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Music Education Research & Development for a New Millennium

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Music Education Research & Development for a New Millennium

This is the first AARME Conference to be held in Perth and the first to have a very special delegate from New Zealand. The conference is the third to follow the 'new' format of including round table discussions and issues forums in addition to the usual research papers. Although we did not have huge numbers, we experienced a very lively and stimulating environment which provided many opportunities for novice researchers from Western Australia to interact with more experienced researchers. Participants were treated to a concert, a tram ride and a sumptuous 10-course Chinese dinner overlooking the beautiful Swan River.

Mindful of humanity's position at the threshold of a new millennium, the conference focussed on a range of issues relevant to research and development in music education in this context. The keynote speaker, Professor David Aspin, illuminated the gathering with an outstanding delivery on the mission of arts education and lifelong learning. His impressive second keynote address centred on a response to David Elliott's praxial philosophy and matters related to formulating a philosophy of music education. Research papers ranged from trends in Australian music education research and assessment of student outcomes to special education, voice science and music technology. The relevance of aesthetic music education, implications of inclusivity and funding for the arts were discussed at three issues forums. Round table session explored topics such as corporate sponsorship, specialist pre-tertiary education and brass pedagogy.

My sincere thanks to the organising committee for their help and contributions throughout the conference. I also want to thank the external reviewers for undertaking a most onerous task so willingly without receiving any renumeration. And special thanks to Dr Vanda Weidenbach, our immediate past-President, the current President, Dr Jean Callaghan, as well as the entire AARME Executive and the various authors for their patience, support and encouragement, especially when I had to contend with the many computer problems in the course of producing this set of Proceedings.

Dr Sam Leong
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Keynote Address

Lifelong Learning: The Mission of Arts Education in the Learning Community of the 21st Century

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Abstract

Across the international arena governments, policy-makers and educators have been concentrating increasingly on the topic of Lifelong Learning. Recent publications from UNESCO, OECD, the APEC Forum, the European Parliament and the Nordic Council of Ministers have taken the theme of "Learning: Realising a Lifelong Approach for All" as their chief educational agendum over the next five to ten years. The reasons for this concentration are embodied in the "Four Pillars" of knowledge and skill on which UNESCO believes education in the 21st Century will have to stand.

The Arts have a particularly powerful part to play in adapting to and even leading the way in embracing the challenges and changes inherent in the imperative for learning to be an activity engaged in throughout people's lifespan. Their special emphases upon skills of exploration and discovery, flexibility and adaptability, initiative and iconodasm, creativity and imagination, and the observation of the highest standards of accuracy, rigour and personal endeavour, while at the same time forging new concepts, categories and forms of communication, production and presentation, provide learners with paradigms which lifelong learning in other fields can take as their models.

This paper will draw upon research and critical reflection presented in our recent publication The School, the Community and Lifelong Learning (London: Cassell 1998) to argue for and justify the indispensable importance and special role of the Arts in providing models of leadership for the whole community of learners across all ages, in supporting a positive approach to inter-cultural understanding and tolerance, and in encouraging all individuals, both on their own and in forms of co-operative endeavour with others, to conceive and create objects, artefacts and performances that will not only enhance their own lives but also add stature and value the communities in which they live.

Introduction: Lifelong Learning for New Types of Employment, Creativity, Leisure and New Modes of Expression

We are now entering an era in which our societies have the potential to cater for people's material needs without the necessity of all people being in full-time employment. This raises all kinds of questions about the importance of employment in people's lives and about the psychological and emotional needs that people's vocations and work occupations satisfy. Certainly there are sufficient changes in the nature and availability of regular paid work to make us realise that the days of full-time employment until the ages of 60 or 65 for all members of the community are coming to an end.

Changes are also taking place in the nature of work. Employment in the manufacturing and productive sectors has been decreasing; workers are now being trained in a range of skills so that they can play a part as multi-skilled members of work teams that can function in a variety of capacities and places. The number of jobs in the actual

manufacturing and production of goods has been decreasing, in proportion to the greater numbers involved in design, presentation and marketing. Meanwhile the number of jobs in the service industries have been increasing – jobs that are often episodic, casual, part-time – and the need for which is constantly changing.

Existing alongside high rates of mass production is an emphasis upon quality service to the customer – on preparing products and offering services that are precisely tailored to individual needs. This stress on standards of excellence in the provision of high quality goods and specialised services calls upon specific knowledge and creative skills possessed by individuals determined on the continuous improvement of the goods and services they currently offer and on the inspiration, creation and provision of new ranges of attractive products and specialised services.

Rapid change in the production and service industries have lead to a broad based knowledge requirement in the work place. In this context, we have had to get used to the notion of leaving the industrial age, with old forms of communication, production and working disappearing, and of entering the information age, with new forms of literacy and communication, that often leaves print behind.

These changes require a reshaping of our modes of thinking, working and creating. We are looking at a new reality that we can shape now, much of which is graphic and non-verbal. Increasingly oracy and literacy are expanding, as the requirement to be able to operate in graphic forms of communication begins to impinge upon our theories of learning, thinking, imagination and creativity that are helping re-define, expand and re-create the world we share in the new information and technology age.

The dominant technology of the future will increasingly be a union of computers and communication, which emphasises the increasing importance of multi-media technology in the presentation of information in words, structures, images, melodies and rhythms. These are going to be the new modes of envisioning and communicating messages and developing new forms and modes of inter-personal significance between people and between worlds, not merely black and white print on a page or chalk on a black board. We are therefore going to need people who will be able to frame and deliver such messages, who possess of a range of qualities and competencies: they will be articulate, divergent thinkers, effective communicators. Such qualities are related to the demands of the new forms of service industry and to creative and imaginative ways of expanding employment opportunities.

At the same time as creativity and specialised service provision is increasing in importance, in some spheres of human endeavour direct human involvement in the provision and monitoring of other products and services will be taken over by technology. People will in future be able to send messages, read books and newspapers, do their shopping, attend to all their personal financial affairs, and have their appliances serviced by computers, robots, and all the other devices of modern information communication and multi-media technology. In the future, from the point of view of industrial engagement, some highly able and information-rich computer intelligent people will be needed to create, apply and service all these increasingly sophisticated devices, while fewer and fewer people will be needed to do the jobs that such devices have steadily taken over from the human sector.

We have to accept all this as part of the change in employment prospects for the future. We need to realise, from the point of view of economic capacity, that, for the foreseeable future, there are sufficient resources and means of generating finance for many members of our society without all members of society needing to be in full-time paid employment.

This means that our society is going to need to find other ways than full-time paid employment to occupy the time, energy and understandable aspirations of significant numbers of its population. It becomes clear that one of the places and forms of activity in which such time, energy and creative enthusiasm can be expended lies in the world of culture and the arts.

New Concepts of Learning and Engagement in the Creative Arts

It is possible to look at the importance of the creative arts in the context of lifelong learning by pointing to the revolution that has taken place in concepts of knowledge and theories of learning. These have altered our thinking about and approach to education, in a major way.

Knowledge has ceased to be absolute, factual and coercive upon us. What we have now is the notion of knowledge as temporary, provisional, conditional and constantly changing. Knowledge now is much less like the fixed, stable and permanent structure of an architect-designed Greek temple and much more like a constantly shifting web in which all parts are integrated onto another. Knowledge is experimental, tentative and problem-orientated; above all it is criticisable, corrigible and subject to change.

Learning is now such that students are no longer viewed as receptive jugs waiting to be filled, as it were, in a classroom that is essentially didactic in its pedagogy, in which students receive and teachers deliver. Learning is now highly differentiated, student-centred, with a multiplicity of different styles and modes and individual paces. Our metacognitive research has highlighted the importance of learning being student-centred, motivationally driven, self monitored, contextually relevant and individually created and developing.

Knowledge and learning are now viewed as best engaged in and achieved on a cooperative rather than competitive basis; they are enabling and empowering. They provide us with concepts and categories that make sense to us because it is we who work to integrate them into our patterns of existing knowledge and understanding. This enables us to work out and set in place our own models and paradigms with which to work in our appraisals of things which we can then bring under our cognitive control. This kind of self-directed learning is rigorous and very critical. We are forever correcting ourselves, forever going back and "getting it right", particularly if we are working on computers. We now realise that by collaborating with each other and correcting each others' work we all as a group make progress faster than if we are shielding our work from each other.

It is as much as a result of changes in communication that these changes and advances in learning have been brought about: they have been facilitated by the revolution that is taking

place in information technology. The ability to communicate globally and internationally expands our awareness of increasingly wide boundaries and previously unknown territories of knowledge in this newly-interconnected, interactive network of computer communication. This new world offers immense resources for enhanced learning and creativity: information technology and modern communication is infinitely resource rich. This is a world of information and resources that is always available. It is personally controllable. It is immensely patient. It never gets angry. It never gets tired. It is universally accessible; it can provide us with an entrée to far wider archives of information and banks of data than are ever available for us on the shelves of our school and local libraries, however well-funded.

In this way communication and information technology is helping to re-define the place and the way people learn. In higher education, for example, it is now a readily accepted part of the pathways to personal advancement available through registration in institutions of higher education, that students can complete degree studies virtually without leaving their bedrooms and without accessing hard print media or even, because of virtual reality capabilities these days, needing to go into laboratories. Such possibilities of and access to the availability of learning from a distance and at any time of day or night are now also available to children and young people enrolled in our schools. These new modes of retrieving, handling and communicating information enables learners to construct new thought worlds for themselves, of innovation, imagination and immense creativity.

Implications for the Arts of Changes in Economy, Society and Learning

Changes in society, economy, theories of learning and the powers of modern communication technology impact upon but are also promoted by work in the creative and performing arts. In all these things the arts provide us with paradigms. They set the example of the revolution in theory of knowledge, in style of learning, and in communication. They are demanding. They require strict criteria of accuracy and attention to detail, clarity and rigour. Crucially they are iconoclastic: they alter the moulds of all that we do and create, and help us to look at reality in new ways and make judgments about it according to new canons of appraisal. This can be done through arts because it is one the chief features of the arts that they call existing categories and concepts into question and create and apply concepts, categories and criteria of significance that are uniquely their own.

In this they are analogous to and equivalent with the sciences. Workers, performers and creators in the arts are leaders in framing and forming new modes of thinking, new categories of working and imagining. The arts are paradigms of corrigibility and criticism. The concept of "getting it right" in the arts is something which exemplifies itself with every stroke of a brush, every movement of a violinist's bow, every move of a dancer's limb.

At the same time works in the arts bring all our learning, knowing and understanding together in one complete fusion, one complex web of thought and action, creation and imagination, because they "de-differentiate" all the constituent parts of the one organic entity that we see as the work of art (Ehrenzweig 1976). They bring together into one particular consummate

whole, entire layers of meaning that cannot be split off from the whole work in which they are embodied, without radically distorting or destroying its meaning, intelligibility and value.

We might, as an example, consider the poem by William Blake, The Sick Rose (cf Greger 1972). This consummate poem, so small as to consist of eight lines only, has as many meanings in it as there are audiences to listen to them and to discuss the poem. Yet these cannot be differentiated out as though we could strip off the various layers of meaning and somehow come to a central point. They are one perfect fusion. It is in this way that the arts are paradigms of the integration of knowledge and the relatedness and interconnectedness of all things (cf Arnaud Reid 1969).

The arts are student-centred too, in the stress they lay on the individual as learner, creator and performer. In the arts teachers can only help, teachers can only facilitate, teachers can only accompany and assist the student. It is the learner who stands in the middle. Furthermore, the arts are models of individual effort yet cooperative endeavour. Arts are productive in that they actually seek to expand peoples' horizons and cooperate in offering enrichment to them rather than being competitive.

The idea of lifelong learning can find particular expression and challenge in the world of the arts. People's painting, writing, poetry, dance and music give them interests, skills and commitments that are life-lasting and which revivify their imagination. The arts show us alternative visions of what it is possible to be. They can help us work out ways of creating satisfying and life-enhancing possibilities for ourselves to create a pattern of preferred life options.

Finally, the arts are examples of the democratic spirit at work: the arts are paradigms of the open society. Karl Popper's view that it is only through trying to solve problems, seeking and attending to criticism from whatever quarter it comes, not merely delegating responsibility but also engaging the notice and attention of all those who have an interest in the work, that we can create an "open" society, is particularly exemplified in the arts. For this is the way in which the creative and performing arts work – facing problems, setting up hypotheses as solutions to those problems, trying to criticise the tentative solutions our productions offer, and being prepared for criticism and attempted correction or improvement of the work we put forward – this is the daily experience of any visual artist, actor, dancer or musician. In that way the arts are models of the democratic life at work.

The artistic life is one of constant challenge. It is the task of the educator, particularly those working in the arts, to help the learners in our community – of whatever age, of whatever interest, with whatever gifts – to make the search for artistic expression and aesthetic experience in their own lives and that of the community the focus for their search for quality more generally and to make the achievement of quality not quite not so difficult and perhaps a little less rare than it might otherwise be.

The Arts as Focus for Community Interaction and Involvement in Lifelong Learning

There are thus many good reasons for seeing the arts and cultural activities as focuses of community involvement and lifelong learning. Many people are drawn to the arts and cultural activities because of the opportunities for social interaction and the practical enjoyment of creative activity that they offer. But it is important that enjoyment of the arts should be made accessible to all social and ethnic groups and be available in all geographic areas, urban, suburban and rural.

To preserve equity and access it will be important to monitor the availability of such developments and activities and to watch for the emergence of high-priced structured courses and costly pursuits, for these will clearly disadvantage some groups that might otherwise benefit from participating in such activities as they offer. Schools can provide a key cultural venue for engagement in cultural activities and artistic pursuits. Schools are in a position to promote the widest possible participation in cultural life, and this will be of major assistance in the aspiration and commitment to create a better integrated community. It is to make possible and promote such a community integration that schools must develop more accessible cultural and artistic programmes.

One strong reason for seeking to make such programmes more accessible is that the arts have the potential to provide meaningful learning experiences for individuals and groups who might otherwise feel marginalised. There is a need for educators, in partnership with other groups, to lobby for the right of all members of the community to have access to cultural activities and artistic pursuits and to courses of training and education in the arts – especially for those with disabilities or those who may be disadvantaged or marginalised in other ways.

One example of a successful programme to achieve this can be found in the work of Arts Access in Australia. This organisation has put together a special programme for young people having special needs and this has proved successful in offering an introduction to and guided activity in the arts, in ways that give people a real sense of inclusion in the educational milieu, where such activities and experiences were being made available to everyone. This is just one example that provides evidence of the hunger for cultural enlightenment that can find rich expression and fulfilment in community involvement in the arts and culture. This kind of work needs to be integrated into the work of schools and educational institutions of all kinds. It is important that there are comprehensive cultural programmes available and accessible to all.

In such programmes the school and the community can join together in and engage in a joint exercise of offering people opportunities to engage in life-enhancing activities. One can see the possibility of dual community-school centres, where there can be provided courses and programmes in the arts, crafts, leisure activities, theatre, a whole range of learning activities in the arts for young people and for the community more broadly. Schools have the infrastructure, a hall (often with a proscenium, theatre lighting and amplification), a piano or even a music suite, art rooms, a gymnasium with a sprung floor - maybe even a dance studio - wheels for pottery kilns, woodwork and metalwork shops, and other such facilities and resources. In many schools, however, such resources and facilities are often locked away for

a large part of the week. These could all be opened up to the community in the interests of lifelong learning for all.

Such schemes can be especially exciting and educative if the provision of schools and community centres as places for learning and enjoyment in the arts can also be staffed by those having qualifications and who are actively working in the arts. This could involve expanding upon such schemes as "Artists in Schools" and/or "Artists in the Community" but also capitalising upon the contribution that people trained in particular crafts or trades can offer to such programmes. Professional craftspeople who are at the forefront of their profession are able to offer a great deal to schools and lifelong learning.

One word of caution needs to be made, however: the practices of artists and craftspeople are often focussed rather more on individual creativity than oriented towards the interests of an organisation or institution. This individuality will need to be respected as well as carefully managed. Yet the talents and creative efforts of such people could be put to immensely beneficial use: they could be encouraged to become more involved in arts and educational activities, showing the benefit and highlighting the importance of cultural endeavours to the general population, and in instilling greater enthusiasm and securing larger audiences for their work. Larger audiences, larger involvement in arts and crafts activities, greater community engagement can only lead to greater understanding and personal illumination. Greater participation can only benefit the arts, the schools, the community and society.

This last point might serve as the principal objective in promoting the arts and lifelong learning in schools and centres of community learning: to benefit both the individual and society. There are, however, also important economic benefits made possible by and accruing from engagement in arts programmes. It is worth noting that integrating the arts into the school might well be a means of assisting the school in income generation. Of course this would require a different way of thinking about resources in such areas; some modern approaches to local school management, including finance and budgeting, suggest that the raising of additional funds is a critical part of any school's success.

Awareness of this kind of emphasis in the direction and management of schools offers a new challenge for the arts community who, in the past, have not been noted for showing enthusiasm for including reference to such considerations in their work. But such an approach is important in planning and delivering all kinds of educating programmes; it has very serious implications for management and for the role and functioning of schools councils. Arts educators will do well to remember that, among the reasons for setting up programmes and schemes for the arts in schools, one of the important ones is the potential they have for assisting institutions to bring in further resources of finance, equipment and facilities, and a further range of personnel with skills and interests that complement those that the school already possesses.

There will of course always be some barriers to integrating the arts in schools. These will include "political" considerations as to their inclusion in the curriculum on grounds of their perceived status; there may be some difficulties arising from their need for resources; and management may find that the iconoclasm that is endemic to successful arts work militates

against management approaches privileging direction and control. In the past many enthusiastic arts educators have ended up disillusioned because artistic and cultural activities have been squeezed for space on the timetable, poorly resourced and managed, and often belittled and demeaned by people some of whom really should know better.

Much of the worst effects of these factors can be mitigated if teachers and educators appreciate that there is a need for coordinated cooperation. Often this can be achieved with more people in the provision of arts and culture programmes and in arts management at the community level. A positive approach to such provision and effective management could operate in ways that complement what is already being done, and could be brought to bear in the attempt to set in motion and draw upon the synergy of a range of diverse groups working together in a planned and strategic way, bound together by a common interest, concern and set of aspirations.

