LISTENING IN MUSIC EDUCATION: AN ANALYSIS OF THE LISTENING PROCESS

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Abstract

The development of appropriate listening skills in children is a current concern in music education in Australia. In addressing this concern, this paper considers theoretical aspects of listening and the place of listening in the cognitive process. Music and music listening also are discussed in the context of them being cognitive processes relevant to children involved in music activities. Factors pertinent to the development of listening skills in children are considered and listening, together with other cognitive skills that lead to the development of selective awareness skills in children, identified as underlying all activities in music education.

Introduction

In the recent position paper prepared by the Australian Society for Music Education (ASME), it is stated that "the approach to listening is one of the greatest challenges in music education today" (1991, p.2). The article presents listening, along with creating and

performance, as one of the three essential modes of response in all stages of music education from preschool through to secondary school. A concern expressed in the paper is that children are conditioned by the "ubiquitous flow of background music" (p.2) in most environments, and so from an early age they do not listen selectively.

Listening is fundamental in all music activities. It is through listening that "sound is conceptualised and ordered, translated in performance, and received by listeners" (ASME, 1991, p.1). Listening is not the mere aural reception of sound but rather is a complex process in which a series of actions occur. Therefore, in considering how best to improve listening skills in music education, it is necessary to first understand the concept of listening itself. Music educators need to be aware of what constitutes listening before considering how to develop strategies to improve listening skills through music education.

While music educators recognise that listening is an essential mode of response in music education, the development of skills associated with listening are usually assumed to just happen. In Australia, most music education programs do not address the issue of what constitutes listening skills although the development of aural skills is stated usually as an aim and/or objective of the music program. What distinguishes listening or aural skills from all other skills of music is that it is through listening that children learn to recognise, discern, differentiate, compare and analyse sound. It is these skills that identify listening as a component of

cognition, and it is in this context that listening and the development of listening skills has to be considered in music education. In particular, the "skill of selective awareness" (ASME, 1991, p.2) has to be identified because the acquisition of such a skill becomes increasingly important in a world where children are not listening.

What is listening?

The assumption by many educators that listening just happens, appears to be world-wide (Bygrave, 1991a). It is only recently that educators generally, in Australia and in other countries, have become aware that a child's listening-span is short. During 1989, the Swedish Government and Skolöverstyrelsen (Education Authorities) conducted for the first time a nation-wide listening test. That test utilised music activities and was administered to seven thousand children in 373 classes; they were aged 8 and 11 years and in their 2nd and 5th years of schooling, respectively. Results from the tests indicated that teachers and students perceive listening in different ways. The younger children on the one hand saw themselves as listening frequently, while the teachers on the other, were of the view that the children listened only occasionally. In discussing the findings of the test, Sandberg (1990) has suggested that perhaps young children see themselves as receivers of sound and equate listening more with simply sitting still.

Although research in listening dates back some fifty years, attempts to define listening have been varied and generalised.

Definitions appear to have revolved around the issue pertinent at a particular time such as categories of listening, different listening purposes, skills associated with listening, and how listening is measured. Devine (1978), in his review of listening, writes that "a simple definition, completely acceptable to all, has yet to emerge" (p. 297). Wolvin and Coakley (1985), suggest that "*the* definition of listening is still in the developing process" (p. 43); they define listening "as *the process of receiving, attending to and assigning meaning to aural stimuli"* (p. 74). Robinson and Smith (1981) have constructed a model of listening for assessment and instruction. They note that there is no widely-accepted definition of listening but acknowledge that the act of listening "is more than hearing; it is more than attending to sounds" (p. 2).

Before discussing listening in any context, it is necessary to distinguish between what constitutes 'listening' and what constitutes 'hearing'. Hearing can be identified as the beginning of the listening process. It is associated with perceiving sounds through the actual physiological reception of sound in the auditory passages of the ear. What the listener can hear by way of the frequency and pitch of sounds, is measurable through studies on tone (Johnstone, 1989). However, the process of listening, what actually occurs when someone listens, is generally seen to be difficult to quantitate. Researchers in language communication claim that what remains elusive is the "direct access to the listening process itself" (Anderson & Lynch, 1988, p. 7) due to the complex combination of skills involved in listening.

Listening and cognition

Most authors on the subject of listening assume that understanding is part of the process of listening. Barker (1971) is one of the few authors to use the term 'understanding' in a definition of listening. He defines listening as "the selective process of attending to, hearing, understanding and remembering aural symbols"; he briefly qualifies his use of the term - "*understanding* refers to the assignment of meaning to the messages received" (1971, p. 17). Robinson and Smith (1981) use the term 'understanding' synonymously with 'comprehension' in their model of listening. In this model, the skills in a listening sequence are divided into three major parts - input, listening, and output. Each of these three parts has several components:

1. Input - The verbal and non-verbal messages the "speaker" conveys to the "listener" through the interaction of verbal components such as the clarity of articulation, the level of vocabulary, the complexity, duration and quality of the message, and non-verbal components of the message as in visual communication.

