ABSTRACT
This study provided a thick, detailed description of young children’s music play in a classroom setting. Interpreting play in this context consisted of identifying children’s selection of appropriate tools for representing their lived experiences and determining how they constructed meaning using these semiotic tools. Negotiation and communication in an educational setting were examined. Children’s use of materials and embodied forms of meaning making (semiotic resources) in their music interactions were core concerns of the study. Multimodal Analysis was used to interpret video data: examining the actions of children first, then their verbal responses, in music invention. Together these components of analysis assisted in investigating the layers of actions and associated meanings (the semiotic resources) in young children’s music play. Ways by which children selected resources to communicate meaning through their everyday music play revealed the semiotic work, the cultural influences of their investment of effort. Music play in classroom settings revealed children formulating and testing ideas, stretching their inventive music dialogue and redesigning music activities during their first year of school. Preliminary results will lead to further study of young children’s capacity in multimodal communication: their embodied and artistic representations of meaning.

Keywords: semiotics, multimodality, transformative redesign, music education

OBJECTIVES OF THE STUDY
Children’s music play in small group activities at school was examined through a multimodal lens to find out how children use materials and actions to communicate in these contexts. This study investigated commonsense ways of using music to express meaningful everyday learning experiences. This is known as semiosis (Jewitt, 2009; Mavers, 2011). Ways of representing meaning in children’s music play was seen as being related to their selection of semiotic resources (musical instruments, voice, materials, movement, gaze and facial expression) for communication.

SUMMARY OF REVIEW OF LITERATURE
In Australia’s national curriculum, the early years are seen as vital for play-based learning that “fosters imagination, discovery and inventive practices” in social groups that “challenge each other’s thinking and develop new understandings” (EYLF, 2009, p. 70). Play-based learning is seen as an important part of the Arts. Play and the multimodality of music are fundamentally related. Play-based learning in music is developed through engagement, communication and a sense of purpose. It is a context for learning through which students organise and make sense of their world, as they engage actively with people, objects and representations. Learning through play is one of the principles of early childhood pedagogy in the Early Years Learning Framework: Belonging, Being, Becoming (Department of Education, Training and Workplace Relations 2009). Research has contributed to deeper understanding of the important role of teacher interactions during children’s play (Fleer, 2010; Ryan & Goffin, 2008). Edwards and Cutter-Mackenzie (2011) looked at modeled, open-ended and purposefully framed play and found all play types act together to enrich learning contexts. Young (2009) observed that as they engage in open-ended play through selection of musical
materials (voice, tuned percussion and embodied gesture), children make constant reconstructions (transformations) in the new communicational mode of music. Transduction involves ideas transferred across modes, from speech to music, or music to dance, using different genres that select features, omit some and add others. The process, involving the interest and agency of participants, is not just “translating, but is in itself transformative” (Kress & Van Leeuwen, 2001, p. 5). Children redesign an idea or aspect of their experience in the world and develop mastery of modes through play (Mavers, 2011). Modes can be defined as a child’s cultural shaping of semiotic resources. These resources include gesture, gaze, bodily action, voice and proxemics (spatial relations) as well as materials (instruments, voice, puppets and picture books). In social semiotic theory, conventional modes of communication or discourse must have functions that are textual (message entities), interpersonal (social interaction/communication) and ideational (actions/events in the world) to fulfill purposes of communicating ideas (Kress, 2009). This study demonstrates that in the mode of music the elements of pitch, rhythm, dynamics, timbre, tempo and phrasing are also necessary for extension and expansion of meaning (Van Leeuwen, 1999).

Semiotic resources assist in reconstructing meaning and communicating that meaning to self and others. The term music dialogue in this study implies the interplay of modes during children’s music interactions using semiotic resources, in shared and negotiated responses of purposeful play. Children have been known to use familiar strategies and resources to communicate meaning in negotiated interactions and learning experiences in classroom music, particularly their strategies for creative music making or composition (Bruner, 1986; Burnard & Younker, 2002; Diagnault, 1996; Jorgensen, 2002; Wiggins, 1994, 2003; Wilson & Wales, 1995; Younker, 2000; Younker & Burnard, 2004). In a reciprocating manner, teachers and children share ideas and materials and consider alternative viewpoints. Music pedagogic frameworks are now considered insufficient unless they appeal to the creative capacity of children and build on their complex and plentiful music inventions made in playground games and out-of-school practices (Barrett, 2011; Custodero, 2009; Darian-Smith & Henningham, 2011; Green, 2008, 2011; Marsh, 2008).