Suggestions for Specific Strategies

There are many ways in which the arts can offer opportunities for integrating the community into the life and activities of the school and for providing openings for lifelong learning. Examples of schemes integrating the arts into schools include: artists in schools or artists in residence programmes; holding exhibitions; providing studio space for dancers, painters and musicians with the expectation of performances as an outcome of such arrangements. Some schools have set up enrichment programmes that facilitate lifelong learning; others make arts groups welcome to use the school hall; others involve their students in mixed arts groups with local drama productions; yet others arrange for suitably qualified and artistically/culturally significant people in the local community to act as mentors in arts and craft activities. One other strategy to enhance learning in the creative arts might be for schools or other centres of learning to arrange for the conduct of master classes in schools with leading musicians, dancers, singers or writers. The ways in which the school can serve as a centre of provision of and access to forms of life-enhancing learning for the community are limited only by the range of ideas people have for bringing work in the arts and cultural pursuits to the notice of people in the wider community and then helping enthuse and encourage these people to take advantage of the schemes they offer.

One other forum for engaging the community in the activities of the school or learning centre might also be through programmes of Media Studies and Media teaching. With multi- media communication growing as it is now and likely to expand even further in future, people are going to use media quite differently from the way in which they use it now. All the various forms of communication media are changing rapidly and people need to be skilled to keep abreast of these advances. Students will find there is practically no end to the uses to which they can put their work in media and communication studies.

Students can use media access to contribute to local newspapers, to assist in the development of conference newsletters, to participate in taking photos of the elderly for local histories, and in helping compile archives of such history for study and expansion. Learners of all ages can read books, newspapers and reference materials on the world wide net, access and distribute information out of their homes, do much of their personal business

and even develop their personal relationships via the increasingly sophisticated devices of modern information technology. And what is perhaps of vital educational importance is the way in which use of these new media can be especially helpful when one is working with the visually impaired or those with learning difficulties. For them and for many others the new media provide educators with great aids to literacy and indeed give equal access and a sense of personal empowerment to all their users, whatever their personal capacities or talents.

There are of course some problems. Among these will figure the epistemological problem of the veracity of the images and information represented in and through the media. One picture, one report may tell both a thousand truths and a thousand lies: it is possible to manipulate pictures, to skew information, to process data in such a way as to distort, misrepresent and even falsify. Similarly it is quite plain that the Internet now gives users access to some things that our society might regard as undesirable – access to pornography, instruction in civil unrest, and the making of explosive devices. In some instances, computers can focus attention on the presentation of life in an oppositional mode; this comes about when information is processed only through binary logic – on/off, yes/no, bad/good – and can thus incline people to view reality through lenses that offer only antithetical, adversarial and generally conflicting perspectives. To learn how to deal with these phenomena, to adjust for possible distortion, to criticise and counter bias, to learn to evaluate the images and information that are presented – all this must be part of any education in the use and exploitation of the media and the information made available to us through them. The "open societies" of the arts have particular strengths here.

There is a further point to be made. A curriculum of arts activities and cultural practices, be they crafts, visual arts, dance, drama, media work, or music, should not be presented simply or solely as recreational pursuits. A programme in the arts should also focus on getting people to see them as vocational areas in which opportunities for possible future employment or application to employment can be clearly seen. Some work in the arts can help young people develop the knowledge and skills requisite for their entering a profession, vocation or industry involving the visual or performing arts or musical experience, or can help them develop skills that are transferable to other areas. The arts can be related to the possibility of securing future employment in a range of activities. As Arnold Packer (1994) put it, "Properly taught, knowledge of the arts can help youngsters with the know-how needed in the twenty-first century workplace".

Experience in the Arts requires students to acquire knowledge and develop a range of skills that can be transferred to the workplace. Many forms of artistic activity and creation, in the performing arts for example, call upon and develop highly complex skills of the management of time, space, resources and personnel. These are matters of daily artistic necessity experienced by the choreographer, the composer, the drama producer, and the visual artist. Moreover the activities of people in the arts make many demands on their technological competence: they have skills in lighting and set design, modern musical electronics, and forms of effective multi-media presentation. Furthermore the necessary skills of working in a team, negotiating, communicating, acting as a leader or being willing to be led, are exhibited in each artistic performance. Each of these must be integrated into school programmes in the arts.

There is the further point that effective work in the Arts occurs only when people have learned the skills of articulate, clear and sophisticated forms of communication. Those who have sought to develop their understanding of and ability to communicate in dance, drama, literature or the presentation of images through film, will have gained invaluable lessons for work in places that call upon such skills, whether in the professions, business or the local council chamber. They will have been immeasurably assisted by their hard work at acquiring the powers given to them by the concentration of the arts on conveying complex and heterogenous ideas and kinds of meaning in clearly intelligible, vivid, and compelling forms.

This emphasis upon communication of ideas in the arts often involves the production and transmission of material that is iconoclastic and innovative. As it is expressed by John Berger (1971), art demands that people do not ever "see the same way again". As Edwards Tufte put it (1991: 3), communicating "ideas through the body", expressing musical ideas, interpreting dramatic materials, and creating visual works ... "to effectively communicate ideas" are all parts of the methods, procedures and forms of signification that are central to work in the arts. All these qualities and operations show students of all ages and levels of competence how important it is to be effective communicators in this information age.

Central to our awareness of work in the arts is the notion that their approach involves problem-solving and this is something that can be taken by practitioners of the arts straight into any other workplace. These days those firms that are determined to excel in service and performance are engaged in a constant endeavour to improve the quality of their products and procedures, and are constantly exploring ways of bringing creative solutions to bear on the problems and challenges with which they are continually beset. Arts learning makes such a problem-solving approach a central part of their endeavours. Art lessons demand all the time that students do the best work that they can, that they integrate all competing considerations into a balanced composition, and that they weigh all the intangibles and incorporate them into an integrated whole.

This kind of approach can give students a far more realistic experience of making judgments in a complex world than other subjects that concentrate more on showing them how to "arrive at the right answer". The logic of the arts is not binary: it is multi-dimensional – as are most of the problems with which students will be faced in their employment and their personal lives.

The kind of thinking and operating in which students of the arts will learn to proceed requires them to be aware of the ways in which parts fit together to produce a comprehensive whole. Their work entails a planning, conceiving and delivery process that involves constant checking, monitoring, evaluating and trying to ensure excellence and the highest standards in the final product or performance. This kind of achievement is made up of activities that call upon many of the skills and key competencies called for in modern workplace know-how: As Mr. Holland's Opus graphically demonstrates, the planning and putting on of a play or a musical performance, the production of a film, the design of an exhibition of students' work, all demonstrate ways in which the skills called for in the arts and the world of work can be conjoined.

The Involvement of Many Partners in Promoting Culture and the Arts

Employers may like to consider the ways in which they can persuade school councils to promote work in the arts on the programme of a school's activities as one of the best ways in which their future employees' readiness to engage in divergent and creative thinking can be demonstrated, encouraged and developed. The concept of work in the arts which we have here explicated shows that it is very much in employers' interests to confirm and strengthen the place of the arts in the curriculum and to promote and ensure that access to courses in the arts will be laid open to all students.

Educators, parents and employers will want to ensure that arts subjects be given similar status in the activities of a community's educating institutions as that of mathematics, science and technology. For they will all realise that the lives and work of future employees, responsible citizens, and fulfilled adults in the community are likely to benefit just as much from the experiences they enjoy, the lessons they learn and the explorations they make in dance, drama, music, and the visual and media arts, as they are in calling upon their knowledge of science, technology or mathematics.

Opportunities for the promotion of the arts and other cultural activities in the life of the school are also likely to have a definite "roll on" effect. These activities offer openings for the development of micro-economic activities and small business works, such as cinemas, bookselling print-making and picture-framing, domestic interior design, cultural tourism and the like. There is the further point that integrating the arts into schools could also generate income for local artists. Arts education also affords opportunities for training people for positions in community arts management. In these ways schools can forge strong links with the wider community, particularly in respect of activities that have come to be regarded as constituting a prime part of our culture and community identity, and that make contributions to the welfare of that community of an economic and cultural kind. No-one who has seen the contributions made to European or North American economies and culture by activities, productions and exhibitions in graphic arts, theatre, music, dance, and film can be in any doubt as to the importance of such work.

For their part arts educators need to realise that they too are part of the changes occurring in school and community. Teachers who in the past worked largely alone are today having to learn to work in teams; teachers who once relied entirely on chalk, pens and the printed page are coming to the realisation that modern methods of learning require them to be expert in the educational use of e-mail, fax, modem, and video communication. Schools must adapt quickly to these modes of communication: those brought up and trained in one culture are now having to learning how to operate in others. Arts educators need to become adept in showing how their students' experience in setting the highest standards of endeavour and excellence for themselves in the arts can be applied to quality work elsewhere.

Arts educators need to show how the learning they offer their students is a demonstration of a deeper underlying purpose. Those in places of learning have to be able to argue that there is a direct connection between what their students learn and their ability to lead a responsible, productive, fulfilled life. Teachers of the arts have a powerful responsibility to

communicate the part their subjects can play in forging the connection between work in the arts and leading a responsible and satisfying life in the community.

Any educational experience involving activity and achievement in the Arts will quickly show us that work in the Arts enhances the quality of life for everyone. For the development of rich sources of personal fulfilment, for training in the skills called for in participating in an open, democratic society, the Arts can also do far more than giving people expertise in some complex and highly important skills that can be transferred and re-deployed in the workplace. They are also a major factor in the conception, construction and launching of individual learners into a responsible and fulfilled life.

This was well put in the Report of the SCANS Commission, US Department of Labor, 1994, quoted in the Pre-Conference Paper prepared for the 'Arts Education for the 21st Century American Economy' Conference held in September 1994 in Louisville Kentucky by Arnold H. Packer, a nationally regarded economist, labour expert and former US Assistant Secretary of Labor, now a Senior Fellow at the John Hopkins University Institute for Policy Studies:

> We understand that schools do more than simply prepare people to make a living. They prepare people to live full lives – to participate in their communities, to raise families, and to enjoy the leisure that is the fruit of their labor. A solid education is its own reward ... We are not calling for a narrow, work-focused education. Our future demands more ...

It is this kind of thinking that will stimulate and inspire those educators who see in the creative and performing arts a powerful force for motivating members of the community to respond to the opportunities offered to them by access to teachers, facilities and resources for extending their own learning beyond the period of formal engagement in full-time compulsory education. This will be most clear through such encouragement as can be given to them to engage in creating and communicating with other people by becoming literate and active in the arts. For in these particular subjects they might begin to explore the possibilities offered in them for developing their own interests and capabilities, for learning to live a productive life, and for contributing to the enhancement of society.

Conclusion

Early experience in home and school is essential to the development and promotion of interests and engagement in cultural and artistic activities. Children must be exposed to and engaged in these areas while they are young. To promote and support learning at school, schemes such as "Artists in residence" make it possible for individual schools or groups of schools to have their own artist-in-residence programme at little or no cost. Then there are ways of bringing people in from crafts and other arts professions, offering students and learners in the local community experience of supervision and crafts-mentor schemes; and there are self-development programmes, that are also helpful and important in promoting community engagement, as are contributions from community arts groups that can also stimulate the arts in schools.

In turn, schools and other educating institutions can open up their facilities and infrastructure to the Arts community, offering their hall for dance, a stage for local theatre, access to a piano and other musical instruments, a pottery facility, a studio for hi-fi and multi-media exploration, or simply by offering the use of under-utilised space to artists for exhibitions. In such ways as these schools can become more closely connected and involved with the activities, interests and values of important groups establishing, building and contributing to the maintenance of culture and value in the community. In return for the use of school resources and facilities artists and craftspeople can provide activities, exhibitions and performances for students and members of the school community. After-school programmes can be offered for work in dance, drama, visual arts. Perhaps a one-day-a-week multi-faceted arts programme after school hours could complement the after-school programmes offered in sports. The school, the students, the community and the artists can all benefit from such initiatives.

Already there has been considerable progress in taking the arts into schools. Cultural artists working in schools have been very successful in involving ethnic parents. In one setting, for example, at one local school a choreographer devised a dance evening with the school's students and forty-two different nationalities attended the performance, the first time that all of them had come together in one place. The programme recognised the needs of working parents by picking up and looking after the students involved during rehearsals that were held at weekends. Another programme drew refugees together, enabling them, through work in the arts, to reflect on where they came from, and helping them begin positively to look to the future.

In short the involvement of artists, craftspeople and designers with schools can be an excellent vehicle for creating a sense of community involvement and cohesion. The projects they tackle can be simple, such as developing a sensory garden for disabled students, or creating a playground for children living in an urban housing area. In such projects the skills of artists and craftspeople can be used to draw resources together, to provide a focus, and to stimulate people to be creative and productive in a non-threatening and supportive environment. In this way creative efforts operate as agents of change for the whole community.

For their part school students exposed to and engaging in such creative activities benefit by interaction with the artists who are able to work with the school and the community on such projects. The artists also benefit from access to facilities that they often have difficulty in providing for themselves and so are enabled to develop personally and professionally. For all such individuals and groups, work in the Arts or an arts based education offers a richness that is valuable in itself, no matter what people do later.

Schools committed to lifelong learning through the arts can run visual arts workshops, painting and drawing classes, garden design courses, work on theatre or musical performances, and have a mixture of young and older people working together in them. Schools can see their communities as places where people create and exhibit what they do, participate in creating endeavours and pass on their experience and achievements to other learners. As one example of this, one school had some wonderful essays and explorations of dinosaurs in their art work at the time when interest in the study of dinosaurs was strong

among school students; the school exhibited some of the art work in the local post office. At the same time, the post office was running a stamp collection on dinosaurs. The two together made for a splendid combination of artistic endeavour. Schools could do more of this kind of thing and could be even more open to community interaction.

These are the kinds of connections that enable schools to build and maintain links with their community and at the same time create environments that encourage people to think aesthetically. Schools and other learning centres can do much to provide a culturally rich environment and be a catalyst for people's growing interest and development of knowledge, understanding and capabilities in the arts. They can do this by maintaining links with people in the community, including different arts, cultural and ethnic groups.

There are of course centres for developing interests and capabilities in the arts and culture other than in schools. One thinks here of Art Galleries, Arts Centres, Museums and Film and TV Studios where there are untold opportunities for lifelong learning, in which such institutions' education or education liaison officers are most anxious to play a part. They can do this at every level and in every way. Within many Arts centres, for instance, there are programmes for kindergartens, families, school children.

It is only when we encounter the work of artists and craftspeople that we start to attend to the meanings and possibilities available in partnerships between schools and those constituencies involved in culture and the arts. It is very much part of the function of artists working in the community to assist in the development of people's self-awareness and aesthetic understanding. Understanding of aesthetics and comprehension of form and composition can be related to anything within the visual arts, landscapes, architecture, city scapes and can take place in a range of social, cultural, educational and religious milieux.

The artist can serve as a model for learning, continually striving for new means of communicating, or extending the use of a particular medium, continually extending the use of a particular technique, continually extending the boundaries in which they operate, looking for new experiences to extend themselves, and new networks of possible meanings in which they explore the expanding boundaries of the worlds they create. The quintessential artist is the best example of a person involved in lifelong learning. Pablo Picasso was quoted as saying that every child is an artist. The problem is how children and young people are to remain artists once they grow up. This is the task for schools and lifelong learning.

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Research Papers

The Italian Vocal Tradition for the New Millennium: Isaac Nathan's Singing Pedagogy and Current Voice Science

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Abstract

To meet the needs of the new millennium, applied voice research needs to take account of the understandings of the traditional Italian school of singing as well as of the new voice science. The vocal pedagogy of the traditional Italian school was imported to Australia in the 19th century by Isaac Nathan. Nathan, often dubbed the 'father of Australian music', was born in England in 1790 and emigrated to Australia in 1841. In Sydney he was active as composer, conductor, impresario and teacher until his death in 1864. Discussions of Nathan's contribution to Australian musical life in the second half of the 19th century have centred on his staging of operas and on his own operatic compositions. He was, however, also active as a teacher of singing. Trained in the Italian operatic tradition, in 1823 Nathan had published a book on singing, entitled Musurgia vocalis, which appeared in a revised second edition in 1836. This paper represents an initial examination of Nathan's writing on singing and a preliminary evaluation of its significance for the teaching of singing in Australia.

> Voices which are weak, will acquire strength; those whose quality of Tone is harsh, will become smooth, round, and sweet; and those which are the least flexible, will shortly be enabled to accomplish Passages in a style equal to Singers of the first eminence. (Nathan, 1819, xi)

Significance of the Research

The human voice is a uniquely convenient, portable musical instrument that can be used in music education and group music-making at all levels (Atterbury & Richardson, 1995; Durrant & Welch, 1995). Singing, therefore, is an activity employed in music education, from preschool activities to specialist tertiary training in singing. It is obvious that those involved in tertiary training in singing base their work on a knowledge of voice and a theory of how vocal skills are taught, and that - given the pressures of mass education, the growing competition for students and funds, and the growing demand for teachers to teach less and deliver more - the luxury of a trial-and-error approach to the teaching of singing is now less affordable than ever. But it is no less true - although it is perhaps less evident - that teachers working with young children in music and movement, primary school teachers preparing the choir to sing on a special occasion, amateur singers training the church choir, secondary school teachers producing the annual musical, and those training

adult *a cappella* groups are all as reliant as tertiary teachers are on theories of vocal pedagogy, even if they do not know what their theories are, or even that they have a theory. In order to achieve maximum results in minimum time, all music educators and choral directors need a knowledge of vocal technique (Phillips, 1992; Miller, 1995a). Applied research in voice and vocal pedagogy therefore has relevance to a wide range of music educators.

This relevance is greater today than ever before. The teaching of singing has traditionally been largely an oral, master-apprentice process relying on expert practitioners conveying experiential knowledge to students through demonstration and description of the results to be achieved and of the accompanying sensations. That tradition grew out of the approach to voice teaching of the *bel canto* period, beginning in Italy early in the 17th century. The traditional Italian school has been long revered for its musical and educational approach; recent assessment finds its precepts rest on a good understanding of efficient physical function (Miller, 1986). It is, however, an approach which is time-consuming, expensive and elitist. In the last 25 years or so, scientific knowledge of vocal function and vocal health has increased greatly, spurred particularly by new technology capable of displaying the larynx in operation, measuring muscular effort, and acoustically analysing vocal sound. Scientific knowledge of voice and technology promising real-time feedback on vocal sound suggest the possibility of more efficient approaches to some aspects of voice teaching, not just at the tertiary level but at all levels and in all kinds of music education.

However, to meet the needs of the new millennium, applied voice research needs to take account of the understandings of the traditional Italian school of singing as well as of the new voice science. As the eminent singing teacher and researcher Richard Miller says, "We live in an advantageous age in which the traditions of the past and the information of the present can be combined in exciting ways" (Miller, 1995b, p. 221).