2. Listening - The cognitive process which identifies the prerequisite skills of attention, acoustic competence (hearing), and language competence (perception, syntactic, semantic), as necessary before listening and the associated skills of comprehension and memory can occur.

3. Output - The observable response of the listener through, for instance, a verbal response, a physical response and/or a written response.

Robinson and Smith (1981), Smith and Robinson (1986), and Robinson (1989), also suggest that there is a reciprocal interaction between the three major parts, input, listening, and output. The observable response or output from the listener could, for example, provide a direction for future input. Similarly, a verbal response, a physical response or a written response can recall the listening task. Although the purpose of the model is for assessment and instruction in language listening skills, the identification and isolation of parts and certain components of these parts of listening, allows for some analysis of the process of listening applicable to any listening purpose.

An area identified by some theorists as needing clarification and further investigation is that of distinguishing the cognitive skills associated with listening such as those of memory, comprehension and thinking in the actual process of listening. Devine (1978) tussled with the link between listening and thinking in discussing whether listening was simply thinking. He concluded that "Listening at its simplest, probably involves minimal thinking activity; in its higher forms . . . listening certainly involves a good deal of high level mental activity" (p. 303). Wolvin and Coakley (1985) also note the difficulty in determining precisely the difference between listening and thinking particularly in association with the testing of listening skills. Because of the

emphasis on comprehension in many auditory tests, they query whether it is the actual listening skills that are being tested or merely thinking and memory skills.

A similar query also arises when considering the development of listening skills in music education. Do cognitive skills such as those of attention, memory and comprehension overlap with listening or can they be distinguished individually in the listening process? In the model of Robinson and Smith (1981) the cognitive skills of attention, memory and comprehension are associated with listening in the listening component of the model. The reciprocal interaction between the three components in the model (Robinson & Smith, 1981; Smith & Robinson, 1986; Robinson, 1989), suggest that these skills also extend into the input and output components of the model. Therefore, the distinguishing of listening from attention, from memory, or from comprehension in the listening process, needs to be considered in the development of listening skills in music education.

Music and cognition

All elements of music - rhythm, melody, dynamics, tempo, timbre, harmony and form - can be adapted, revised, utilised and integrated to provide an educational means for knowledge acquisition. Through such means, musical activities can be related to the three major domains of learning, namely the affective, the psychomotor and the cognitive. Traditionally, only the affective domain of learning (how the child receives, is motivated by,

responds to and values an activity) and the psychomotor domain of learning (how the child imitates, manipulates and articulates skills involving use of the body and some use of the intellect) have been seen to be associated with music.

Investigations of the thinking processes which occur when an individual takes part in musical activity, have now led to an identification of music with the cognitive domain of learning. Researchers of music activities have identified components of cognition in elements of music; these include memory and attention in pitch (Deutsch, 1977; Deutsch & Feroe, 1981), memory of melodies (Bartlett & Dowling, 1980; Dowling, 1982), structures of pitch, melody and rhythm (Howell, Cross & West, 1985), and the mental processes involved in composing, performing and listening (Sloboda, 1985).

In music listening, the application of successive and simultaneous cognitive processing skills by the listener have been identified (Fiske, 1982, 1984; Serafine, 1983). It has been suggested that cognitive processing takes place when the listener identifies what is and what is not music (Serafine, 1988), that there are cognitive aspects of listening to music such as memory structures (Minsky, 1982), and that listening to music involves cognitive skills of organisation and relationships (Hedden, 1973). The use of cognitive strategies such as image-comparison and check-list strategies also have been studied in music listening (Fiske, 1985), and a model of music cognition has been proposed (Heller &

Campbell, 1982, 1988) for testing the listener component of the music communication process between performer and listener.

Having identified components of cognition in music and in music listening, how does this relate to children in music education? Serafine (1988) already has explored the development of cognitive processes through musical tasks with children. Her experiments indicate that cognitive processes do exist in relation to musical tasks and although not strongly evident in children around five years old, they are well established in children of around ten to eleven years of age. She also has found a rapid development in the musical understanding in children of a similar age. Two of the more relevant findings from the studies of Serafine (1988) are:

1. Young children through listening first identify and understand the global features or characteristics of music such as texture ('thick or thin' music), tempo (fast or slow music), dynamics (loud or soft music) and timbre (tone color) in a piece of music. As children become older, more analytical monitoring and strategies develop particularly in pitch discrimination.

2. Music cognition in children appears to result from factors such as general cognitive development and through everyday experiences with music.

Other important points revealed in her studies were that traditional instrumental music training does not appear to

influence the acquisition of cognitive processes, and that children with no formal instrumental training are not disadvantaged in musical tasks and perform as well as those children who had had training.