Communication of learning through meaningful experiences is realised in redesign (Jewitt, 2009) by changing socially constructed knowledge into social action and interaction. In studies of group music interaction, children negotiated and redesigned musical ideas using instruments and voice, exploring melody, rhythm and gesture (Elliot & Baker, 2008; Wingstedt, 2008). In co-operative music play with instruments (Hallam, 2009; Young, 2009), the researcher playfully co-constructed music with children to enrich musical thought and response. Young (2003) highlighted the need for ongoing research examining the “intersensory whole” of music (instruments, voice, materials and movement) to identify “forms of organisation that are identifiable and competencies they imply, so that appropriate provision and pedagogical strategies can be designed” (Young, 2003, p.56). Mans (2002, p.59) acknowledged the increased use of play … “not only as content but as the form of all musical learning activities.” In studies by Custodero (2006) and Barrett (2009, 2010) children were seen as competent in inventive music play before school, building on previous knowledge and experiences of music across contexts. Early years classroom settings were perceived as arenas for furthering this agency, promoting children as “curriculum makers” in music education (Barrett, 2007, 2009). Harrop-Allin (2011, p.167) demonstrated how teachers might “recognise, recruit and develop children’s musical identities” in classroom learning through the affordances and designs of their music games. In this study, children’s selection and transformative redesign of semiotic resources in classroom contexts are investigated to determine how their prior experiences and interactions in music might enrich learning.

METHODS
A group of ten children in their first year of an Australian school were selected for their interest in music. These children gathered for
half an hour a week over the course of six weeks to invent music using tuned percussion and singing games. Children were invited to select semiotic tools (drum, xylophone, puppets, movement and singing) to communicate while telling stories through music. Mediated discourses focusing on actions, interactions and use of resources were noted as children communicated meaning with peers and the researcher. Video data were collected during these sessions, transcribed and analysed using a multimodal approach (Bezemer & Mavers, 2011, Flewitt et al, 2009; Kress, 2003; 2009). The music events were analysed using a variety of conventions in reconstructing the video data and these choices were made to “shape the account of social interaction in significant ways” (Bezemer and Mavers, 2011, p. 203). This method highlighted moments of particular attention and simultaneity.

Inquiry into children’s embodied forms of representing and communicating meaning required a transformation of the use of investigative resources (Flewitt et al, 2009). Focus was not on language-based techniques, but on the whole “multimodal ensemble” of communication as part of a social event or experience (Kress, 2003; 2010). As this study prioritised embodied actions over language during interactions, video transcriptions addressed the question, “What are the actions taken here?” Communicative modes “are always directly linked to the actions that the actors perform at a particular time and in a particular location” (Norris, 2009, p. 88). These links were made in the analysis. The focus was on semiotic resources used to construct meaning: negotiated interpretive actions and materials selected by children interacting in music play in classroom contexts.

In music, elements or concepts of percussive or lyric effects, dynamics, timbre and tone, pitch, meter, rhythmic variation and harmony are all important for making meaning and for redesign. In this study, they were useful for identifying modal redesign: how meaning is translated or made across modes in a multimodal ensemble. Children were seen to do this with growing aptitude in the focal events.

**RESULTS**

In the data gathering stage of this study, participants were invited to create music texts freely and spontaneously as they interacted in music play with peers. The researcher observed, sometimes providing prompts, and took video clips of participants negotiating responses through music. Participants consistently displayed purposeful, effortful behaviour while selecting semiotic tools in co-operative music play.

In collaborative explorations of music transformation, Edward and Anna invented duos on the xylophone that were rhythmically complex, alternating with one keeping a beat while the other played syncopation, then vice versa. This playful dialogue involved using a limited melodic range on their xylophone. The richness of their motifs echoed the rhythms of jazz music used in the general music program. Stephen and Leighton used the same range with melodic variations in 3-note patterns, one on high and one on low register, keeping a steady beat. Daniel and Sophie demonstrated selections of complex rhythm patterns, timbre and dynamic range, and through gesture and gaze exchanged ideas. Dylan and Bob invented sung stories and displayed fine motor control on drums and xylophones, contributing a steady beat in ensemble.

The music dialogue between two peers on selected percussion was an extraordinary moment of learning where the children discovered new ways of making sounds through the affordances of the instruments, and transformed these sounds into harmonies and rhythms that fitted together in a musical whole. This was made possible as, in pairs, participants performed for their peers. They listened and responded to each other while immersed in performing an improvised piece using a limited range of pitched notes, developing new rhythmic ideas and combinations of notes in harmony.

Some activities involved transmodal redesign of experiences, first represented verbally then on a metallophone. Tracey told of a green bird flying away by repeating a sequence of three notes below the tonic,
then a rising glissando followed by a repeat of the low sequence in diminuendo, finishing softly on the tonic. Anna captured ghost-like sounds by softly striking the bass metallophone and playing minor seconds in rising sequences, finishing on the supertonic and leaving her “unbelievable” story unresolved, in suspense. Daniel made two darting, sharp, striking movements with his mallets, each note in turn, followed by two notes simultaneously, as a repeated motif with variation. This strongly expressed the terrifying power and influence of “a red snake lying in the grass” and then “biting my baby sister.” He demonstrated sophisticated awareness of structure and repetition in music texts. Leighton “saw a red-back spider at my home – in the bathroom,” capturing this with back-and-forth consecutive fourths and fifths, (C-G; D-G), a repeated G, then a final high, suspended E.