Methodology

In other forums I have explored the applications of current voice science to the teaching of singing (see, for example, Callaghan, 1994; 1996; 1998). This paper complements that research by presenting an initial investigation into the teaching of the traditional Italian school as it was imported to Australia by Isaac Nathan in the 19th century, and by discussing Nathan's writing on singing in the light of modern vocal pedagogy and the findings of modern voice science. The methods of historical musicology were employed to identify Nathan's writings and to place his work in a cultural, musical and educational context. Nathan's prescriptions on vocal technique, abstracted from his writings, were then assessed by comparison with relevant findings published in current experimental voice science.

Isaac Nathan and the Traditional Italian School

Isaac Nathan, often dubbed the 'father of Australian music', was born in England in around

1790[1] and emigrated to Australia in 1841, living in Sydney until his death in 1864. In his 23 years in Sydney Nathan dominated the musical life of the Colony, composing, promoting concerts, conducting, teaching, lecturing and writing on music. Discussions of Nathan's contribution to Australian musical life in the second half of the 19th century have centred on his staging of operas and on his own operatic compositions (Callaghan, 1990; Wood, 1979). He was, however, also active as a teacher of singing.

Nathan's musical and vocal heritage included the Jewish tradition of synagogue singing and the Italian operatic tradition. His father was a cantor, who sent his son from Canterbury to the first Jewish boarding school at Cambridge with a view to his training as a rabbi. Isaac, however, decided on a career in music and his father reluctantly arranged for his apprenticeship with the singing master and composer Domenico Corri (Mackerras, 1963), a teacher acknowledged as a valuable voice theorist (Crutchfield, 1989). Nathan was articled to Corri from around 1810[2] and began his teaching as Corri's assistant.

Domenico Corri, born in Rome in 1746, had studied in Naples with the legendary opera composer and teacher Nicola (Antonio) Porpora from 1763 until Porpora's death (?1766). Porpora composed nearly 50 operas, but his fame rests on the fact that he was the teacher of most of the legendary opera stars of his day, including the castrati Uberti ('Porporino'), Farinelli, Caffarelli and Salimbeni. Haydn was for a time his studio accompanist.

In 1790 Corri moved to London, working as music seller and publisher with his son-in-law, the pianist and composer Jan Dussek. Corri's daughter, Sophia Corri Dussek, was a renowned concert singer, considered a leading exponent of her father's teaching (Foreman, 1968). In 1810 Corri published a two-volume book on singing training, *The singer's preceptor*. In 1823 Nathan published *The history of singing*, which appeared in a revised second edition in 1836 as *Musurgia vocalis*.

The pedagogical line thus runs from Porpora, through Corri, to Nathan. It is clear that Nathan's musical background was unusually broad, that he received the best possible training in the Italian singing tradition, and that his writings constitute important documentation of the state of singing pedagogy in the early 19th century.

Nathan's Teaching

Nathan had hoped to make his name (and the fortune needed to repay his debts) by success on the operatic stage. When his Covent Garden debut proved unsuccessful he opened an 'academy of singing'. Some insight into Nathan's approach to singing teaching

[1] Mackerras's biography (1963) and Foreman's *The Porpora tradition* (1968) give Nathan's birthdate as 1790. This has recently been questioned by Burwick & Douglass (1988) and *The Oxford companion to Australian music* (1997).

[2] The Oxford companion to Australian music (1997) gives the date as 1809 and Mackerras (1963), who gives Nathan's birthdate as 1790, says that he became apprenticed at the age of 18, which would make it 1808 or 1809. Burwick & Douglass (1988) nominate 1810, the year that Corri's book was published.

is - strangely - provided in his wife's novel *Elvington* (Nathan, 1819). After the title pages, preface and dedication (to Isaac), a 'Prospectus of an Academy for Vocal Music, on Mr. Nathan's System of Teaching Singing' appears. Mr Nathan promoted his Academy as based "upon a System, which, though not calculated or professed to perform miracles, will, by the close attention of the Pupils, to those Exercises which Mr. Nathan has composed expressly for the purpose, procure for them advantages not so readily attainable by any other method" (Nathan, 1819, p. xi). He promises exercises to strengthen weak voices, improve the tone of harsh voices, and achieve flexibility for inflexible voices. In addition, the musical ear will be cultivated and pupils "will have the advantage of the English, Italian, and German Schools in the same Lesson".

Pupils were expected to attend for two hours, twice a week, as a group, with the pupils divided into two classes "of four or six in each Class, according to their state of advancement. The first Class receives Instruction for one hour, without the aid of a Piano-Forte; while the second Class, in another Room, Sings, and receives Lectures on the Science of Singing, etc." Presumably Mrs. Nathan and/or an apprentice would contribute to the teaching. It is not clear whether the proposed group teaching was adopted for pedagogical or financial reasons.

'Three or four young Ladies, who are desirous of perfecting themselves in Music and Singing' are invited to be "received under the immediate care of Mrs. NATHAN, from whom they will receive every attention, and meet with those advantages of Society and intellectual Instruction calculated to speedily promote their Improvement" (Nathan, 1819, p. xii). Rates are quoted for them which include board. Different terms - unspecified 'Terms of Apprenticeship' - are advertised for "Ladies or Gentlemen desirous of acquiring the Art and Science of Music and Singing professionally, either for the Stage, Concert-Room, or as Teachers" (Nathan, 1819, p. xii). Perhaps these 'terms of apprenticeship' included individual tuition in exchange for assistance with the work of the academy.

The prospectus does not describe how Nathan went about achieving the promised results. For more detail about his teaching methods we must turn to his later writings. The vocal concerns receiving most weight in the *Musurgia vocalis* [3] of 1836 are those suggested by the prospectus for the academy back in 1819: vocal strength, tone quality, and flexibility. In addition, *Musurgia vocalis* gives great importance to realisation of the text. A brief discussion of each of these topics follows.

Vocal Strength

Nathan rightly links vocal strength and control to breath management: "Power, or softness, volubility, or sweetness, depend greatly on prudent management of the breath" (1836, p. 121). He points out that, while inspiration and expiration comprise a natural function of the "living system", "it is still in our power to repress or protract either of them at pleasure to a considerable extent, and thereby to render them subservient to the rules of music" (Nathan, 1836, p. 118). Thus, breathing should be so managed that the

[3] 'The Muses' work for the voice', i.e. the vocal part of the skills of The Muses.

"effect of the music may not be destroyed" by stopping in the middle of "a long division of notes, a cadence, or pause" in order to breathe (Nathan, 1836, p. 122).

A section devoted to vocal health warns against "the insolent quack" who calls himself a singing master even though in "total ignorance of the construction of the human voice" and may cause damage (Nathan, 1836, p. 143). Nathan likens vocal training to other athletic exercise, recommending gentle, daily training of "the nerves and muscles connected with the vocal organs, which gain strength and tone by such judicious practice" and counsels that "whatever agrees with the constitution cannot disagree with the voice ..., whatever tends to impair the general health will likewise impair the vocal powers" (1836, p. 143). He also recommends moderation in eating and wine-drinking. All these recommendations are in line with current research on vocal stamina and health (see, for example: Boone, 1993; Sataloff, 1985, 1987; Titze, 1993, 1994).

He advises building the voice from "any grave[4] sound within three or four of the lowest compass", making that note the tonic and exercising up to the third, then the fourth, the fifth, etc., until a scale is built (Nathan, 1836, p. 139). The note approximately a third or fourth from the bottom of the range has been identified as the optimal speaking pitch and using the speaking voice at its optimal pitch has been identified as a significant factor in vocal health (see Boone, 1977; Drew & Sapir, 1995). Nathan's recommendation thus makes good sense.

Tone Quality

Under this heading I shall discuss Nathan's treatment of intonation, registration, *messa di voce*, resonance and articulation. Nathan's attitude to intonation is fascinating. While acknowledging that in its general musical sense the term refers to pitch,

> intonation as applied to the human voice, comprehends all its properties of expression, which may be loud or soft, harsh or smooth, strong or weak, and these independently of its various inflections ... It relates to that strength, softness, swell and decrease of tone upon which, to a certain extent, all expression depends. (Nathan, 1836, p. 123)

This meaning of 'intonation' relates this aspect of singing both to language and to acoustics.

In language, intonational features - those related to pitch, stress, duration and voice quality - are used to give prominence to certain syntactic structures, to group related items, to make lexical distinctions, and to communicate emotional and connotative signification. Vocal pitch, resonance and word articulation are interdependent parameters reliant on the movements of the articulators, with each vowel sound corresponding to a characteristic pattern of articulator adjustment. Each articulation also corresponds to a combination of formant (vocal harmonic) frequencies characteristic of that vowel. While in musical terms the lowest harmonic, or fundamental, is regarded as the pitch of the note, each vocal sound has a complex harmonic structure which may be varied by articulatory

[4] Nathan uses 'grave' for notes low in the range and 'acute' for notes high in the range.

adjustments (Sundberg, 1987). These variations are perceived as differences in timbre, vowel quality and intensity. Changes in formant frequencies may even change how the pitch of the note is perceived.

As Nathan says, "if the singers [sic] intonation is imperfect, all attempt at expression will be vain" (1836, p. 123). He goes on to recommend "constant and assiduous practice" (p. 126) of the diatonic, chromatic, and enharmonic scales, allied with listening to good music-making. Disagreeing with his master, Domenico Corri, he advocates commencing with the diatonic scale rather than the chromatic. He suggests singing with eyes closed as an aid to accurate intonation. Nathan regards careful practice of the diatonic scale (beginning unaccompanied, and then accompanied at the piano by a variety of harmonies, including discords) as the foundation of all vocal work: "Grandeur, power, roundness, sweetness, and steadiness of tone, all depend on this practice" (1836, p. 127). The inaccuracy of piano tuning is discussed at length and the student advised to adjust intonation according to harmonic context. He lays great stress on audiation: "the mind receiving the impression of sound through the ear, that organ may be exercised in music as in other branches of education" (1836, p. 125).

Nathan's discussion of vocal registration is more problematic. He seems in the main to be discussing three registers: *voce di petto* (chest), *voce di testa* (head) and 'feigned' voice. He recommends using 'feigned voice' in uniting the chest register with the head register:

> The rule experience pronounces infallible is this:- when the singer after having cultivated the lower tones, (which form the basis and give the character to his voice) arrives at the *break* or meeting of the registers *di petto* and *di testa*, let him proceed in the *feigned* voice alone; let him gradually unite it with the chest voice rather by its own enlarged volume than by any exertion of the latter - thus affected [sic], the junction will be imperceptible, and once gained will never be lost. (Nathan, 1836, p. 146)

However, it is difficult to ascertain exactly what is meant by 'feigned voice'. This context suggests that he is speaking of the male voice and referring to falsetto, but his instructions on other matters in other parts of the book seem to contradict that assumption.

After discussing the position of the mouth, Nathan introduces the topic of articulation as "the next grand requisite to intonation" (1836, p. 163), referring to "that distinctness and accuracy of expression, which gives every syllable and sound with truth and perspicuity, and forms the very foundation of pathos and grace" (1836, p. 164). In current literature, anything to do with the position of the articulators and the conformation of the vocal tract is regarded as relating to articulation and resonance. Nathan's discussion covers the position of the mouth in sustaining vowels, control of the soft palate to avoid nasality, articulation of diphthongs, and precise use of tongue and lips. For difficulties with the tongue he recommends practising articulating with the teeth closed, "although I am no advocate for either singing or speaking with closed teeth" (1836, p. 166).

A detailed discussion of emphasis and accents follows, linked to a chapter on expression. Accent is defined as a stress on a particular vowel or syllable, with emphasis being defined as the particular tone of importance or stress given to whole words or sentences

(Nathan, 1836, p. 179). By 'expression' Nathan means "the particular form, manner, or style, used in communicating our ideas" (1836, p. 195), the way emphasis and accent are used to appeal to the feelings. In the following passage the relationship with language and acoustics is made explicit:

> Music, being both an art and science, must depend upon expression; for the connexion between it and language proves it to be natural to man. Hence we with facility pass from the accents of speaking to diatonic sounds ... Now, music having occasionally been defined to be an arrangement of sounds in proportions, which result from consonance, it is clear, that it must inherently demand expression. But, the knowledge of this proportion of sounds constitutes THE SCIENCE: and this is that, which the ancients called harmonical music ... (Nathan, 1836, p. 221)

Flexibility

Nathan deals with flexibility under 'execution', which he defines as "a facility in performing difficult divisions, and other intricate passages, with an easy velocity, combined with taste, grace, feeling, expression, and just intonation" (1836, p. 259). He discusses execution of divisions written out by the composer, and ornaments introduced by the singer, the latter depending on the singer's "rhythm, intonation, distinctness, invention, originality, elegance, and a knowledge of harmony" (1836, p. 260).

Nathan attributes vocal flexibility to a mobile uvula. The uvula is a pendulous structure of the soft palate, which, although an important articulator in some languages, seems unlikely to contribute in any direct way to vocal flexibility (Zemlin, 1988).

Discussion and Suggestions for Further Research

This initial investigation of Nathan's writings on voice brings to light several valuable points. Firstly, Nathan taught in what might be called small tutorial groups, with each group receiving instruction in vocal technique and music and performance theory. Vocal technique was taught without recourse to the keyboard. Requiring students to attend twice a week (or more often in the case of apprentices) is in accordance with sound educational principles on the teaching of physical skills.

Secondly, Nathan's approach to vocal strength and tone quality accord with the recommendations of current voice science.

However, it is in relation to vocal registration that Nathan's writing is both significant and problematic. There has been a renewed interest in use of the countertenor voice in recent years, which has sparked interest in research on that voice type. Essential to that research is an understanding of the terminology used in describing the registration events and voice qualities of the countertenor and how these relate to the other male voice types.

The terminology of registration presents great difficulties in understanding historical writings on voice and relating it to current writings. The list of terms used by writers on singing since the 12th century is a long one and shows few points of correspondence to the equally long list of terms employed by scientists, voice pathologists and spoken

voice teachers (Callaghan, 1996). Mörner, Fransesson and Fant (1964), for example, list 107 different names that have been used in identifying registers.

A detailed examination of Nathan's writings on vocal registration may well shed some light on the countertenor voice. For example, it is important to clarify what vocal quality is implied by the use of the term 'feigned voice' and in what circumstances that quality is used. Such an examination would need to take into account his discussion of the compass of the various voice types, the repertoire of the time, and the practice of Corri and Porpora. Such an examination would also make a contribution to the understanding of 19th-century performance practice.

Vocal pedagogy relies not only on an understanding of physical function and vocal acoustics, but on an application of that knowledge in teaching the physical co-ordinations which produce the vocal qualities demanded by particular musical styles and their performance practice. The learning of vocal technique and the learning of vocal style are usually linked by teaching the physical skills in conjunction with musical patterns common to the particular style. While current voice science can tell us much about physical function and vocal acoustics, it is from a study of traditional pedagogies that issues of historical style and performance practice are clarified. Further examination of Nathan's writings would make a contribution in this area.

Other areas of research which would illuminate Nathan's contribution to singing pedagogy would be: the conditions of his teaching in Sydney; the work of any musical contemporaries in the Colony; the careers of successful students; and the relationship of his approach to that of Corri and Porpora and to that of contemporaries in Europe and America.

> 'Let us turn back to the old Masters; that will be progress ...'
> (Verdi, quoted in Gal, 1965, p. 268)

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Relationships Between Textual Literacy and Music Literacy in Young Children

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Abstract

This study investigated some possible relationships between textual literacy and music literacy in young children. These included: 1. similarities in the processes of acquisition of early literacy and music literacy skills; 2. similarities between structural aspects of literacy - text, rhyme and alliteration and phonemic awareness - and structural aspects of music literacy - music notation, rhythm, keyboard recognition and pitch; and, 3. aspects of music learning which could be used for early literacy development and enhancement as well as in early literacy intervention programmes. The study involved twelve case studies of young children aged between five to eight from the researcher's piano teaching studio. The data consisted of school classroom observations, interviews with the pupils' classroom teachers, interviews with parents, school reports, music studio journals, and aural and written tasks devised for this research. The results suggest that children who demonstrate weaknesses in text reading have weaknesses in music reading, while children who have high text reading abilities also perform well in reading and performing music. Music lessons may be helpful in reinforcing some information processing skills necessary for successful reading.

Introduction

The aim of this study was to investigate possible relationships between the development of textual literacy (reading and pre-reading) and the development of music literacy (including music reading and keyboard recognition) in young children.

Music and language are both means of communication and expression represented by systems of symbols and patterns. The learning and acquisition of language and music skills involve both social and cognitive processes. From a social perspective, as Vygotsky wrote so persuasively, children learn about language as they interact and engage in print and other language-related social activities (Teale, 1982), especially with their parents. Similarly, Young (1995) has suggested that the growth of a child's music literacy is dependent on an adult's facilitation and encouragement of that child to interact with music and musical instruments.

From a cognitive perspective, Kodaly has stated that the ability to audiate (inner hear) and discriminate pitch develops and increases the understanding of music notation (Wheeler and Raebeck, 1983). Similarly with language, Lamb and Gregory (1993) and Goswami (1994) found that children who have high phonemic awareness had high text reading abilities, and, consistently, Bradley and Bryant (1985) found that early phonological success indicated later success in children's spelling and reading achievements. Furthermore, Kodaly believed that independent rhythmic execution

increases a child's understanding and knowledge of music reading (Wheeler and Raebeck, 1983). According to Goswami (1994), developing a sense of beat and rhythm increases a pupil's awareness for rhyme and alliteration - the foundations for phonological awareness.

These parallels between the processes of textual and music literacy, and between the development of each in young children, suggest that inter-relationships may exist, that is, that developments in one area of literacy (say, music) may affect and even enhance development in the other (literacy). Such a relationship between music activities and the development of reading skills is supported by studies by Weeden (1971) and Bygrave (1991, 1994, 1995) who suggest that the knowledge and understanding of new aural concepts and an awareness of sounds through music activities over a long term improves listening skills, and hence enhances more general associated language skills. Further evidence for this conjecture was sought in this study through two research questions:

1. What similarities are there between the processes of acquisitions of textual literacy and music literacy?
2. What relationships are there between specific aspects of textual literacy, viz., reading, rhyme and alliteration, and phonemic awareness, and specific aspects of music literacy, viz., music notation, rhythm, keyboard recognition and pitch?

It was hoped that the results might indicate some aspects of early music education which could be used to enhance early literacy development, especially in early reading intervention programmes.

