and comprehensive music listening. When provided with the opportunity to select individual instructional pathways, some study participants appeared to avoid music listening. When subjects did activate Music examples, they often did not listen to the entire excerpt. Both in MMI sessions, where the Music examples were relatively short, and in MDQ sessions, where the provision of a complete recording of the Dissonant Quartet made uninterrupted listening possible, participants exhibited fragmentary listening behaviours which are likely to constrain music learning. As Berz (1995) has observed, when music listening is fragmentary, IMMI participants may not develop a balanced overview of a composition, and their understanding of the aesthetic wholeness of a work may be seriously compromised.

Another finding that has important implications for IMMI users was the discovery of a moderately positive relationship between participants’ prior computing experience and the amount of Music that occurred in MMI sessions. Participant interaction with MMI Music examples was more extensive in the sessions of subjects with higher levels of skill and confidence in using computers than in the sessions of participants with lower levels of computer skill and confidence. Consequently, limitations in prior computing
experience appears to inhibit participant interaction with IMMI Music examples. As 75 percent of study participants had no previous IMMI experience, that lack of interactive multimedia software experience may have contributed further to the low occurrence of Music in some study sessions. These findings point to the necessity of ensuring that inexperienced IMMI participants possess adequate computer expertise. Music educators who introduce IMMI into a curriculum need to identify students who would benefit from interventions that augment computing skills and facilitate participant interaction with IMMI Music examples.

In considering participant music listening behaviours in the study sessions, it is important to acknowledge that intervening variables may have influenced participant interactions with IMMI audio components. For example, responses to the follow-up interview questions indicated that session time constraints were a factor that precipitated participant interruption of Music examples. Most respondents indicated that they would have preferred to have spent more time listening to Music, and some participants suggested that they would have done so had they not been mindful of session time limitations. Therefore, in some study sessions, time constraints appear to have had the effect of decreasing the amount of time that participants spent listening to Music. As the use of IMMI programs in formal education settings usually occurs within the structure of fixed lesson times, the present finding that session time constraints inhibited participant music listening has important implications. If IMMI participants avoid Music listening due to session time limitations, then instructional outcomes are likely to be compromised.

In discussions of their interaction with IMMI audio components participants sometimes raised the issue of session goals. Prior to each study session, subjects were requested to "explore" the IMMI programs, but no specific instructional objectives were given. While most participants reported approaching the study sessions from an investigative or
exploratory perspective, some subjects indicated that their interactions with the IMMI programs may have been quite different if there had been a specific instructional objective for the session. When questioned about their interruption of Music examples, participants occasionally mentioned the objective of gaining an overview of the IMMI programs as a reason for not allowing Music examples to play in their entirety. While exploring, these participants had sometimes skimmed rapidly through the programs, without reading the on-screen information or listening to Music examples fully. It appears that such skimming contributed to an increase in the number of Music Events that occurred in some sessions, and may also have decreased the duration of Music events, as participants clicked momentarily on Music examples, but interrupted them to continue exploring the program. Such skimming and interruption of Music examples highlight the unexpected interactions that can occur when participants exercise a high degree of control over the structure and pacing of IMMI.

Interventions to Enhance IMMI Music Listening

The present findings suggest that many IMMI participants would benefit from interventions that elicit more extensive and prolonged interactions with IMMI Music examples. If the objective of encouraging attentive and comprehensive music listening behaviour in IMMI is to be achieved, software designers need to develop program structures which entice participants to interrupt Music examples less frequently. IMMI participants need to be encouraged not only to activate Music examples, but to listen to them more comprehensively. It is possible that artificial intelligence algorithms could be interpolated into IMMI software in order to monitor session sound activity and to offer participants appropriate advice where interaction with Music examples remains low for extended periods. An "agent" or computerised assistant could be integrated into IMMI software to remind participants of the importance of active aural engagement with the musical components of the program. The agent could intervene at appropriate times with listening suggestions based on an analysis of participant’s prior interaction with the
program. In view of the strong preference for user control expressed by many study participants, interventions of this kind would need to be carefully implemented. In particular, software designs would need to encourage Music listening without mandating the presence of sound.

IMMI software could be programmed to automatically capture data relating to participant sound activity and thus to provide documentation of session listening times which would be available to both participants and their instructor. Such documentation of session sound activity could be used to activate on-screen timing devices that would indicate the length of a Music example, the user’s current position within a Music example, the length of a Music example that was remaining to play, cumulative Music listening time for the session, and so forth. Sound activity documentation would be of assistance to instructors who could inspect sound interaction records at a convenient time following a session to assess the extent of student interaction with the Music component of IMMI programs. Instructors would use the sound activity documentation to identify participants who exhibited inappropriate Music listening behaviours and, where necessary, take action to modify participants’ music listening behaviours with an appropriate form of supplementary assistance, such as guided listening.

Recommendations for Further Research
The present study has initiated analytical procedures that provide a basis for further scrutiny of IMMI sound activity. The identification of a high level of variation in the extent of participant interaction with IMMI audio components has important implications for computerised music instruction, which indicate that additional research using larger, randomised samples is warranted. Recommendations for further research and ongoing refinement of the procedures employed in the present investigation follow.

1. Developmental research which includes the design and testing of IMMI programs that incorporate automatic monitoring of session audio activity
needs to be undertaken. Particular attention might be focused on the effectiveness of on-screen timing devices that inform participants of the extent of their interaction with IMMI Music examples.

2. Further research into participant perceptions of the extent of their interactions with IMMI audio components is required.

3. Further investigation of the relationship between participants' prior computing experience and the extent of participant interaction with IMMI audio components is needed. Studies which compare the audio activity of computer naïve IMMI participants with computer literate IMMI participants would prove valuable.