These findings indicate that in musical tasks, young children do use the cognitive skills of listening, memory, understanding and analysis, and that they develop the metacognitive skills of monitoring and the use of strategies. As well, the development of general cognitive skills and daily musical experiences appears to affect music cognition in children; traditional music instrument training does not. While these studies establish a link between listening, cognition and music activities in children, the relationship of these to the development of the listening skills in children participating in music education has been only recently established (Bygrave, 1991b), and will be the subject of a further communication.

Music education and listening

In discussing listening as a component of music education, two factors emerge as pertinent when considering the development of children's listening skills. These are:

1. The age at which listening skills develop optimally in children.

2. How to best develop listening skills in children.

In considering the first factor, it is well recognised that auditory discrimination and sound differentiation occur early in children. Tests measuring development in children such as the Griffiths Mental Development Scales (Griffiths, 1970), the Denver Developmental Screening Test (Frankenburg, Dodds, Fandal, Kazuk & Cohrs, 1975) and the Bayley Scales of Infant Development (Bayley, 1969) indicate that response to sound occurs in the first month of a child's life. Musical awareness, particularly of songs and instruments, in children around six months of age is evident in studies by Moog (1976) and by Chang and Trehub (1977), and a recent study by Reis and Van Bloem (1990) has found that infants from birth can apparently respond and match the sung pitched vocalisations of their parents.

It would appear from the studies undertaken by Serafine (1988) that children learn to interpret music well before the age of seven. Sims (1990) in discussing the development of music concepts, has proposed that children aged three to six-years-old acquire the ability to discriminate in a listening context. In a study by Heller, Campbell and Gibson (1982) the ability of children to discriminate similar interpretations of melodic passages from dissimilar interpretations was found to improve in seven to nine-year-old children and to level off in children aged from nine to eleven years. These studies emphasise the importance of teaching listening as a skill in music education at an early age.

The second factor concerns how to best develop listening skills in children. Listening is a defined activity along with singing, the

playing of music instruments, moving and creating, in most music programs in Australia. It is this identification of listening as a separate activity that tends to lead to its isolation by teachers during music lessons. A study by Baldridge (1984) in the United States of America (USA), has found that teachers in elementary classroms seem to think of listening as a separate activity in general music activities. Listening was not seen as an activity permeating all musical activities, but was utilised mostly by teachers in singing, the playing of instruments, and in traditional listening-appreciation music lessons. In discussing how teachers might approach listening in elementary schools, Baldridge (1984) has suggested that teachers teach listening as a specific skill through explaining or asking questions to create a critical awareness of listening in all musical activities.

Studies by music educators in the USA and in Sweden indicate that the teacher has an important role to play in developing listening skills. A study of preschool children in the USA by Sims (1986) has provided data indicating that high attention levels exist in three-to-five-year-old children during music listening activities when teachers maintained an enthusiastic non-verbal contact, such as through facial expressions, with the children while they listened. Linzander (1990), a music educator who was involved in designing the listening test in Sweden, directs the children's attention in the teaching of listening as a specific skill. Her first music lessons with children commencing school are based on making them aware of the concepts of listening and hearing. Children are taught to listen to what sounds are, to recognise and to distinguish between sounds, to

discuss associations with sounds, and to use their imaginations to think about sounds through different musical experiences and activities (Linzander & Aurell-Hellström, 1989). Linzander (1990) has found that by creating a learning environment, wherein the children's awareness of their own listening and associated listening skills develop, leads to the concomitant development of their concentration, thinking skills and understanding.

Listening as a process involving other cognitive skills of attention, memory and understanding has been discussed earlier in this paper, and the difficulties noted in separating one cognitive skill from the other. If the listening process has reciprocal interactions between skills as suggested, then listening has to be considered as a cognitive skill in association with attention, memory, and comprehension. It is important to acknowledge these interrelationships in addressing the issue of the acquisition of the "skill of selective awareness" (ASME, 1991, p. 2). It would appear that as children develop listening skills, they also develop skills associated with "selective awareness", skills of attention, memory, and understanding. For these skills to develop and strengthen however, music educators need to recognise that listening underlies all activities in music education and to direct their teaching towards encouraging children to listen to recognise, discern, differentiate, compare and analyse sound in any music skill, activity, experience, and environment.

Conclusion

The defining of listening as a cognitive process within which other cognitive skills such as those of attention, memory and comprehension are identified, provides a wider context in which to consider listening as a component of music education. Such a context also allows for skills of awareness, of selection, and of appreciation to be learnt. The role of the music educator is crucial in approaching the development of listening skills in music education. If children are to learn to distinguish listening from hearing or listening from simply sitting still, music educators must acknowledge that listening skills need to be taught, that they are part of a process, and that listening is involved in all aspects of music education.

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