Method

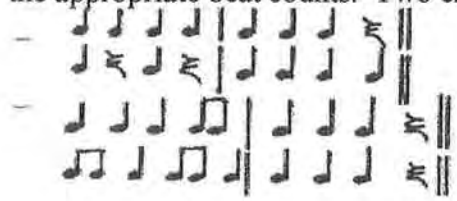
Twelve children from the first author's piano teaching studio, aged from five to eight years and stratified for reading ability, participated in the study. A rich set of data was collected from music studio journals, specific aural and written tasks, school classroom observations, school reports, and interviews with the pupils' classroom teachers and parents.

The music studio journal, kept from the beginning of the school year for each pupil, provided a progress and observation report of music literacy development throughout the year. A series of informal and formal interviews with the pupil's parent were undertaken about twice a term during the year to provided information of the pupil's learning within his/her social environment. A 30 minute interview with the pupil's class teacher was held in Term 3, and was followed by observations of the pupil in the classroom during Term 4. These provided the researcher with additional information about how each pupil responded in non-studio formal learning situations. As well as gathering data, the interviews and classroom observations served to safeguard against potential biases and distortions, as pointed out by Walker (1983) and Whyte (1979), who also suggest that collaboration with people in the field provides the researcher with both insights and assistance in the interpretation and analyses of the results.

During their studio music lessons in Terms 3 and 4, all pupils were given specific activities, including:

1. Worksheets on the musical alphabet and its relationships both to keyboard layout and music notation on the stave which involved:
   - identifying eight examples of intervals of a second and a third;
   - matching six rhythm patterns to the appropriate time signatures - 3/4 and 4/4;
   - identifying marked keys on seven examples of words on the keyboard.

2. Rhythm-Echo tasks which required an echo (in the form of clapping) of each pattern after it was presented once. Then the pattern was presented again, after which the pupil was required to echo-clap the pattern and simultaneously allocate the appropriate beat counts. Two examples are:



3. Pitched-Word Span tasks which required remembering progressively longer tunes made up of English words, e.g.,
   - 3 notes: EGG BED DAD;
   - 4 notes: DEAD CAFE BABE;
   - 5 notes: FACED CAGED EGGED.

   The pupils were required to find and play the notes of each word tune on the piano twice, then sing the notes and play at the same time, and finally, sing the notes without accompanying themselves on the piano. The task was somewhat analogous to the Letter Span tests used to measure abilities in successive (sequential) information processing (Das, Bisanz, and Mancini, 1984).

Results

Three case studies are presented here as exemplars.

Tim

Tim was eight years old and in Year 2. At school Tim received daily reading support to develop better strategies and phonic skills to learn to read and spell. Language-communication assessments indicated that despite some high cognitive abilities, Tim's weak sequential processing abilities hindered his text reading ability. This analysis was confirmed by Tim's mother.

Tim had been coming for piano lessons for a year. Learning and understanding music concepts were not difficult, but fluency did not come easily to him. Tim was at an early music reading level, being slow and deliberate, and seemed to be developing preliminary strategies of his own to work out the notation. He found that feeling the values of the notes and counting quietly to himself was very difficult. With the Worksheets, Tim self-

corrected on two of the eight interval-recognition items, matched the rhythm patterns to the time signatures without assistance, and understood the music alphabet in relation to the keyboard layout. On the Rhythm-Echo task, he performed accurately but deliberately. On the Pitched-Word Span, Tim was almost correct in the three-note word tunes, but only managed the first note in the other word tunes.

Lisa

Lisa was nine years old and in Year 3. She had a severe hearing impairment which was deteriorating for middle to high frequencies, but was stable for low frequencies. She wore hearing aids in both ears. She was also awaiting a cochlear implant in 1998. Lisa was a fluent text reader with a superior spelling ability. A special needs teacher worked with Lisa on word blends and similar sounding words. The school reports revealed that Lisa was both an enthusiastic reader and an imaginative writer. She displayed a good sequence of ideas in her written work, her ability to spell unknown words was gaining independence, as well as her use of phonics to help identify unknown words. She was generally a fluent reader with a good sight vocabulary. Lisa had difficulty pronouncing words with soft sounds, for example, mouth, moth, most, life, liked, lie and light, because of her inability to hear the endings of words. However, she was placed in the top seven in her class in spelling, possibly due to her high visual memory for letter patterns.

In Term 1 in the music studio, although Lisa read the treble stave fluently, she struggled with reading the bass stave, and with establishing a secure sense of beat and rhythm. In particular, she lacked a sense of a regular beat with simple rhythmic patterns containing a combination of quarter and half notes. Initially Lisa was placed between the transitional and independent music reading stages. By Term 4, there was improvement in her sight-reading of two staves of music, as well as in developing a more secure sense beat and rhythm. On the Worksheets, Lisa completed the interval recognition without assistance, matched the rhythm patterns to the time signatures correctly, and found all the marked keys in relation to the keyboard layout. On the Rhythm-Echo task, Lisa echoed the patterns accurately but demonstrated confusion in counting the eighth notes. On the Pitched-Word Span, Lisa was correct in pitch for the first two notes only in most of the word tunes.

Anna

Anna was 5 years old and in the Prep (K) year at school. Although her home environment was predominantly Chinese speaking, Anna spoke both English and Chinese fluently, and wrote her name and number words in both English and Chinese characters. Anna's mother had read to her in English since she was a baby. Anna had been able to sound out words and put the sounds together to make words since she was 4 years old. According to her school teacher, Anna was a conscientious and enthusiastic pupil. Anna was often among the first to complete class assignments, and did so with no difficulty. During a classroom observation, when Anna volunteered the word flick for an activity with words beginning with f, she spelled the word phonetically, k for ck.

Anna had had music appreciation lessons since she was 3 years old, and she began individual piano lessons when she turned 4. She learned to read music notation in C position for both treble and bass staves very quickly, and her left and right hand

coordination was exceptionally good. She also had a good sense of beat and rhythm, being able to count aloud and play a tune or clap a rhythmic pattern without difficulty. She combined music reading and rhythmic skills easily, and sight-reading was a simple task. Anna did all the Worksheets correctly, and recalled the closest previous marked key to identify the next key as it related to the keyboard layout. Anna performed the Rhythm-Echo task accurately, as she did the Pitched-Word Span, including the longest tune-words.

Discussion

These three case studies (and the other nine) provided some evidence that similar cognitive processes underpin both textual and music reading. The ability to perform unfamiliar music requires understanding and fluency with the piano for meaningful and purposeful communication. This depends on the child's ability to make connections between the system of musical notation as well as the system of patterns and principles that make up the keyboard layout, and may be compared with the application of phonics in spoken language for word recognition and in written language for spelling.

Tim, with weak successive processing abilities, read music on the stave with difficulty. This was consistent with his weak text reading ability where phonic skills and other strategies to read and spell needed to be developed. However, Tim had a good understanding of the relationship between the music alphabet and the keyboard layout, consistent with his higher simultaneous processing abilities, i.e., his ability to establish patterns and relationships between objects. Such asynchronous processing abilities as Tim's have been previously reported by Robinson (1983) who concluded that children with text reading difficulties seem to prefer to use simultaneous modes of processing, even when successive modes would be more appropriate for early levels of text decoding. Thus, despite his familiarity with the keyboard pattern, Tim's weak music reading abilities hindered his performance of unfamiliar music. Similarly, Lisa also demonstrated a high ability in establishing relationships between the music alphabet and the keyboard layout, possibly also as a result of her high visual (simultaneous processing) ability. However, it is likely that her music reading ability is compromised by her hearing impairment which impeded her ability to make a greater connection between what was seen and heard. In contrast, Anna, a fluent and independent music reader, also displayed high literacy abilities. Moreover, she seemed to have developed a more integrated keyboard strategy enabling her to perform unfamiliar music quite fluently.

There were also some indications of a relationship between the skills required for rhyme and rhythm. Consistent with Goswami (1994), that a sense of rhythm is important for a child's awareness of rhyme and alliteration, Anna, who performed the rhythm tasks securely and independently, was an accurate speller with high reading abilities. Lisa's accuracy in the more straightforward rhythm patterns seemed related to her progress in text reading, and not inconsistent with the possibility that exposure to beat and rhythm, a significant component of her music education, had, despite her hearing impairment, increased her awareness of rhyme and alliteration.

There was stronger evidence for a relationship between pitch and phonemic awareness. Tim, with weak word attack and spelling skills, was unsuccessful at the pitched word

span tasks, consistent with children with text reading difficulties who score low on letter or digit span tasks (Das, Bisanz and Mancini, 1984). Lisa's pitch accuracy and aural memory corresponded with her average text reading abilities and weaknesses in the pronunciation of words with similar soundings or endings. Anna, who pitched and memorised the word tunes accurately in their entirety, had high phonemic awareness, consistent with superior text readers who score highest in other span tasks. These observations support the claim that early phonemic awareness indicates later success in reading and spelling (Bradley and Bryant, 1985).

Overall, this cognitive interpretation of relationships between textual and music literacy acquisition was supported by data from a social perspective. School reports and teacher interviews indicated that Lisa and Tim had made obvious progress despite their particular difficulties - Lisa's hearing impairment and Tim's weak successive processing abilities. Both children were fortunate in coming from home environments which reinforced the support they received from school. Interviews with their parents indicated that these children also received similar support and encouragement for music at home. This was evident in their enthusiasm, despite some limitations in progress, for their studio music lessons. Where the home environments of high ability children in this study like Anna were conducive for learning both to read and to play a musical instrument, these children displayed high abilities in both language and music. Such observations are consistent with the argument that textual literacy and music literacy are partly social processes involving children's interactions within a literate environment (Teale, 1982) and a musical environment (Young, 1995). That is, home environments where the more children engage and interact and are encouraged in activities involving language and music, the more textually and musically literate they become.

Conclusion and Recommendation

The results from these (and the unreported) case studies supported previous findings that children's skills in text reading, spelling and word attack skills require similar cognitive abilities to those used in music reading, pitch and rhythm tasks. The results were also consistent with the conjecture that the early development of textual and music literacy make similar demands on these underpinning cognitive abilities. Observations and interviews from the study also indicated that the acquisition of textual and music literacy by children was mediated by the support and facilitation of parents and teachers.

Consequently, it is recommended that language support and development programmes could include some music learning activities in pitch and rhythm discrimination, such as suggested by Weeden (1971) and Bygrave (1991, 1994, 1995), in order to enhance phonemic awareness and text and music reading abilities.

Acknowledgments

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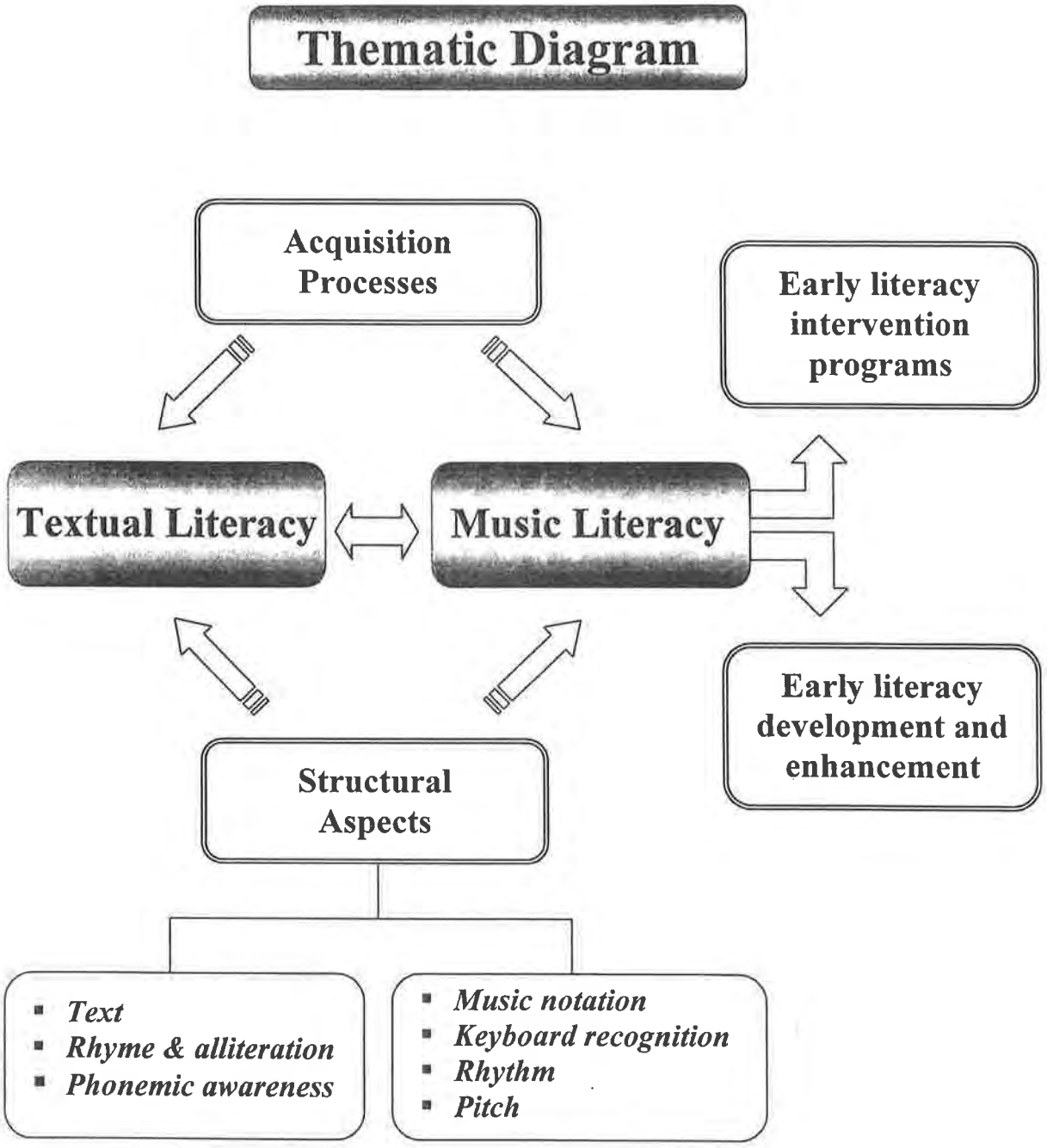
Thematic Diagram
Acquisition Processes
Early literacy intervention programs
Textual Literacy
Music Literacy
Early literacy development and enhancement
Structural Aspects
Text
Rhyme & alliteration
Phonemic awareness
Music notation
Keyboard recognition
Rhythm
Pitch

Music Technology in the New Millennium: Issues for Consideration in Tertiary Training Programs

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Abstract

Secondary schools throughout Australia are demanding that a much larger focus be placed upon the use of information technology in music education. Syllabus guidelines present outcomes which imply greater technology based application at all learning levels. A factor that will significantly influence the classroom implementation of music technology and the structure of tertiary course design is the understanding and perception that students display towards the use of technology. This paper will discuss attitudes, skill and knowledge levels identified by students as they commenced a Master of Teaching/Diploma of Education program. Data were collected from a questionnaire survey and are representative of students from different universities over a two-year period.

Introduction

Definitions: for the purpose of this paper the term 'Music Technology' refers to the use of commercially available digital sequencers (hardware or software based), microcomputers, MIDI systems or keyboard laboratories.

Secondary schools and the wider context

The use of technology based education is now mandatory in all syllabus areas, none more important than the study of music.

In NSW, the syllabus document for each learning level supports the emphasis currently being placed upon the use of technology. It states that "teachers are encouraged to use as broad a range of technology as is available to them and in the wider school context. It is important to remember that it is the effect of technology and its influence on music that is to be the focus of the study, not the technology itself" (1994:6).

The support document (1995:70) also states that "as technology changes, teachers must address these changes and integrate the ongoing developments into their teaching programs".
The use of Music Technology is integral to the future direction and success of music education. It allows users to process information and develop knowledge in more diverse and meaningful ways, amplifying the learning process (Salomon, 1988) while fostering skills in creativity (Folkestad, 1996). There are also many advantages that it can provide for the teacher who uses it in the classroom (Rudolph, 1996). In music education there is the opportunity to employ Music Technology in all four component areas of Performance, Aural, Composition and Musicology, but appropriate training and preparation is needed for this to take place successfully.

One must constantly be reminded that Music Technology, like any other area of the

information technology domain, needs sufficient time and application if effective transfer of skills and knowledge is to take place. Williams (1992:26) highlights this by saying that "it takes at least five years of exposure to, and hands on experience with computer technology before a teacher will consistently use computer applications creatively and effectively in the classroom".

Verrastro and Leglar in Colwell (1992:683) reinforce the need for "more ... studies which look specifically at the use of technology in teacher training". If teachers in training are to implement Music Technology at an appropriate level of competency in the classroom, there is a need to review the types of coursework offered to students in this area. With this in mind it is critical that all tertiary programs offered make provision for the technology based needs of the students.

There are many factors which influence how individuals engage with Music Technology. These include: knowledge, perception, skill level, personal experience, prior training and anxiety, many of which have been identified in a previous study by Merrick (1993).

Students carry many of these factors with them when they commence study in music education at a tertiary level. As educators, it is important that we are aware of the significant impact that these factors can have upon the level of success that is achieved by participants. By developing a better understanding of these factors, Music Technology coursework can be designed to meet the specific needs of tertiary students. This continual influx of technology has created the need to re-assess classroom pedagogy. Theberge (1997:4) suggests that "what is at stake here is not simply a change in technology - the substitution of one set of materials for another - but rather the form of *practice*". As a profession we need to realise that technology is not something that we just add on to existing practice, rather it demands the development and implementation of a whole new pedagogy.

While there have been a number of studies completed on the use of technology with school students (Folkestad, 1996; Comber, Hargreaves & Colley, 1993), there has been very little research completed about the level of computer literacy and knowledge displayed by students as they enter tertiary study. It is only recently that the profession has started to review these important components related to the study of Music Technology. "Technology Standards for College Music Degrees" by Taylor and Deal (1997) is one of the first papers to look at the establishment of technology based outcomes for music students at selected universities in the United States.

Procedure

A written questionnaire was completed by twenty seven students as they entered into a postgraduate Master of Teaching/Diploma of Education course. Responses were taken over a two year intake and are representative of students from two different universities in NSW.

The questionnaire included a series of rating scale responses, yes/no answers and open ended questions. All the students have completed either a Bachelor of Music or Bachelor of Arts (Music) undergraduate degree from varied institutions throughout Australia.

The data reflects the knowledge, skills and attitudes of the students prior to their commencement of coursework. The design of the questionnaire allows for the collection of a mixture of quantitative and qualitative data. This data is divided into categories which include:

* technology anxiety and experience,
* technology based undergraduate study,
* technology based instruction and the use of technology in education,
* knowledge and use of software and hardware,
* most valuable types of training structures.