4. There is a need for investigations of IMMI audio activity that employ longitudinal designs. Studies which trace participant interactions with IMMI audio components in sessions that occur regularly over extended periods are required to establish the extent to which participant interactions with audio components vary as participants become familiar with IMMI programs and interactive multimedia protocols.

5. Studies which examine the effects of instructional objectives on the extent of participant interaction with IMMI audio components are required. Particular emphasis needs to be placed on the investigation of relationships between the extent of participant interruption of IMMI Music examples and instructional objectives.

6. Further investigation of participant interactions with the audio components of IMMI programs that employ "intact" musical
compositions needs to be undertaken. Such studies might assess the propensity of IMMI participants to listen to complete musical works.

7. Investigations that examine relationships between IMMI Music listening behaviours and instructional outcomes are required.

8. The investigation of participant interaction with IMMI audio components needs to be expanded to encompass a broader selection of IMMI resources, including those that are delivered using emerging technologies such as the Internet.

Conclusion
This exploratory study of participant interactions with IMMI audio components has scrutinised the first link in a sequence of events that facilitates music listening in IMMI. Participant interaction with IMMI audio components, and in particular the activation and interruption of Music examples, is a critical factor in IMMI music listening. In the absence of adequate interaction with IMMI Music examples, participant attention to music listening remains limited. In emphasising the importance of attention in instructional transactions, Fleming (1987) is unequivocal that "without attention, there can be no learning" (p. 236). Participants who do not listen attentively to IMMI Music examples are unlikely to achieve optimal instructional outcomes and will not gain a comprehensive and aesthetically balanced understanding of the musical works they encounter.

The present investigation has shown that participant interactions with IMMI audio components are highly variable. While study participants who interacted extensively with IMMI Music examples often exhibited attentive music listening behaviours, participants who engaged in a low level of interaction with IMMI Music examples demonstrated
music listening behaviours that were neither attentive nor comprehensive. As participant
attention to music listening is fundamental in music learning, IMMI participants who
exhibit inattentive music listening behaviours need to be encouraged to increase the
extent of their interaction with IMMI Music examples. By engaging more extensively
with Music examples, such participants are likely to enhance their understanding of the
musical content of the IMMI programs they use. As previously discussed, participant
interaction with IMMI Music examples could be augmented through innovative software
designs that include both participant and instructor monitoring of session sound activity.

Ongoing advances in digital communication technology mean that the development cycle
of computerised instruction has passed into an evolutionary phase which some
commentators describe as a "converging technologies" period (Negroponte: 1995,
The convergence of digital technologies refers to the integration of devices such as
computers, telephones, and televisions. The current growth in communication networks
such as the Internet is indicative of the trend towards technological convergence. A recent
report from the Australian Bureau of Statistics (ABS) (1998a) revealed that Internet use
has doubled each year since 1996. While 250,000 Australian homes had Internet access
in 1996, by February 1998 that figure had increased to approximately one million, and
more than three million Australians had accessed the Internet during the 12 months to
February 1998. Another ABS survey (1998b) confirms the increasing use of computers
for educational purposes, particularly by children. For instance, ABS figures indicate that
51 percent of Australian children aged between five and 17 years frequently used a home
computer compared to 26 percent of adults. Furthermore, 84 percent of children who
used home computers did so for educational purposes. These statistics suggest that
computer use will continue to escalate substantially, particularly as the current
generation of increasingly computer-literate children mature to adulthood.
As computers are now almost universally equipped with CD-ROM and increasingly offer Internet capabilities that can deliver interactive multimedia instruction which includes sound, the salient issue of how participants interact with the audio components of computerised instruction is now more critical than it was at the outset of this investigation. Commentators such as Blattner (1993) and Hereford and Winn (1994) suggest that sound will play an increasingly important role in all computer-mediated communication. Blattner anticipates considerable advances in the role of sound in computerised instruction, particularly with the ongoing development of three dimensional sound for use in virtual reality applications. She maintains that

the appeal of sound surrounding the user is so great that we can expect to see this new technology permeate educational and recreational software. Music is enormously richer in three-dimensions, conversations are clearer when separated in space, and the sense of immersion in an artificial world is greater when sound surrounds the listener. (p. 79)

Sound delivery over the Internet is improving rapidly, particularly with the evolution of software such as QuickTime (1989) and RealPlayer (1995), which provide "streaming audio" capabilities that can transfer high quality sound and minimise the delays which previously hampered Internet audio delivery (Patterson and Melcher: 1998). The provision of high quality sound underpins IMMI delivery across the Internet. As Internet audio capabilities continue to improve, and the use of interactive multimedia becomes increasingly prevalent in computerised music instruction over the Internet, the investigation of participant interactions with IMMI audio components will remain a critical research issue.

The concern about music listening in IMMI which permeates the current investigation was expressed candidly by the study participant who observed that "it's a music program, music's in trouble without listening!" That spontaneous expression of the pivotal
importance of listening in musical experience was foreshadowed eloquently in Copland's (1939) reflection that

music can only be alive when there are listeners who are really alive. To listen intently, to listen consciously, to listen with one's whole intelligence is the least we can do in the furtherance of an art that is one of the glories of mankind. (p. 163)

Participants in the present investigation frequently did not listen "intently", "consciously" or with their "whole intelligence". With an improved understanding of the idiosyncrasies of participant interactions with IMMI audio components, music educators and software designers will be better equipped to foster music listening that is, as Copland put it, "really alive". The current investigation has taken an exploratory step by providing rudimentary but essential information about participant interactions with IMMI audio components, which it is hoped will further the development of such understanding.