Bob explained how he “was just thinking it in my head, and then it made the sounds I wanted.” While he kept a steady beat without rhythmic variation, he explored the pitch potential of the instrument, with interval leaps from low to high, then back. Edward, his twin brother, “falled over – you know those cement steps – and I hurted my knee.” He expressed this on the metallophone by first scanning the whole range visually, then repeating the lowest note six times, following it with one high note at the top of the range. The individual stories were highly symbolic representations of experiences, first expressed in the mode of speech then transducted into the mode of music on the metallophone by selecting salient features of pitch, dynamics, rhythm and phrasing.

In whole group instrumental music inventions Bob developed leadership qualities, using conducting gestures (alternating folded arms and pointing), bodily actions and voice, shaping responses from the participants. Tracey also displayed leadership through gesture and voice, interacting with the group to weave a story. Millie was initially quiet and observant, but developed her agentive disposition through negotiation, animated facial expression and accommodating body language accompanied by verbal instruction to conduct group instrumental stories. She invited members to explain their choice of instrument, and how it helped tell the story. Daniel displayed agentive dialogic behaviour by constantly mediating and negotiating between peers using gesture, and by exploring the drum sets as he moved across the room. Dylan, Edward and Sophie contributed through body language and gesture, and limited verbal negotiation, to solve problems. In one classroom music event Tracey, who had recently arrived from Brazil, was bilingual but found difficulty in verbally expressing in English her account of an event with a bird that fell from a tree, and a little boy who saved it. However, she was much more fluent as she transduced the event from speech to music. Her verbal account came to life as she led the small group of participants in a music ensemble. Agentive in her role as “director” of a music drama, she requested each participant to select a percussion instrument. Together the children reconstructed meaning through choice of ways to play their instrument by exploring the potential affordances of the xylophones, drums and guiros. Her purposeful choice of who should play and in what sequence was based on visual, aural and gestural clues. Sometimes she watched a participant and chose them for their awareness and eye contact. In this way she chose Sandra as the little girl who saved the bird (changing the content of the previous story). Through listening to the disjunct sounds provided by the bass drum and guiro, she chose to add more complex elements to her story. These were the crocodile and the kangaroo (the latter being chosen as a motif running through the entire piece, because the participants were keeping a steady beat). This event was an example of transmodal redesign from speech to music. The decisions of Tracey and her friends
were made using purposeful ideas to advance the story and bring it to a satisfying conclusion. There were many levels of complexity in the choice of music elements and interaction of modes to form a multimodal ensemble of meaning. The music event was an effortful artistic expression of an experience.

Thick descriptions of music play revealed principles and purpose in the child’s selection of semiotic tools for communication of experiences and ideas. It was found that this selection sometimes involved a process of negotiation in not only what materials to use to make music texts in play, but how the child’s activities, embodied meaning-making and interests influenced the choice and use of these materials. Children were innovative in providing musical ideas or motifs, interacting by imitation or cross-rhythmic dialogue. During music invention, children constantly chose how they rearranged and featured recognised and familiar aspects of performance. They were engaged in redesign.

CONCLUSIONS AND IMPLICATIONS

Young children’s use of semiotic tools in music play was found to be multimodal in the use of tools (instruments, voice) and other resources (gesture, gaze, bodily action, proxemics) influenced by individual social and musical experiences. They used complex semiotic work to shape meaning in musically inventive practices during interactive classroom activities. This involved the interplay of many communicational modes - familiar and embodied representations of their ideas - for interpretation, redesign and reproduction (Mavers, 2011). The use of a social semiotic lens and multimodal analysis revealed how children creatively and flexibly negotiated and communicated using music elements in the mode of music to enhance their music-making dispositions, and shape new experiences through music play. Analysis of video data encapsulating children’s music dialogue revealed their capacity to redesign music texts in exploratory discourse, featuring embodied actions.

In this study, young children participating in intelligently structured music play demonstrated a secure understanding of elements in the music that they identified it as belonging to a particular genre or style. They used a variety of strategies to select and synthesise these musical elements and to express an understanding of different genres through movement, playing instruments, and in song. There was a general preference for certain musical elements - melodic motifs and rhythms - over others, selected in performance. Educators may accurately assess what children do know, their strengths and abilities, in activities where these elements are expressed through embodied and culturally familiar ways. Multimodal analysis shapes future planning of learning activities, enabling children to build on prior knowledge and experience to strengthen their musical identity. This approach rejects a deficit profiling of children. Preliminary results should be useful for policy and practice that enriches young children’s learning with multimodal programs that are inclusive of and sensitive to embodied, musical representations of knowledge and ideas.

REFERENCES


(pp. 77-91). USA: MENC.


Diagnault, L. (1996). Children's creative musical thinking within the context of a computer-supported improvisational approach to composition. Northwestern University, USA.


Mavers, D. (2011). Children's drawing and