Results

Table 1 n=27
Responses to technology based statements about experience, study and anxiety.

Statement	Yes response	No response
I have had limited experience with technology.	(89%)	(11%)
I completed work with music technology as part of my undergraduate study.	(59%)	(41%)
I feel that music technology has educational value in the classroom.	(100%)	(0%)
I am anxious about the use of music technology in education.	(44%)	(56%)

Table 2 n=27 Rating of own technology skill and knowledge level

Elementary	Intermediate	Advanced
(67%)	(33%)	(0 %)

Table 3 n=11 Nature of the technology based instruction received
(As this was an optional question, not all respondents replied).

Question	Educationally Centred	Technology Centred
How was the technology instruction that you received structured?	(9%)	(91%)

Table 4 n=27 The use of technology for personal productivity.

Question	Educationally Centred	Technology Centred
Do you use a computer regularly for personal productivity based tasks?	(81%)	(19%)

Table 5
The following collection of comments are representative of the responses received to the question, "How do you feel about integrating technology in music education?"

"I feel that the application of technology in music provides new and exciting directions in performance and composition"
"I think it is essential but would like more familiarity with the range of software available and ideas for how to use technology myself (as the teacher) and also how the students can use it"
"With a computer based society today, it is important to introduce technology into music education and the learning process"
" I think technology in music education is potentially very valuable but I don't yet fully understand the technology and its possibilities"
" I think it is the future of music teaching"
" I consider that technology should be considered as a tool, rather than the actual product"
" A very necessary part of today's music education"
" A necessity. Music in schools has long passed the traditional classical study. As a new century with mixed cultural influences and diversity, technology is essential as music education needs to cater for all students at all standards"
" I think it's becoming increasingly important to integrate technology into music education".
"If I am instructed properly, it would be very beneficial for teaching".

Table 6 n=27 Responses to the questions about having heard of or used popular music computer software

Name of Software	Heard of Name	Used the Software
Band in a Box	44%	30%
Notator	59%	22%
Cubase Score	48%	41%
Cakewalk	30%	7%
Logic	48%	15%
Encore	52%	11%
Music Master	26%	7%
Sibelius	15%	10%
Finale	70%	33%

Table 7 n=27 Most valuable training/instructional processes identified by students

TYPE OF INSTRUCTION	Most Valuable	Valuable	Of Little Value	No Use
One to one individualised instruction with specific software packages.	52%	44%	4%	0%
General courses looking at a variety of software packages.	33%	59%	4%	4%
Specific music software and their relationships to teaching topics.	66%	30%	0%	4%
Cooperative based tutorials using Music Technology hardware/software.	59%	33%	8%	0%
Separate courses for each musical component area, i.e. performance, aural.	26%	44%	30%	0%
Graded courses from easiest to hardest packages.	30%	41%	25%	4%
Designing classroom activities that use Music Technology.	59%	30%	4%	7%

Discussion of Results

Experience with technology

Although 59% of students stated they had completed some undergraduate study of Music Technology, it is a concern that 41% of the students had not been exposed to any Music Technology at all. Although 56% indicated that they were not anxious about using technology, the remainder of the participants identified themselves as being anxious about using Music Technology.

The results also indicated that 89% of participants identified themselves as having limited technology experience which is an extremely strong indicator of the limited coursework that had been completed in this area. This is particularly relevant in light of William's comments about the time taken to develop and apply Music Technology in the classroom.

Most importantly, 100% of the students felt that Music Technology had educational value in the classroom. This result showed that despite deficiencies in other areas, the participants were not philosophically opposed to incorporating technology into classroom teaching.

Technology Skill and Knowledge

Based upon the data collected, there was a very low perception of the students' level of technology skill and knowledge. Two thirds of the participants were placed in the elementary level and a third in the intermediate level. No students perceived their ability to be in the advanced category, providing further support that the students feel they are

limited in their awareness of Music Technology, lacking appropriate skills and understanding.

Nature of Technology Instruction

Although the response to this question was limited due to its optional nature, it is important to note that 91% of the training received in undergraduate courses was 'technology centred' with only 9% being 'educationally centred'. This result suggests the need to further evaluate the nature of instructional practice employed in technology training.

Personal Productivity

A high level of students, 81%, indicated that they used computers for the completion of their own personal productivity based tasks. Although this was positive in relation to the development of word processing, database and spreadsheet skills, there is still a significant difference between this high level of use for this purpose and the rather low level of experience with Music Technology.

Feelings about Technology Based Integration

From the range of responses presented in Table 5, it can be clearly seen that students see great potential in the utilisation of Music Technology in education, while at the same time, questioning how it will impact upon the teaching and learning process.

Comments such as "I think it is the future of music teaching", "I think it is becoming increasingly important to integrate technology into music education and the learning process" and "a very necessary part of today's music education" are examples of these responses.

Software knowledge and application

From these results, only a small percentage of students are familiar with well-known software packages and even fewer have used these programs at any given time. The most well known package was Finale with 70%, which had only been used by 33% of the students. Cubase Score was the most widely used package with 41% while only 48% of the students indicated familiarity with this software.

Given that most secondary schools use any combination of these software packages, this result identifies the need to provide a higher level of software exposure and application within the training process.

It is also important to consider the nature of the software packages that are the most known and regularly used. Finale is a high level editing (notation) program suitable for commercial publishing while Cubase Score offers a more combined package of sequencing and notation, suitable for classroom application. There is a need to ensure that students are familiar with a range of software from both the editing and sequencing domains, ensuring that the software being presented is appropriate to the educational outcomes of the syllabi and not excessively technical in nature.

Training/Instructional Processes

In developing a framework for Music Technology based courses, the results from this section of the survey give a very clear indicator of the types of learning experiences that the students feel will be most valuable to them in their study.

In order of rank the five most valuable types of instruction as rated by the students were:-

1. Specific music software and their relationships to teaching topics (66%),
2. Cooperative based tutorials using Music Technology hardware/software (59%),
3. Designing classroom activities that use Music Technology (59%),
4. One to one individualised instruction with specific software packages (52%),
5. General courses looking at a variety of software packages (33%).

Recommendations Arising from the Study

The results presented have emphasised the need to re-address the current course designs, curricula and teaching practice being used to develop technology based skills and knowledge in our tertiary institutions.

Specifically, there is a need to develop a much higher level of general computer literacy amongst all of these students as they complete their teacher training. One of the most positive outcomes from this survey was that all participants felt that technology had educational value in the classroom. Combined with this were many positive responses from students which outlined their feelings about the integration of technology in education. These statements reinforced that the students are motivated about the use of music technology in education. It is now the responsibility of tertiary institutions to provide support for the many positive responses of the participants while also providing appropriate, technology based training to improve the deficiencies identified.

Students need to be engaged in more continuous training that allows them to develop more practical experience and time with the technology. The fact that 89% of participants said they had limited experience with technology needs to be rectified.

In order to decrease the level of technology based anxiety felt by many students, there must be an effort to ensure that technology is promoted continuously throughout music education programs, with reference to its use in all four component areas of performance, musicology, aural and composition. If the students become confident technology users by the completion of their coursework, there should be a much lower level of anxiety present when they enter the classroom.

With appropriate coursework and practice, students will also develop a better perception of their own ability and efficacy as teachers. There is a responsibility to ensure that all teachers have a high perception of their own knowledge and skill level with Music Technology.

The writer suggests that a requisite level of knowledge and skill should be established for

attainment prior to being employed as classroom teachers. This is crucial if the curriculum outcomes are to be satisfactorily achieved. If this does not occur, many students who elect to study music will be disadvantaged because their teacher is unable to immerse them in appropriate technology based learning experiences. As mentioned in the results, it is also important to ensure that students are being exposed to the various types of hardware and software that they are likely to experience in the school setting.

When developing these Music Technology courses, the instructional practice and design should be carefully considered in order to meet the needs of the students. As identified in the study, particular reference should be given to the following:

* one on one individualised instruction with specific software,
* specific software are their relationships to teaching topics,
* cooperatively based tutorials using Music Technology hardware/software,
* separate courses for each component area,
* designing classroom activities that use Music Technology,
* ensuring that the nature of the instructional design utilised within the technology
  courses is 'educationally centred' rather than 'technology centred'.

The writer acknowledges that due to time restraints, whole courses devoted to each of these domains may be difficult to achieve. It is also suggested that many of these structures be integrated into other areas of music education coursework on a regular basis in order to avoid isolating technology as a separate entity with the education process. Tertiary educators should also strive to model activities and learning experiences that are similar to those that would be experienced in the classroom environment.

In order to establish a requisite level of knowledge and skill, the writer suggests that there be a move to establish a nationally based technology statement for music education degrees, one that prescribes minimum content and standards that must be achieved by students as part of their teacher training. By doing this there would be a consistent level of technology literacy amongst all new music teachers. This would give a great boost to the profession as a whole and reduce the need for expensive re-training in the years to come. Any future in-servicing and training could look to build upon the skills and knowledge that these teachers have already developed, while catering for individual needs relative to different school environments.

The following list of suggested content areas that should be included as part of the Music Technology National Standards.

Music Technology

* general knowledge of computers, synthesisers, sound modules, sound cards, and their configuration;
* a knowledge of the different types of instruction that can be employed with computers, i.e.. Computer Assisted Instruction, Computer Based Learning, Creativity;
* an awareness of MIDI and its operation;
* an awareness of hard drive recording systems;

* satisfactory knowledge and skills developed through 'hands on' experience with a set of established sequencing, editing, auto-accompaniment and aural software;
* an awareness of internet access and CD-Roms for resource development and classroom application;
* an awareness of keyboard laboratories and consoles.

Classroom Practice

* an awareness of new approaches to classroom practice with a technology focus including new learning structures for the teacher and students to use, i.e. cooperative learning, problem solving, facilitating independent learning;
* an awareness of the influence of technology on cognitive and metacognitive processing of learners;
* an awareness of the different structures and settings to use so as to attain educational outcomes of a satisfactory level.

Other areas to be considered for inclusion in additional coursework should provide suggestions for classroom integration at different learning levels, evaluating and purchasing technology combined with technology maintenance and trouble shooting.

The writer suggests that there is a need to have a specialist technology teacher working within these courses so as to maximise the opportunities available to students. It is essential that this person has educational experience as opposed to purely 'technology' based experience so as the technology is promoted as a transparent tool within the learning process.

Throughout this discussion many areas of concern have been identified for further consideration. Conversely, there have also been many positive findings that provide support for the ongoing development of Music Technology training in education. The writer suggests that all of these factors be further explored through more expansive research and that any standards set down as part of the framework be evaluated on a constant basis.

As we head towards the new millennium, tertiary institutions have a responsibility to set new Technology Standards for our music educators, ensuring that the needs of tertiary and secondary students are appropriately catered for as they become the musicians and educators of the future.

Creating these frameworks will be a challenge to develop and implement, but certainly worth achieving as soon as possible. Considering the speed at which technology continues to develop within our society and the impact it is having on music as an art form, we must attempt to develop and implement these changes before we reach the new millennium.

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A Re-Modelling of Music Education In Western Australia

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Introduction

The concept of lifelong learning has commanded support internationally (European Parliament 1995; The Nordic Council of Ministers 1995; OECD 1996; Delors 1996). The changing social reality due to increasing discretionary time (Chapman & Aspin 1997) as well as the recognition of the value of music in everyone's lives (EP15) point to the need for a lifelong music orientation. At the dawn of a new century and in a context where utilitarian imperatives are in competition with education for a quality of life, educationists are in search of a way forward. A review of music education policy and practice is therefore timely.

This paper is a condensed version of a study undertaken as part of a doctoral thesis on *Lifelong Learning: Music Education for Adult Beginners*. It examines the current situation with regard to the provision and delivery of music education, particularly music making activities, to adult beginners in Perth, Western Australia (WA). It aims to develop a theory about Lifelong Learning: Music Education for Adult Beginners so as to arrive at a model for music education where purposeful and systematic music programs for adult beginners can be effected in a pluralist society.

Most of the related literature on lifelong learning focuses on the concept of employability. The importance of personal development has been under-valued. While several studies relate to lifelong learning, there is little information on lifelong music learning. Where this is available, the focus has been on older adults (Gibbons 1985; Patchen 1996). Furthermore, no study reviewed has attempted the comprehensive research process undertaken with touchstone and the valuing of group beliefs.

The next section describes the process of theory formulation to uncover the 'best' theory at this point in time that can determine how music education for adult beginners in WA can be operationalised.

Process of Theory Formulation

The research involved the collection of data from 79 participants including adult beginners (AB1-56) and education providers (EP1-23). Adult beginner participants were selected on the basis of their age (35-50) and their level of formal musical training (0-5 years). They were either presently engaged in music activities in metropolitan Perth, or interested in continuing their music education. Education providers targeted were determined on the basis that they are/have been engaged in some kind of music making activity with adults over the last 12 months.

Three sources of data collection were utilised - document analysis, questionnaires and interviews. Data analysis was ongoing.

Document Analysis

Public documents studied included: *Developing Lifelong Learning Through Undergraduate Education* (Candy, Crebert & O'Leary 1994), *Amended Proposal for a European Parliament and Council Decision Establishing a European Year of Lifelong Learning* (European Parliament's Commission of the European Communities 1995), *The Golden Riches in the Grass: Lifelong*

Learning For All (The Nordic Council of Ministers 1995), *An Action Agenda for Lifelong Leaning for the 21st Century* (Longworth 1995), *CALL (Community Action for Lifelong Learning) for Developing Human Potential* (Longworth & De Geest 1995), *Making Lifelong Learning A Reality For All* (OECD 1996), *Learning: The Treasure Within* (Delors 1996) and *the Concluding Statement of the Eighth Biennial Meeting for the ISME Commission for Community Music* (Veblen & Elliott 1998). These documents relate to the international and Australian contexts, to lifelong learning or to adult music education and are the work of key figures and policy-making bodies in their respective areas.

The Questionnaire

A questionnaire was designed to examine the clientele likely to pursue music education as well as to investigate the motivations of adult beginners that impact on their decision to continue music making. Questionnaire items were derived from the literature as well as from the documents analysed. A separate questionnaire with slight variation in wording was prepared for the education provider group. The questionnaire was pfloted and then completed by all participants. On receiving the responses from the questionnaire, analysis involved gauging frequencies rather than constructing measurements.

The Interview

Following trial interviews, the first semi-structured interview was carried out. Through seven sets of open questions the interview aimed to disclose participants' perceptions regarding the provision and delivery of music education for adult beginners and its relationship with lifelong learning, rather than to provide specific findings to *a priori* hypotheses. 30 participants were involved in audio-recorded interviews - 29 adult beginners and 11 education providers. Considering the importance of the feedback loop in this research, subsequent interviews were held with the same participants.

Summary notes and transcriptions were subjected to analysis. The data from the first set of interviews was considered together with data from the questionnaire and printed material. The researcher looked for something(s) overarching in the data. Categories and sub-categories were developed. As the volume of data collected was enormous, the researcher looked for *touchstones* (Lakatos 1978) within the 'core' beliefs (Quine & Ullian 1970). In terms of categorising such a mass of data, Patton (1990) reminds us that "There are no formulas for determining significance. In short, there are no absolute rules... (only)

guidelines" (p. 372). As Allport (1942) suggests, "the internal consistency, or self-confrontation of evidence obtained by such poly dimensional approaches is almost the only test we have for the validity of our researches" (p. 121).

In this research, the poly dimensional approaches did not serve simply to confirm situations or events, to identify gaps in information or to review the adequacy of data obtained, but rather, provided useful opportunities in the search for *touchstone*. After going through the information a few times these areas of collective agreement were refined and translated into core concepts. These core concepts were presented to participants in the second interview in the form of propositions or tentative theories of the emerging framework for music education. These propositions that represented the views of both groups of participants were further refined and re-presented in the third interview, together with the proposed theory.

The third interview was a group interview. This group perspective provided another level of theory testing not available through one-to-one interviews (Fontana & Frey 1994). Eight other questionnaire participants who were not previously interviewed were also invited to participate. It was felt that they could add to discussions by providing fresh insights. As most participants attended the first group interview - 23 participants in all, comprising 16 interviewed participants and 7 extra participants - this session on Saturday, 2nd May, 1998 was video-recorded. As not all interview participants could attend the group interview on the same day, two other group interview sessions were held.

All participants in the third round of interviews also received the refined propositions and the proposed theory in writing before the interview. As the propositions underwent some alterations during and after the second interview and as an additional proposition emerged from the participants, these propositions were re-visited by the group. It was deemed to be important that all contributors to the proposed theory were well informed as to the reasoning behind the theory. So in an effort to enhance the understanding of the extra participants who came to the first group interview session, more time was spent discussing the propositions during this session than in the other group sessions. Also, as one interview participant did not share the views of the others with regard to one of the propositions, it was important that her view be shared and that consensus be reached. Particularly through the interactive discussion that ensued, the group interview highlighted the value of shared beliefs over individual beliefs.

The proposed theory was then discussed and slight modifications were suggested. Prepared questions were put forward to stimulate discussion, the justification of the theory was read out and participants were asked if they accepted this proposed theory with the changes suggested. Participants were assured that the refined theory would be mailed to them for their endorsement. In conclusion I highlighted some points of interest which suggest that this research has all the makings of optimism. Once again refinements were made during and after the third interview sessions. My attempt at identifying *touchstones* was conducted at two levels: firstly to identify the areas of shared interest, values and beliefs, and secondly, to reach agreement on how concerns relating to lifelong learning and music education for adult beginners could be facilitated. Data analysis was complete when

feedback did not result in any further opinions being generated (Macpherson 1987) and when all data collected was processed.

The Current Situation

Currently the commitment to music education in WA is uneven and inconsistent with international policy. This study highlighted a clear "*youth focus*" (EP18) and a concerted effort to re-introduce music opportunities when one starts to "*degenerate*" (AB3). Music provision for adult beginners however, is "*a world apart*" (AB25). There is some provision through amateur music groups and short courses but "*there is no program of development*" (EP15) in the sense of being ongoing.

Two factors may account for this clear 'disconnect' between the two age groups. Firstly, there is no coherent training program for music teachers of adult learners. For many teachers at present "*there's only one student and that's a child*" (AB32) and there is only one curriculum and that is a classical orientation (EP19). Although some teachers are happy to take on adults when asked (EP8) other teachers are apprehensive of teaching adults (AB32). It is not surprising therefore, to hear that adult beginners are unaware of whom they can approach for instruction (AB38). Program delivery is narrow in the sense of being mostly "*geared to children*" (AB32) and limited in musical scope. It does not acknowledge the wide-ranging interests or needs of adult learners. In order to enhance the cultural richness of Perth, WA, development in other musical genres such as folk music, bush band music as well as rock and blues must not be neglected. Cooperative relationships can facilitate this.

