

## Chapter Ten

### CONCLUSION AND IMPLICATIONS

#### 10.1 Introduction

The aim of this chapter is to relate the evidence discussed in the previous chapter, that the listening skills of students in JACs can develop through their participation in a music program, to the implications this could have for any students with learning difficulties. The academic, cognitive, and social development of the JAC students participating in the music program will be discussed. Conclusions from this discussion will provide the basis for suggesting that children with learning difficulties could benefit from the inclusion of an appropriate music program in the design of future school curricula.

#### 10.2 Students with learning difficulties in a JAC

Three common characteristics associated with children who have learning difficulties were discussed in Chapter One (see 1.3-1.3.3). These characteristics, which are applicable to students in a JAC, relate to problems in the academic, cognitive and social development of the student. In a JAC, students are seen as being slow to learn, inactive learners, and to have difficulty in applying the cognitive processing skills of attention, comprehension, memory, problem solving, and listening, to learning tasks. In addition these students too, often lack appropriate social skills in their interactions with others, have low self-esteem and lack self-confidence (see Chapter Four, 4.2.1.1 & Table 4.1).

Although further research needs to be done to confirm the results obtained in this study, participation in music activities by the students in the JACs described in this thesis, appeared to have a positive impact on their academic, cognitive and social development.

### 10.2.1 Academic development

Language is acknowledged to be an area where children with learning difficulties experience problems, especially in the acquisition of reading, spoken language and listening skills (see Chapter One, 1.3.1; Chapter Two, 2.8.1). Characteristics that link the development of music concepts with developments in language were noted in Chapter Three (3.2.2.6). It is apparent from the evidence discussed in Chapter Nine, that three specific linguistic skills important in the acquisition of early reading skills, listening comprehension, phonological processing, word retrieval and word knowledge, were acquired by many of the students participating in the music program. The impact of the music program on the phonological processing skills and the listening comprehension skills of the students was apparent at the posttests prior to the effect of the program on their receptive vocabulary at the postposttest (see Figures 8.2-8.7), suggesting that the music activities provided opportunities for the students to develop these skills which gradually began to have a positive effect on their word retrieval and word knowledge skills (see Chapter Nine, 9.2.3).

The apparent transfer of skills and knowledge acquired in the music program by some of the students to other areas such as language, is of particular interest. The issue of the transfer of domain-specific knowledge to general thinking and to other areas of knowledge, is one of concern to many researchers who debate the

merits of whether to teach students to develop a broad base of knowledge, or to develop general skills, for example, those of problem solving.

### 10.2.2 Cognitive development

The development of cognitive processing skills such as the three skills discussed above, was supported by experimental data (see Chapter Eight). It also was apparent, however, that the students participating in the music program demonstrated other cognitive skills through music activities (see Chapter Nine, 9.2.1). The use of attention, comprehension, memory, problem-solving, and listening skills by the students was reflected in their verbal, written and motor responses to messages given by the teacher or by a peer, during music activities.

The music activities also provided the students with five areas of experience - listening, singing, the playing of musical instruments, movement, and creativity, to develop concepts, and the use of strategies. For example, in solving the problem of how to notate music on the chalkboard, (see Appendix D), the students used percussion instruments to practice the presentation of various sounds, and they received feedback from their peers on how the sounds should appear on the chalkboard. This led naturally, to more practice with the percussion instruments and to more feedback from peers. The students also frequently modelled their thoughts or ideas during music activities such as how to represent movement to a high sound, or how to build an igloo for the song "Okki Tokki Unga" (see Appendix E). This modelling often led to an extension of their thoughts and ideas either through the actual act of modelling and through the interaction with the class group.

### 10.2.3 Social development

In many of the music activities, the students interacted with their peers or teachers during learning tasks. For most of the students this was a new experience as, in the past, there had been few opportunities for co-operative learning in the classroom. The positive effects of these interactions became evident almost immediately. As discussed earlier in the thesis (see Chapter Five, 5.3.3.1; Chapter Nine, 9.4.3.1), the members in one music group co-operated to give an impromptu class performance at the weekly school assembly in the second week of the intervention period.

Further examples of the effect of interactive music activities on the social development of the students were indicated by the four case study students participating in the music program. Three of these students had been reported by their teachers as having poor social skills and the fourth student as having little self-confidence (see Chapter Six). At the end of the intervention period, both teachers implementing the music program, reported positively on each of the students development in social interactive skills, self-esteem, and self-confidence. This led to one of the teachers commenting on her poor judgement in applying the criteria for selecting one of the case study students who had improved through participation in the music program, despite being not expected to do so (see Chapter 6.6).

### 10.3 Implications for the future

Recently, researchers (Adelman, 1989; Bartoli, 1989; Sigmon, 1989) have expressed the need for educators and caregivers to consider the interactions, the tasks and associated skills, within the environment of children with learning disabilities. The results of this study suggest that serious consideration should be given to the implementation of appropriate music activities in school curricula with students experiencing learning difficulties. Music activities provide listening activities through active interactions and can be seen as pre-requisite activities for the development of language and reading skills, especially in younger children whose cognitive processing skills are not yet developed.

The current trend to mainstream students with special needs involves a shift from an the emphasis on the special educational setting for these students to one on educational programs. Recent publications consider the implementation of programs for children with learning difficulties in the pre-school (NSW Department of Education, 1989), and the use of early intervention programs by teachers in integrated settings (NSW Department of School Education, 1990). This latter document has been designed to assist teachers in developing programs which offer a range of experiences to develop skills of cognition, motor, communication, social, self-help and appropriate behaviour in students with difficulties in learning. A daily session involving music and movement to develop language, social and gross motor skills, has been suggested as part of the weekly program plan in support classes. If educators and caregivers are "to develop integration as a quality learning experience" (Sawatzki & Walsh, 1991, p.26), programs should be available that can accommodate both the student with learning difficulties and the

other students in an integrated setting. This study has indicated that a program of selected music activities, which can be implemented by teachers with no musical background or prior musical knowledge, can provide quality learning experiences for children with learning difficulties in a JAC setting.

In light of data indicating the relatively large number of children aged from five to nine years with learning difficulties attending ordinary classes in schools in Australia (see Chapter One, 1.3), it is suggested that participation in regular music activities also could benefit students in these classes. As has been discussed in this thesis (see Chapter Two, 2.8.1; Chapter Nine, 9.5), children generally are inattentive listeners. This problem often is exacerbated by educators, parents and caregivers who largely disregard the prerequisite skill of attention in the listening process, assume the natural development of listening skills in children, and tend to commence communication with children at the comprehension level. Students often have limited listening experiences to develop efficient listening skills. Children with learning difficulties in particular, have to be taught how to listen, to learn to focus on what is relevant and what is appropriate or inappropriate in a learning task, and within the learning environment. As mentioned above (10.2.2), an appropriate music program provides task-structured activities that encompasses five areas of experience. These areas in turn can provide for the development of effective listening skills and cognitive processing skills and for the natural development of learning strategies transferable across the school curricula.