Learning: The Treasure Within (Delors 1996) highlights the importance of education drawing out the treasure of each individual and the individual in society. The current situation however, points to a lack of opportunities for adult beginners to be involved in music making particularly with regard to instrumental involvement (AB7; EP8; EP11). Adult beginners have a lot to offer, yet this treasure remains within (EP20).

Affordability in many cases is another issue that creates a gap in terms of who can participate. Music education opportunities based on prerequisite attainment, talent or elitism also deprives many people of the gains that can be derived (Achilles 1992). Furthermore, there exists a divide between music education and adult education. An interdisciplinary perspective can close this gap.

There is no basis for exclusion on the grounds of age (AB23; EP7; EP30), training (AB32) or in terms of who can afford (AB15; AB39) especially if education in the 21st century is as Colin Power suggests, "an education that bridges gaps" (Australian National Commission for UNESCO 1998).

THE NEW MODEL

Probably the most significant outcome of my research is the new model for music education that has been developed. This new model can be graphically portrayed as follows:

MUSIC EDUCATION FOR ADULT BEGINNERS WITHIN A LIFELONG PERSPECTIVE

Lifelong Music Learning Prerequisites/Processes

Characteristics of Lifelong Music Learning

- Music for all
- Provision for all of life learning
- Sensitivity to students' needs
- Imaginative facilitation
- Eclectic and holistic approaches
- Linkage and connectivity
- Social relevance
- Teaching and learning as traditionally conceived is obsolete
- Collaborative practice
- Reflective practice

Greater collaboration and networking

- All agencies of music provision and delivery involved.
- Re-consideration of relationships and roles among adult beginners and education providers as well as among the various education providers.
- Connectivity across the years, within and across subject areas as well as within and across government and inter-governmental agencies.
- Re-assessing of content, materials & approaches

Greater public awareness and accessibility

- Positive promotion of those presently involved.
- Compilation of a directory of providers.
- Provision of special facilities/equipment.
- Regular advertising of courses available.
- Ensuring the affordability of programs.

Program development

- Meeting the musical needs of adult beginners.
- Awareness of new developments in music education e.g. use of technology, current research
- Awareness of the cultural context of learners.
- Developing and making available, age-appropriate learning materials.
- Cater for continuity

Flexible structures

- Easy flow into and out of learning.
- Extended hours of operation.
- Flexible arrangements e.g. hours, payment schemes.
- Accommodating learners of wide age-range and diverse abilities/interests.

Meaningful participation

- Opportunities for adult beginners to make music together/share music experiences.
- Multi-age/intergenerational music making opportunities.
- Greater exposure/acceptance of a range of music types.
- Relevance in terms of choice of music/methods and life experiences.

Appropriate environment for learning

- Conducive
- Supportive
- Acoustically appropriate.
- Image change.

Moral decision making

- Consideration of the following:-
  - what learning should be valued?
  - individual and of collective responsibility for learning.
  - equality of opportunity.
  - social inclusion.
  - *public good* versus *private good.*

The training of music providers

- Options/electives for working with adult beginners.
- Programs to incorporate the psychological and pedagogical tools for adult beginner music education.
- Training for eclectic and holistic perspectives to music education.
- Training to encourage self-steering.
- Training to appreciate their role and the multiplicity of possible motivations and needs of adult beginners.

Research in the area of lifelong music education with the adult beginner in mind

- Developing programs in adult music pedagogy.
- Developing more music material for adult beginners.
- Publishing more articles relating to adult beginners.
- Longitudinal, comparative & interdisciplinary studies .

Policy development

- Addressing the purposes of education.
- Coordinated and coherent organisation.
- Infrastructure to support policy.
- Bridging gaps in provision/accessibility.
- More equitable funding.

The following represent the characteristics of the model of music education for adult beginners that has emerged.

Music for all

This model supports the view that education through music can enhance educational and quality of life outcomes for all. Inclusivity therefore, is a major thrust here. The knowledge that adults in the 21st century will make up the majority of the world's population and the fact that people are living for longer makes it imperative for education to move beyond the present focus on youth. Currently, the adult group is under-served, particularly adult beginners. Lifelong music learning has a better chance of success in an environment where learning is not age-based, based on prerequisite attainment or affordability. Every effort must be made to allow everyone access to the resources of choice.

Provision for all of life learning

If lifelong learning implies ongoing learning, this predisposes the availability of learning opportunities that will encourage a continuing of learning once the school years are over. Provision needs to reflect the view that there is no mandatory retirement age in music.

Sensitivity to students' needs

This implies sensitivity both to the musical needs of adult beginners as well as sensitivity to their cultural contexts as learners. There needs to be an understanding of the multiplicity of reasons why adult beginners choose to pursue music making activities and an appreciation of the pressures and commitments they have. An empathy in relation to the myths and other psychological '*baggage*' adult beginners bring with them is also important. There is also need to appreciate the individuality of learners and of learning situations because of the diverse needs and interests of adult beginners.

Imaginative facilitation

This model presupposes that the teacher is no longer a director of learning but rather, a guide who facilitates learning. Such a person does not tell a learner what to learn, but communicates with the learner to gain an understanding of his/her expectations. Through professional expertise combined with information gathered, they steer learning. This person also understands that teaching the student all there is to know is an impossible task, so fostering a '*learning-to-learn*' ethic is a priority. Imaginative facilitating can encourage self-directed learners able to face the challenges ahead. To meet the needs of their adult students, such a facilitator acknowledges the need to be learners themselves sometimes and be willing to work in with others.

Eclectic and holistic approaches

This model moves away from being constrained by established pedagogical methods such as those by Suzuki, Kodaly and others and focuses on a holistic music education. As a result, the recommended teaching style represents a conglomerate of various practices. It also encourages an interdisciplinary perspective in the sense of cutting across subject areas, for example, music and the arts, or specialised fields of knowledge such as lifelong education, adult education and music education.

Linkage and connectivity
Making connections across the years and across disciplines is encouraged. Where there is linkage with life experiences, learning is enhanced. It is important to remember that adult learners have years of learning behind them in a range of learning areas.

Social relevance
Implicit in this model is the view that the music program must not ignore how technology can enhance music learning. Neither should it ignore the need to prepare members of society for the expanded amounts of discretionary time available. There needs to be an appreciation of

individual expression as well as an appreciation of the expression of others. As well, the need to explore various musical traditions, that is, music of '*the masters*', as well as pop, jazz, ethnic music and other musical types, must be acknowledged in practice.

Teaching and learning as traditionally conceived is obsolete
Here there is a move from a teaching to a learning model. There are no set learning tasks as such and no fixed environment for learning. Decisions regarding learning are mutually agreed upon by the teacher and the adult student. There is also flexibility in terms of lesson arrangements. Moreover, there is a focus more on the process of learning and on skills development, especially in terms of skills that can be applied to a range of situations, than on the end-product of learning. The teacher is also sometimes a learner especially if this learning helps to facilitate student learning.

Collaborative practice
This model encourages all the partners in learning to work together for the betterment of student learning. As it is difficult for one person to meet the diverse needs of a range of adult beginners, working together can ease the burden as well as provide a synergistic boost to the learner. It is difficult for example, for individual private providers to have the space for large ensemble practice and for parking. Hiring a hall can be expensive. Collaboration can see less duplication of effort and a broadening of the range of musical offerings. Through collaboration also, opportunities for networking can increase awareness of music developments among providers as well as encourage a sharing of information and a cross-fertilisation of musical experiences and expertise. Adult beginners too, can benefit from seeing music in action and have opportunities to meet like-minded adults as well as talk to more advanced players. Collaboration in this sense can also assure adult beginners that their learning is not isolated.

Reflective practice
The provision and delivery of music making experiences to adult beginners can be enhanced where providers reflect on their practice and work towards improvement. Adult beginners can also reflect on their experiences to establish what the triggers to learning are for them and share this information with their providers.

The achievement of these goals however, rely on the following prerequisites/processes:
• Greater collaboration and networking at all levels and involving all agencies engaged in the provision and delivery of adult music making experiences.

For collaboration to take place there needs to be the working together by all agencies engaged in the music provision and delivery of adult music making experiences. Such a philosophy requires a re-consideration of the relationships and roles among the music providers and adult beginners as well as among the various music providers. It also necessitates a re-assessing of curriculum content, materials, delivery and methods of assessment. Connectivity across the years, within and across subject areas as well as within and across government and inter-governmental agencies can facilitate collaboration.

• Greater public awareness and accessibility in relation to music making opportunities for adult beginners.

Some strategies to achieve this include the positive promotion of those presently involved and regular advertising of courses available. The compilation of a directory of providers can also help in raising awareness and assisting adult beginners by saving them time and effort in sourcing this information out themselves. Ensuring the affordability of programs by all as well as the provision of special facilities/equipment, for example, car-parking space, ramps for disabled participants and the loan of expensive instruments and materials, can also help make things easier for the adult.

Encouraging access to programs in this way can have a significant influence on their decision to participate.

Program development

Program development needs to consider the needs of adult beginners as well as new developments in music education, for example, the use of technology or trends in current research. The cultural context of learners must also be considered. There are also implications for the development and availability of more age-appropriate learning materials. Program development also needs to cater for continuity or ongoing learning and for the enjoyment of the musical experience.

Flexible structures

These structures include an easy flow into and out of learning. Opportunities need to exist for learners to come into learning at any level. Considering the many possible entry points into the study of music throughout the life span, the multiple benefits of music study should be considered at every possible entry point. Smethurst (1995) recommends that as an appropriate model for learning, one must discard the Piagetian notion of a ladder and replace it with the notion of "a complicated climbing-frame where people are able to go up and across and down a bit, depending on what courses suit them at particular times" (p. 43). There also needs to be flexibility in program arrangements. Flexible arrangements may extend to lesson times, which may occur outside of the normal working hours. They may also include payment schemes. Systems need to be in place to accommodate learners of a wide age-range and of diverse abilities, interests and commitments.

Meaningful participation

Meaningful participation is critical to ongoing learning. It has a two-pronged dimension. It implies opportunities for music making as well as opportunities for a variety of sharing

experiences. Where opportunities exist for adult beginners to make music together and to share music experiences, learning is enhanced. Multi-age or intergenerational music making can also help learners to see that there is no mandatory age for music learning to cease and that music is part of life. Where there is greater exposure and acceptance of a range of music types, adult beginners can be more discriminative as well as accepting of different traditions and musical tastes. Such exposure also encourages informed choice in respect to music material. Relevance in terms of choice of music, methods or life experience has an important bearing on adult beginners' decision to continue learning.

Appropriate environment for learning

An appropriate environment for learning is firstly, one that fosters learning. Implicit in this view is the importance of public awareness both in terms of the importance of such learning and in terms of opportunities available. An environment that encourages learning also promotes positive experiences. Furthermore, there is the implication that such a learning environment is accessible.

Secondly, an appropriate environment for learning is one that is also conducive to learning. Where the environment caters for the physical needs of the learner in terms of sufficient lighting, ventilation and heating, learning can be facilitated. Also, where the musical needs of the learner are catered for in terms of adequate human, physical and financial resources as well as in terms of participation, learning can be enhanced. Furthermore, where learners' social needs are addressed, for example, through interaction, learning can be boosted.

The continuing of learning requires a supportive environment where learners can feel comfortable to ask questions or to make mistakes. It is one that is non-threatening. Such an environment is also conducive to the purpose of the experience. If music making activity involves getting together for the purpose of performing for others or for sharing in an outdoor venue, the appropriate environment will be one that provides an appropriate sound system, among other things. An acoustically appropriate environment enhances performance pleasure and can impact on learners' decision to engage in further music making An appropriate environment for learning also allows learners to pursue their interests. An environment which values community music making boosts participation by adult learners. In this regard an image change is urgently required.

Moral decision making

There are many value questions that arise and need to be addressed. These questions include what learning should be valued? Who will participate in this learning? The provision and delivery of music education needs a careful consideration of competing values and the concept of justice, which implies the proper balance between competing claims (Rawls 1972). In the case of music education provision for adult beginners, a consideration of education priorities and economic priorities is valid. There also needs to be a consideration of issues relating to equality of opportunity.

Questions arise as to whether music education provision should be age-based, skills based, based on whether one can afford or whether all should have equal access to it. There is also the responsibility that people have to themselves to seek improvement (Kant cited in Chapman & Aspin 1997) and enhance the autonomous life of other members of society

(Ratz cited in Chapman & Aspin 1997). Closely aligned to this view is that of equal respect (Strike, Haller & Soltis 1988), which implies the valuing of the well-being of others. This could be perceived as utilitarian, as everyone benefits. Music education, as has been alluded to already, brings personal gains as well as community gains. Is there need to justify involvement by everyone? If we are to accept that there is a social benefit, should we not accept that there is a social cost? Hence the following questions need to be posed. Is this learning to be a private good or a public good? Should government responsibility for education cease after the schooling years? When one considers that the concepts of schooling and of rights are changing, should government responsibility not change with it?

The training of music providers

Provision for all of life music learning presupposes the presence of music providers who are equipped to cater for various age and ability levels. The training of musician teachers and other providers for adult beginners is therefore, imperative. Training colleges can facilitate this by providing options or electives for music providers wishing to work with adult beginners. Programs need to incorporate the psychological and pedagogical tools in relation to adult music education. As flexibility and a holistic perspective are key strategies when working with adults, a training program that promotes these strategies is encouraged. Training can also encourage self-steering both in terms of themselves as learners as well as with regard their adult students. The expanding role of education providers, an outcome of the ever-expanding demands and the changing relationship between education providers and learners, education providers and their colleagues, education providers and their work practices and education providers and the community, also needs attention.

Research in the area of lifelong music education with the adult beginner in mind

More research is needed relating to developing programs in adult music pedagogy. Closely aligned to this is the need for developing more music materials for adult beginners. Publishing more articles relating to adult beginners can also give a boost to music development in this current area of deficiency. Longitudinal studies related to music education can also contribute to further development in this area of music learning. It might also be worth conducting research among different cultural groups within WA to see if there are any differences in understandings and in views. It will be interesting to note if personal value systems are based on one's ethnicity or related to the society one lives in.

Policy Development

Policy needs to address the changing and multiple purposes of education. Policy also needs to be supported by an infrastructure based on coordinated and coherent organisation. A coordinated effort is more likely to exist where funding is equitably distributed across the various age groups, across standards (that is of musical excellence) and across the range of musical genres. Also, where policy focuses on bridging gaps in provision and in terms of accessibility, music education for all can become a reality. It is only when policy reflects the cultural value of lifelong learning that lifelong music learning can become an achievable

goal. Like a piece in a jigsaw puzzle, no one point here is any more important than any other point. They are all essential in facilitating lifelong music learning.

Conclusion

This proposal for music education reform is a response to musical traditions, individual needs and a changed social reality. This new model sees music education for adult beginners as a conglomerate of musical experience, human experience and contextually relevant experience. It also gives credence to the notion of lifelong learning as providing a balance with regard to economic, social, cultural and personal growth (The Nordic Council of Ministers 1995).

This model is not intended to be prescriptive. Rather, it is intended to reflect on the wisdom of conventional practices and on current thinking so that the more enduring effects of education can be realised. The emergent model can build on what presently exists, however, there is need to be creative and innovative in providing applications based on this new model. While conservative in its sentiments regarding the careful balancing of the triadic principles of equity, relevance and excellence, this model is expansive in its orientation in terms of the changing goals of education, altering life circumstances and interest. The acknowledgement of community values as well as global concerns and the recognition that education is everyone's responsibility is also explicit.

In terms of the provision and delivery of music education to adult beginners, the calls for product innovation and market innovation are resonating loudly. This expanded model of music education together with coherent organisation and administrative frameworks has the potential to bring about individual and collective benefits as espoused through the four pillars of the Delors report (1996): learning to know, learning to do, learning to live together and learning to be. As such, it clearly points the way forward. I would like to extend an invitation to everyone present to take up the challenge and give practical substance to the ideas put forward.

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Student Outcome Statements: Can We Use Them as a Reliable Measure of Classroom Music?

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Introduction

The need to gather information about the effectiveness of education in The Arts has been emphasised by the current push for accountability in education and recognition of The Arts as one of the eight compulsory learning areas in the Western Australian K-10 curriculum. In Western Australia, The generic title, The Arts, subsumes the disciplines of dance, drama, media, music and the visual arts. It is intended that, during the primary school years, students have the opportunity to experience several art forms and develop broadly-based achievements in each discipline with a view to specialisation in particular art forms at secondary school (Education Department of Western Australia 1994, p.2). This study focuses on the measurement of achievement in one aspect of The Arts namely, music education.

In this age of 'accountability', where the general perception is "you test what is important" and with the recognition of The Arts as one of the important learning areas, music cannot be ignored when gathering information about what students know and what they are able to do. Feedback on student progress is important in any learning area, for several reasons, not the least being that data on the effectiveness of instruction will assist the teaching process and assist in motivating student learning, self criticism and evaluation. It will also inform parents, community, teachers and school decision-makers of progress towards meeting objectives and standards. At a system level, feedback on student progress is essential in informing Governments and policymakers and assisting in driving curriculum initiatives.

Measuring the achievements of students in a subjective and non-quantitative area such as The Arts is likely to be extremely difficult and certainly, in the past, Arts educators have been somewhat reluctant to apply quantitative measures to Arts disciplines that are non-quantitative in nature. It is possible, however, to measure student knowledge and abilities on a continuum of achievement, with the use of a descriptive profile or reporting framework which describes a progression of knowledge, skills and understandings against which student achievement can be measured. To gain a measure of students' knowledge of any art form, including music, it is essential to observe both the ability to practice it, that is, to 'do it' or 'make it' and the ability to understand and appreciate the discipline. (Mercer & Church, 1998). It is, therefore, necessary for any conceptual framework on which assessment is based, to address these two criteria.

This study addresses the problem of a lack of reliable and systematic methodology for evaluating progress in the discipline of music in schools. It attempts to do this by developing an innovative range of authentic assessment tasks appropriate for use at system, school or classroom level so that meaningful reporting of student outcomes in music can occur. For the purposes of this study, the term 'authentic' describes assessment tasks that reflect exemplary classroom practice. The assessment tasks reflect good teaching and assessment practice in classroom music, and the skills and understandings identified in the authentic tasks are placed onto a continuum of students' skills which is matched to a standards framework based on the Western Australian Education Department The Arts Student Outcome Statements (1996). A Rasch measurement model (Rasch, 1960/80; Andrich, 1988a, 1988b; Wright, 1995;) was used to create a music achievement scale and transform student raw scores into ability estimates and item difficulties on the same scale, with a computer program called RUMM (Andrich, Sheridan & Luo, 1996).

The Test Design

First, an examination was made of the Arts Student Outcome Statements (1996) to determine the type of testing that would be necessary to gather the maximum amount of data on student performance in the two areas of Expressing and Appreciating and, at the same time, be feasible in a classroom testing situation. Second, in order to cover both these areas, two test forms were designed; a Process form and an Analysis form. Third, a marking key was generated for each of the forms and music teachers were trained to mark them. Third, raw scores were obtained for the Analysis test only, the Process test only, and for a combination of both tests. Fourth, a Rasch analysis of the scores and an estimate of fit was undertaken for the Analysis test, the Process test, and for a combination of both. Ability estimates revealed that the fit was better by combining the results of both tests. Fifth, an examination of scores, together with individual student scripts was carried out to obtain level cut-off points and to estimate student levels.

The first assessment instrument, the Analysis test, addresses student ability to understand and appreciate music. It consists of a set of stimulus material to which students respond, primarily in relation to the strands, Responding, Reflecting and Evaluating and Understanding the role of the Arts in Society. These are known as the Appreciating strands. Students produce responses in relation to aesthetics, critical analysis, interpretation of meaning and music concepts, such as beat, rhythm, melody, dynamics, shape, mood and tension. Developmental processes involve comparisons and contrasts and the exploration of critical and contextual understanding focusing on particular periods of music history. Where possible, tasks are open-ended in order to provide students with the opportunity to demonstrate their maximum levels of ability. The analysis task is designed to cover a time duration of approximately one lesson period at the appropriate level; that is, approximately 45 minutes at Year 3, 50 minutes at Year 7 and 60 minutes at Year 10.

The second assessment instrument, the Process test, addresses student ability to *make* music. It offers a broad view of student abilities through their documentation of the steps in the learning process which lead to the performance of their final products. The process addresses the *The Arts Student Outcome Statements* (Education Department of Western Australia, 1996) strands of 'Creating, exploring and developing ideas', 'Expressing' and

'Using skills, techniques, technologies and processes'. These are known as the Expressing strands. This test provides evidence of students' planning processes towards a simple composition and performance. The activities in which students engage provide opportunity for inquiry and the use of music language, which are fundamental elements in the creative process leading to the development of a composition and its performance. These activities provide direct evidence of the students' skills and learning, as well as concrete evidence for evaluation using marking keys that were developed during trials. An important feature of this instrument is the opportunity for students' reflection and self-appraisal of their work. The process assessment is designed to cover a time duration of approximately two lesson periods at the relevant level and is based on a clearly structured framework beginning with an appropriate stimulus and culminating in the performance of the composition.

Structure of the Analysis test

A combination of multiple choice and extended answer question types was included in the Analysis tests and, where possible, tasks were open-ended in order to provide students with the opportunity to demonstrate their maximum levels of ability. As this was an assessment of music, student responses were not assessed for spelling or writing skills. Through the use of common items and common stimulus material, tasks allowed for linking of items through Years 3, 7 and 10, thus providing valuable information on student progression through the outcome levels. Where subjective questions, asking for students' opinions or reflections were asked, they were used as prompts for further justification and were not scored.

At Year 3, teachers were provided with an audio tape of the piece *Ballet for Children* (Bliss, 1995), which was recorded in parts, as well as containing verbal instructions for teachers on where to pause the tape. Teachers were then requested to: read the questions for part 1, play the passage of music for part 1, and read the questions one at a time, giving the students reasonable time to answer before going on to the next question. When part 1 was completed, they then repeated the procedure for parts 2 to 7.

The test contained thirteen questions that were designed to address the outcome levels primarily related to Appreciation from Level 1 to 5. All questions in the test, apart from multiple choice items, had the capacity to earn partial credit for students who answered below the targeted Level.

At Year 7, teachers were provided with an audio-tape of the same stimulus piece as that for Year 3, with an additional piece entitled Dharpa (Kellaway & Yununpingu, 1992). The format was similar to that of the Year 3 test with the test being presented in parts, from part 1 to part 9, containing a total of 15 questions. Teachers were instructed to: ask the students to read the questions for part 1 (or read aloud if you think that it is necessary), play the passage of music for part 1, give the students reasonable time to answer all the questions in part 1. When Part 1 was completed they were then asked to repeat the procedure for parts 2 to 9.

Question types were similar to those in the Year 3 tests with the addition of a *compare and contrast* item, as demonstrated which allowed the students to compare and contrast the two stimulus pieces in the areas of instrumentation, expression and rhythm.

The structure of the Year 10 Analysis tests was similar to that of the Year 3 and 7 tests. Both of the stimulus pieces used at Year 7 were provided, together with an additional, more complex, contemporary piece entitled *Earthcry Kakadu* (Sculthorpe, 1989). The test consisted of 17 questions and the audio-tape was played in 10 parts.

Item types similar to those of the Year 3 and 7 tests were used, with the addition of more complex items, providing the potential for students to respond as high as Level 8.

It should be emphasised that, while items in all tests at Years 3, 7 and 10 were targeted to address particular outcome levels, all, apart from multiple choice items, allowed for partial credit to be awarded and the analysis of the data, using a Rasch model, provided item difficulty estimates which enabled outcome Levels of achievement to be established.

Structure of the Process Test

The structure of the Process tests was the same for Years 3, 7 and 10. First, students participated in a directed music warm-up that was intended to focus students' thinking on the creative use of sound and different musical elements. Following the warm-up, they were presented with a stimulus that they examined before participating in a class brainstorming activity to discuss the stimulus. They were then instructed to: write down their own ideas about different sounds that could be used to represent the stimulus, join a small, pre-determined group to plan a composition to reflect the stimulus and notate the composition in either traditional form, or their own style. Groups then rehearsed their pieces before performing them for the class. Teachers videotaped the group performances for central marking. Specific instructions were given for the videotaping process to avoid differences in the quality of productions. After all groups had presented their items, students were asked, individually, to complete a critique of their groups' performances.

Links were achieved through Years 3, 7 and 10 by using the same procedure, the same items and the same marking key across the three Year groups. Tasks were developmental so that, potentially, it was possible for students at all levels to achieve as high as Level 8.

The Marking Keys

Experimentation was carried out to establish the most effective structure for marking keys. Each group's performance was videotaped so markers could watch it as often as necessary to allocate the appropriate mark. Again, the trial material was used to finalise the most effective method of marking.

First, to reflect the development of skills, a line of continuum was developed in a style similar to a Likert scale. For instance, the marker was prompted with the question, "How effectively has the group expressed form?" Along a continuous line across the page were three vertical marks. Under the first mark was the indicator, *not at all effectively*, under the next mark was *somewhat effectively*, under the third mark was *quite effectively*, and under the final mark was *very effectively*. These terms were further qualified by the inclusion of descriptors of these indicators. The problem with this method was the tendency for

markers to be inclined to allocate a level in between the indicators. An attempt was then made to divide the line into smaller degrees with 100 marks along the continuum so that levels between the descriptors could be measured. This resulted in markers tending to count the marks and give a score out of 100. This was detrimental to the notion of assessing and describing what students can actually do, and reverted back to the old method of allocating a numerical score.

Finally, a method known colloquially as a 'marking tree' was developed. A prompt question to the marker, such as "How effectively has the group used expression?" was followed by a sequential, vertical list of competency levels matched to a mark allocation. For instance, '0' mark for no evidence - *no expression - even sound, all loud or all soft*, 1 mark for beginning to develop - *slight changes in dynamics - loud/soft*, 2 marks for sound development - *obvious variation in dynamics, tempo and/or melody in an attempt to reflect mood*, 3 marks for well developed - *effective use of dynamics, tempo, rhythm, melody, harmony, tone, etc. to reflect mood - some evidence of organisation in planning as well as performance*, 4 marks for highly developed - *exceptional use of elements to create a pleasing sense of expression which clearly conveys mood - inclusion of appropriate variety of dynamics, tempo, rhythm, melody, harmony, tone, texture, legato, staccato etc. - evidence of organisation/leadership in planning and performance.* Using this structure, markers could not mark between the descriptors and had to allocate the one which most closely reflected the student's performance.

The Sample

Years 3 and 7

Forty classes of students from each of Years 3 and 7 were selected, in a stratified random sample, to be tested in each of The Arts disciplines from government primary schools. Five steps were taken to achieve this. First, a list of Western Australian Government primary schools and student numbers from the Education Department's Information directorate was obtained. Second, the list was ranked in size according to student numbers, and schools with minimum class numbers of less than six in Year 3 or Year 7 were withdrawn from the list. This was done so that the recommended student group size of three, four or five for the Process test could be achieved, and group interaction could occur. Third, in order to obtain the maximum sample size, the largest 400 schools were selected from the list. Fourth, the list of 400 schools was divided into two halves by selecting every second school. A decision had been made not to ask schools to test in The Arts at more than one Year level, so one half of the list was allocated to Year 3 and the second half to Year 7. Fifth, the 200 schools on the Year 3 list were randomly divided into five sections; that is, one for each of the disciplines; dance, drama, media music and visual arts. This was done by counting 1-5 repeatedly down the list to ensure that the school sizes were distributed evenly across the five disciplines. This process was then repeated for the 200 schools on the Year 7 list.

The final sample for music testing at Year 3 consisted of 40 classes, providing a total of 946 students. This compares with a total number of Year 3 students in Government schools in 1996 of 20,661. Of the 946 students tested, 426 were identified as girls and 486 were

identified as boys. There were 34 students who did not state their gender. Other sub-groups identified in the sample were Aboriginal Torres Strait Islander students, of which there was a total of 59 at Year 3, and Non-English Speaking background students, of which there was a total of 122 at Year 3.

Year 10

The Year 10 sample was not randomly selected. The selection of the sample was constrained by the following:

- Only those Year 10 students who were undertaking music classes at the time were tested;
- There are limited numbers of students undertaking Year 10 Arts classes at secondary schools. The following table demonstrates the limitations of the Year 10 sample:

Table 1.1: Year 10 Arts Enrolments by Gender, 1996

Discipline		Females enrolled	Males enrolled
Dance	n % of enrolled % of population	1 944 98.5 11.3	30 1.5 0.2
Drama	n % of enrolled % of population	2 516 71.5 14.7	1 003 28.5 5.9
Media	n % of enrolled % of population	1 084 55.9 6.3	854 44.1 5.0
Music	n % of enrolled % of population	791 57.6 4.6	583 42.4 3.4
Visual Art	n % of enrolled % of population	3 759 64.7 21.9	2 053 35.3 12.0

- Only schools with a minimum enrolment of six in a class were included in the sample. This constraint was imposed because the process tests required students to work in groups.

The music sample at Year 10 consisted of 20 classes of students in each of the five disciplines, giving an overall total of 321 students.

Data Collection

The tests were administered in school classrooms that reflected students' usual learning environments. In primary schools where a specialist music teacher normally taught music classes, the music teacher administered the tests. In primary schools where there was no music specialist, the teacher who normally taught music to the class administered the tests. This was usually the classroom teacher. In secondary schools, the specialist music teacher administered the tests.

In order to reduce variability in administration of the tests, explicit administration instructions were distributed to teachers. These included the overall time allocation for the tests, as well as times to be apportioned for specific sections of the tests. Instructions were also given as to what the teacher was required to prepare before administering tests. For the Process test, this included the viewing of a Teacher Training Video demonstrating the warm-up and group work.

Analysis of the Data

The Rasch Model

A form of item response theory, known as The Simple Logistic Model, was developed by Danish mathematician Georg Rasch (1960/1980; Andrich, 1978a, p.451; 1978b, p.561; Griffin & Nix, 1991, p.90; McArthur, 1987, p.111). A basic assumption central to a Rasch model of item response theory is that of specific objectivity wherein a set of people to be measured can be ordered in terms of their ability, and the set of items used to measure them can be ordered in terms of their difficulty, on the same scale. This ordering permits a parameterisation of people and tasks that fits the simple logistic model of Rasch (Andrich, 1978b, p.561; 1979, p.188; McArthur, 1987, p.111). Rasch's (1980) simple logistic model is used where dichotomous responses are required, that is, answers are right or wrong.

The Extended Logistic Model of Rasch

An extended logistic model of Rasch was developed by Andrich (1988a, p.363) to move item response theory beyond dichotomous responses to include more meaningful tasks where models for graded items with three or more response categories, referred to as polychotomous response items, have been developed and used as a basis for comparing and interpreting performances across groups, and from one instrument to another (Andrich 1988a, b; Samejima, 1969; Andrich, 1978b; Masters, 1982, in Griffin & Nix 1991, p.99; Masters 1994a, b). Using this model, a threshold level is established which indicates the amount of attribute needed to make the probability of a correct response higher than the probability of an undecided or incorrect response. At this threshold, there is a 50 per cent chance of the student responding in the higher category. The polychotomous response model, allowing for partial credits (Andrich, 1985, 1985a 1988a), is appropriate for assessing music which incorporates performance, analysis and response to stimuli. Partial credit allows for identification of what students know or can do rather than just allowing for a right or wrong answer. For example, it is possible for students to respond to an open-ended item which requires their interpretation of an excerpt of music, in several categories from a simple reference to the dynamics, to an extremely complex explanation of the elements, the mood created, and the instrumentation, using music-specific language.

A Rasch analysis was undertaken, using the RUMM (Andrich, Sheridan & Luo, 1996) computer program to transform students' raw scores onto a scale in which the unit of measure is constant along the scale, and to produce estimates of the difficulty of items on the same scale as the measurement of music achievement for students. The model assumes that a score of zero does not imply a complete absence of music achievement and a perfect test score does not imply a complete ability of music achievement. For example, a student

who scored zero on the test may know something about music that was not asked in this particular test. Conversely, there may be many things about music that a student who gained a perfect score on this particular test does not know. For this reason, the items are located centrally around zero on the scale with no limit in score to indicate absence of ability or perfect ability. The unit of measure, which is used for both item difficulty and student music achievement is called the *logit* - the log odds of answering the item correctly.

The parameter estimate for the items, that is, the item difficulties, range from -4.5 logits, to highest ability, 6.102 logits. This means that the difficulty level of the items is spread over a range exceeding nine logits, which is a wide range of difficulty levels for a one-off testing situation where both time and resources are constrained. It means there was good opportunity for students of high ability levels to display their skills and abilities. Results display a spread of student ability levels from -4.316 logits to 3.057 logits. This means that there was a broad spread of ability levels among students, allowing a sufficient range to provide the level of variance required for mapping student knowledge and abilities using a student outcome framework.

Fit of Items to the Model

The RUMM (1996) program provides two statistics for the estimation of fit to the model. The first of these is an item-person interaction statistic. The degree to which persons respond to items of different difficulty value in a consistent manner is examined. The fit statistic distribution approximates at a t distribution when the data fit the model and have a mean of zero and a standard deviation of one (Andrich & Sheridan, 1980). A negative value indicates a person or item pattern response fits the model closely, while a positive value indicates poor fit to the model. In the case of negative values, there is usually one or more dependencies present in the data. Where values are positive, it usually means that the result indicates no significant knowledge or understanding of the trait being tested. The second statistic used for the assessment of fit of data to the model is the item-trait interaction test-of-fit which examines the consistency of the item parameters over the range of person estimates. The item-trait interaction test-of-fit indicates the degree of consensus of the items across persons located at differing ability levels.

Individual items were examined for 'fit' to the model. When data are ideally ordered, students with high ability are expected to attain higher total scores and be more likely to correctly answer an item than students of lower ability. Where this does not happen and there is unexplained inconsistency of performance, the item does not fit the model. An example of this is when the number of low ability students correctly answering an item exceeds the number of high ability students correctly answering the same item. Where this occurs, a search is made for the source of the anomaly, which may be the wording of the item, an incorrect or unclear marking key, or a source of bias that advantages less able students. A poorly fitting item may be deleted from the final analysis.

The student sample was divided into ten ability groups and the data were examined for identification of the least fitting items. The chi-square statistic was used as a general guide but, in view of the large sample size, this statistic was treated with caution and the residual

fit statistic was used as an indicator of item fit. For items where this statistic was extreme, the Item Characteristic Curve from the RUMM (1996) program was used to examine the observed and expected values for each group for that item. Although there were a few items that showed relatively low discrimination, they were all positive and contributed to the integrity of the test. Therefore, a decision was made not to delete any items from the final analysis.

An example of a RUMM (1996) Item Characteristic Curve for Item MA21 is shown hereunder (Figure 1.2). This was a link item between Year 7 and Year 10. Students were asked to compare and contrast the two pieces, Ballet for Children (Bliss, 1995) and Tribal Voice (Kellaway & Yunupingu, 1992) in terms of instrumentation. The line indicates the expected score of ability groups, ranging from the lowest to highest achieving groups. Each black dot represents the observed score of a student ability group. When the observed scores closely follow the curve of expected values, the group is performing as expected on the item. Item MA21 shows good fit to the model with all groups achieving close to the expected scores, except that the highest achieving group did not perform quite as well as expected. This is indicated by the location, below the line, of the black spot representing the highest ability group.

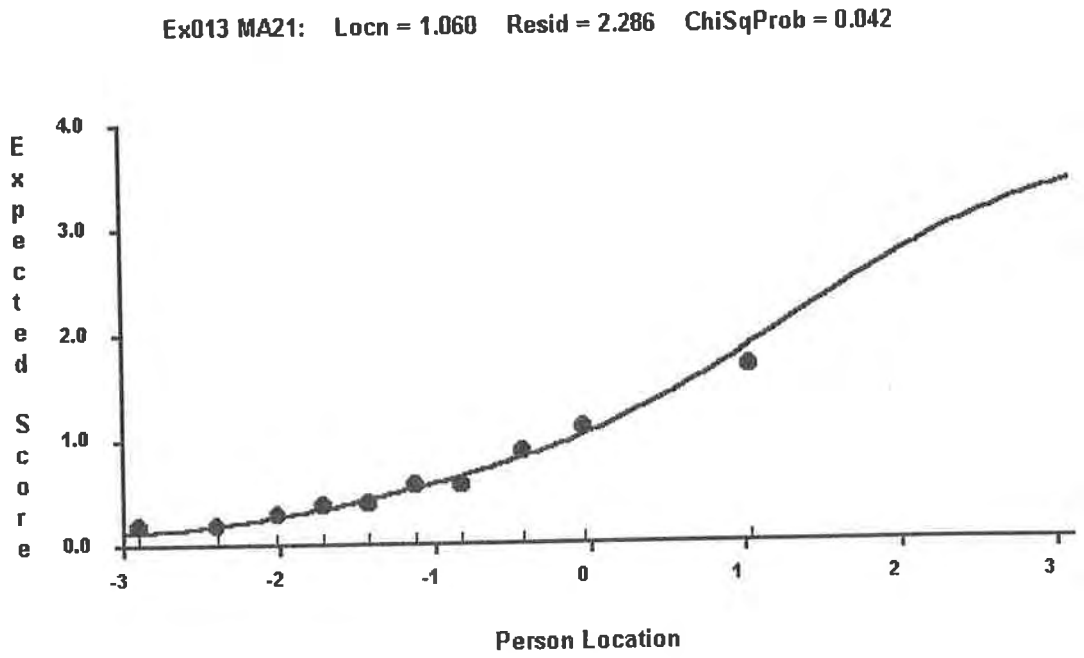

Figure 1.1 Item Characteristic Curve for Item MA21

Thresholds

A threshold structure associated with the categories was parameterised to obtain an indication of the item structure which, if the data had fit the model, should have demonstrated a hierarchical progression from the easiest to the most difficult to achieve. Ideally, all response categories should be answered consistently, for all items, in order from easiest to most difficult. For example, for a student possessing a low level of knowledge and ability in music, the most probable response to a difficult item would be in the first category. A student possessing a high level of knowledge and ability in music would probably respond in a high order category for the same item. This means that students

with a high level of ability in music would achieve successively higher order categories than would be the case for a student of lesser music ability. If this pattern is observed for all items then the item thresholds will be in an ordered sequence. If thresholds are not ordered, the categories are not behaving as expected and this need to be investigated.

An examination of the Category Probability Curves, provided by the RUMM (1996) program, is a useful source for facilitating this investigation. An example of a Category Probability Curve showing the ideal ordering of sequence attained is Item MA19. This was an analysis link item for Years 7 and 10 in which students were asked to discuss elements of the music that helped them to decide what different styles of music were combined by the composer in the piece Tribal Voice (Kellaway & Yunupingu, 1992). The item was developed to contain four response categories; that is, 0 marks, 1 mark, 2 marks and 3 marks. The thresholds for the respective categories were -3.398, 0.051 and 3.347. Figure 1.2 displays the curves that represents each item category and its allocated mark. The even distribution of the curves indicates an evenly distributed order of thresholds.

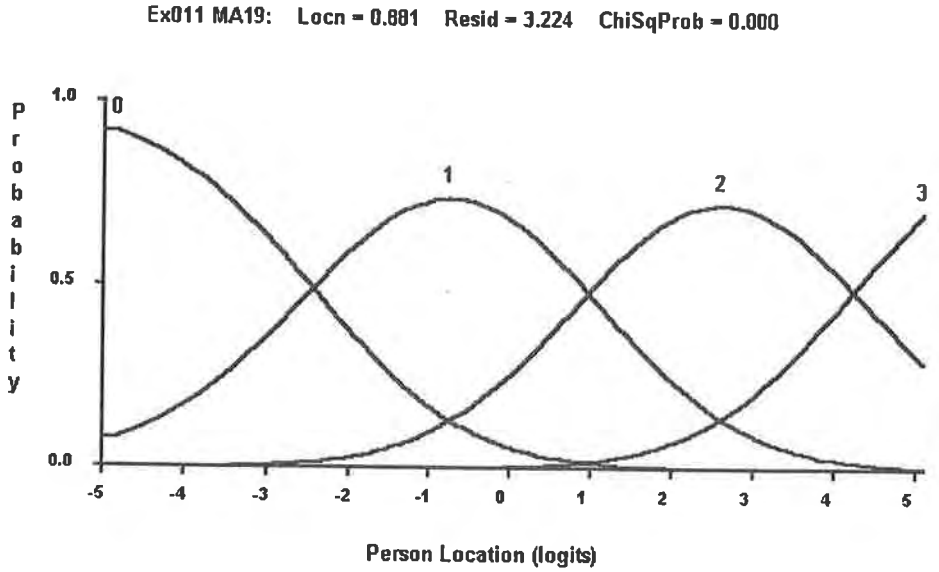

Figure 1.2: Category Probability Curve for Item MA19

NOTE: Below -2.4 logits, a student ability group has a decreasing probability of getting 0 marks and above the point -2.4 logits, an increasing probability of getting 1 mark. Below Logit 1, a group has a decreasing probability of getting 1 mark and above logit 1 the group has an increasing probability of getting 2 marks. Below logit 4.3 a group has a decreasing probability of getting 2 marks and above logit 4.3, the group has an increasing probability of getting 3 marks.

There were four Analysis items and four Process items in which the thresholds were either not strictly ordered or had minimal discrimination. In these cases, an examination of the category probability curve was undertaken to facilitate decisions regarding the rescoring, or collapsing of categories for these items.

The Results

The initial RUMM (1996) analysis of the combined results of the music Analysis and Process tests produced a mean of 0.000 which indicates excellent overall fit to the model, and a standard deviation of 0.898. The total number of students included in the analysis was 2192. The person separation index for the final analysis was 0.896. The RUMM (1996) program measures the power of the tests of fit on a five point scale, that is: *Excellent, Good, Reasonable, Low* and *Too low.* The Power of the tests of fit for this analysis was rated as *Excellent*, and the total item chi-squared value for the test was 3577.143 ($p = 0.000$).

Increasing the Probability

The relationship between student ability and item difficulty that had been established using the RUMM (1996) program, reflected a probability of 0.5 that a student would correctly respond to an item of equal difficulty. This is usual for Rasch models. However, to increase the reliability of a student's success in achieving at an outcome level, the probability of success upon which to base an ability estimate was converted, at this stage, from 0.5 to 0.7. The consequence of this was that a student now had at least a 70% chance of correctly responding to an item with a difficulty of equal to or less than the ability of the student. This meant that, when outcome levels were allocated, it could be said, with more confidence, that a student was performing at a particular outcome level.

Establishment of Levels

The simultaneous scaling of item difficulties and student abilities on the same scale derived from a Rasch model of analysis, allows for the linking of student performance to The Arts Student Outcome Statement (Education Department of Western Australia, 1996) levels.

After item difficulties were established, the distribution of items was plotted on an item map. The outcome level which was intended to be operationalised by the item was then entered next to each item. A study of the item clusters on the item map was then undertaken to establish outcome level boundaries. It was expected that samples of items operationalising an outcome level would be normally distributed with respect to difficulty and that items operationalising a high level outcome would be more difficult than those operationalising a lower level outcome. This was the case in most instances, apart from a few items which did not perform exactly as expected. In some instances, there is some overlap between item levels. There could be a number of reasons for this. For instance, the format of a question may have created an anomaly which made a question easier or more difficult than anticipated. An item which was intended to operationalise a Level three outcome may have been easier for students because it was presented as a multiple choice format. On the other hand, an item which was designed to operationalise Level two may have been more difficult because it was an open-ended format. Unfamiliar or unusual wording may have had a similar effect.

The ability levels of students were then plotted on the item map and a study was made of the test scripts of students whose ability levels were close to the level boundaries (see

Appendix 1). Overall scores of student test performances were compared to the study of item clusters to ensure that students whose ability estimates appeared within the boundary of a particular outcome level had a high probability of being at that level. Level cut-off points were established and Student performances could now be viewed in relation to *The Arts* Student Outcome Statement (Education Department of Western Australia, 1996). It should be noted that, as student ability estimates approach the upper or lower boundary limits of a level, the probability of their being in that level decreases.

Transforming the Logit Values

For the purposes of reporting, and to eliminate the use of negative values for student ability, the logit scale was converted to an arbitrary scale from 0 to 800. Although the scale is arbitrary, a scale of 800 was selected to reflect the eight levels of outcomes contained in *The Arts* Student Outcome Statements (Education Department of Western Australia, 1996). After being adjusted to 0.7 probability, the minimum logit value of the sampled students was -3.75. This minimum logit value was transformed to the arbitrary scale score of 0. The maximum logit value, after being adjusted to 0.7 probability was 4.56. This maximum logit value was transformed to the arbitrary scale score 800. The equation used to perform this conversion is $800/[\text{logit}_{max} - \text{logit}_{min}]$.

Student Performance Levels

The mean level for each Year group shows a clear pattern of development from Year 3 through Year 7 to Year 10, although there is considerable overlap in performance between the Year groups. For example, the highest achieving 10 per cent of Year 7 students performed above the level demonstrated by approximately 25 per cent of Year 10 students.

Over 80 per cent of Year 3 students demonstrated skills associated with Level 2 outcomes in music. This means they can work in a group to plan and create a simple sound piece to interpret a given stimulus, including the creation of a simple score, notating their own rhythms, melodies and accompaniment patterns using simple known methods. They reflect upon music works, noting particular features including melody, instruments used, form and expression. They identify the purpose of a work and how it affects the way it should be performed. They
apply simple critical reflections on their preferences and describe sounds using basic musical terms.

Over 55 per cent of Year 7 students demonstrated skills associated with Level 3 outcomes in music. This means they can compose short, simple, structured musical works using tuned or untuned percussion instruments, recorder, sounds from the environment, voice and body percussion. They are able to aurally recognise and describe musical features such as simple rhythmic and melodic patterns, tempo, instrumentation, timbre, dynamics and structure and use and interpret signs and symbols representing pitch, duration of sound and dynamics. They can describe obvious features such as repetition, form, changes in dynamics and texture, as well as identifying music from another culture and associating characteristics of the music with the style.

Over 80 per cent of Year 10 students demonstrated skills associated with Level 4 outcomes in music. This means they can create musical works that capture characteristics of a given stimulus and interpret elements of pitch, rhythm, dynamics and phrasing in composition. They explore major and minor tonalities, textures, forms, media, and invent a soundscape score related to the theme. They explore combinations of sounds from the environment, chords, ostinati, and incorporate known structures such as ternary or binary form. They are able to give reasons why a musical element used in a piece is important and how it was used to create the perceived mood, tension and purpose. They can compare music from different times, places or cultures, identifying notable differences in musical characteristics. Below is a summary of the overall performance of Year 3, 7 and 10 students in music (Table 2.2) and the scale of student performance and outcomes achieved.

Table 1.2: Summary of student performance in music

	Number of students	Mean	Std deviation	Level
Year 3	946	294	85	2
Year 7	921	359	82	3
Year 10	324	525	105	4/5

Implications

The tests have been administered by both generalist and specialist music teachers in schools and have proven suitable for use by either group. Classroom and specialist music teachers will now be able to use students' raw scores to compare their results with the data gathered across the State for this testing program. The tests will provide the opportunities for outcomes relating to aesthetics, critical analysis, interpretation of meaning and music concepts to be measured with a level of reliability which has not been possible in Western Australian classrooms before. It will also be possible for teachers to make comparisons using a common framework. The tests will also provide a model of good classroom practice based on The Arts Student Outcome Statements (Education Department of Western Australia, 1996) framework. Marking keys and item descriptions have been worded to provide descriptions that can be understood by generalist as well as specialist teachers at both primary and secondary levels.

Although the tests need to be administered to Years 3, 7 and 10 to compare with State results, they have been developed to reflect a developmental continuum and so are not limited to specific Year levels. This means that the tests can be used at any Year level as a valuable tool for gathering classroom or whole school data in relation to The Arts Student Outcome Statements (Education Department of Western Australia, 1996).

Conclusions

The Music achievement scale, to measure student outcomes in classroom music across both the Appreciating and the Creating strands of The Arts Student Outcome Statements (Education Department of Western Australia, 1996), for Years 3, 7 and 10, has been successfully developed. Validity of the measure has been established by trialling the

materials with a sample of 2192 students in Western Australian primary and secondary schools and conducting a Rasch model of analysis using the RUMM (1996) program. Item difficulties have been calibrated on the same scale as the student measures. Overall fit, as well as individual fit, of items to the model has been established and thresholds have been adjusted where necessary, so that they are properly ordered. Reliability of the scale, as shown by its Separability Index, is high and the power of fit to the model is excellent. Targeting of the items against the student measures is satisfactory. This evidence leads to the conclusion that a valid and reliable scale of music achievement has been created. The Excellent Power of fit to the model, as rated by the RUMM (1996) program is testimony to the reliability of the tests.

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Confidence in Singing: A Profile of Early Childhood Preservice Teachers' Attitudes

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Introduction

In early childhood settings, singing plays a vital role, not only in the development of musical skills, but also in the development of physical, social and language skills (Feierabend, 1990). it is important that teachers in early childhood settings are both confident about singing with children and willing to sing with children. The quality of musical activities offered to children depends largely on teachers' own attitudes towards these activities and their own musical achievement, and their confidence in their own ability (Gifford, 1993). Lack of confidence has been cited in other studies as a major reason for not teaching the arts (Cleave & Sharp, 1986) and as a major obstacle preventing the teaching of music in primary schools (Mills, 1989).

This study set out to identify factors that influenced early childhood preservice teachers' confidence in their own ability to sing and determine what effects participation in a university music foundations subject had on their confidence. Three categories of factors were examined. The first category dealt with preservice teachers'enjoyment of singing and the identification of possible contributing experiences. The second category examined their beliefs about singing generally and their own singing ability specifically. The third category explored their confidence to sing in different circumstances.

Subjects

The subjects for this study were preservice early childhood teachers. Two groups participated. One group (24 students) was in Year 3 of a four-year Bachelor of Education course. They were enrolled in Music and Movement, a subject that focused on specific skill development. In this subject students met 3 hours per week for the whole year. One hour was devoted to learning keyboard skills in a laboratory situation. The other two hours were devoted to group activities such as singing, playing tuned and untuned percussion instruments and moving.

The second group (37 students) was in Year 2 of a restructured four-year Bachelor of Education course. These students met 3 hours per week for one semester. One hour of this time was devoted to learning keyboard skills in the laboratory and the other two hours were devoted to group singing, playing and moving activities. The outcomes for both groups concerning singing were the same. They were:

1. That by the end of the year/semester, students would be able to sing a variety of early childhood songs confidently,
2. That by the end of the year/semester, students would have improved their ability to sing in tune;
3. That by the end of the year/semester, students would enjoy singing with others;
4. That by the end of the year/semester, students would feel confident in designing singing activities for children.

All students were surveyed during the first week of lectures in Semester I regarding their beliefs about singing. They were again surveyed during the last week of their lectures. Responses to both the pre and post-tests will be reported.

Instrument

The survey used was adapted from a survey used by Jeanneret (1995) in her study of preservice teachers' attitudes and confidence in participating in musical activities. The Singing Confidence Survey had four sections. Section I gathered data on preservice teachers' formal music training. The 23 questions in Section II gathered data on preservice teachers' attitudes to singing (Question 1), their beliefs about singing (Questions 8, 9, 13, 17, 18, 19), their attitudes about involvement in formal and informal singing activities (Questions, 2, 3, 4 ,5, 20, 21, 22, 23) and their confidence to sing in various situations (Questions, 2, 3, 6, 7, 10, 11, 12, 14, 15).

Section III asked preservice teachers to compare their perception of their own confidence to their perception of their peers' confidence in four instances; singing with their friends, in front of their peers, their ability to teach songs to children, and to sing in front of children.

Section IV elicited information from subjects regarding the most positive and negative experiences they could remember concerning singing and the reasons for those reactions.

Results

I. Prior Singing Experiences and Enjoyment

Data were gathered to determine the degree of individual involvement in various singing activities and whether these were perceived as enjoyable, positive or negative. On the pretest, 59% of the total group of 61 agreed or strongly agreed that they enjoyed singing as an activity, but 38% indicated that singing was not an activity they enjoyed (Appendix 1). Only 48% of the sample had sung in a primary school choir and enjoyed it. The other respondents had either not enjoyed the experience (39%) or had not been involved in participation (13%), An even smaller number (18%) had sung in a secondary choir and enjoyed it compared to 46% who had not enjoyed singing in a secondary choir and 36% who had not been involved.

Regarding other activities, 18% indicated they enjoyed singing in Eisteddfods, 20% enjoyed singing in a band or some kind of group, 28% enjoyed singing in a Karaoke

situation and 16% had enjoyed a church choir experience. The remainder of the sample had not enjoyed or participated in those types of singing activities.

Although more than half of the group admitted they enjoyed singing, less than half perceived their primary choir experience as enjoyable. Anecdotal evidence indicates that during secondary school, fewer students become involved in formal school choral experiences than did in the primary school. The data for this study support that view.

In order to examine possible sources of subjects' attitudes towards singing, they were asked to identify the most positive singing experience they could remember. Most responses fell into the category of peer group singing activities such as: Singing in the infants, primary, secondary school choir or groups (30%)- singing in school musical productions (13%)- and singing with friends, relatives or children (18%). Another category of responses dealt with singing alone in the car, shower, or with the radio (14.5%). For 13%, singing solo at school, in Karaoke situations, and winning at Eisteddfods were cited as positive experiences. Only fourteen students in the total sample did not respond to the question. It may be that those respondents did not want to answer the question. It may also be that they could not think of any positive experience in their life associated with singing.

Students were also asked to identify the most negative experience they could remember regarding singing. One category of responses dealt with formal school experiences. These included singing at school (1%), compulsory school choirs (1%), singing in choirs (10%), and the high school music class (1%). Another category of responses dealt with experiences that communicated to respondents the notion that their voices were unsatisfactory. These included not getting into the primary choir (1%), being punished during the primary choir practice (1%), being told they had a bad voice (8%), being laughed at, criticised, or told to stop singing (7%). Solo singing was identified by 8% of the group as being the most negative experience they had. Others identified mishaps during singing or the quality of the experience as being negative. These included such things as: singing wrong words or forgetting the words (1%), singing out of key or singing wrong notes (1%), losing her voice before a performance (1%), learning boring, out of date songs (2%).

II. Beliefs: Talent verses Training

A second set of data was gathered to determine preservice teachers' beliefs about singing from three perspectives: (1) singing is a talent one is born with versus singing is a skill one can acquire; (2) I believe am able to learn to sing well; (3) the quality of my voice is as good as the quality of my peers' voices.

Table One reports the results of three questions dealing with the talent versus skill issue. Over half of the sample agreed with the statement that most people could be trained to be good singers. However, a majority of the sample indicated that they believed one did have to be talented to sing well and that people were not born with good voices. The reasons for the apparent anomaly in responses are not apparent. It is possible the first question is ambiguous and can be interpreted in many ways. Does it mean that all people are born with good voices or that all people are born with the potential to sing well. What

does "good" mean? Russell-Bowie (1988) has indicated that preservice students often over estimate the "ability" required to perform musical activities. Perhaps in these students' minds, "good voices" equals "professional musician standard" and not just "singing pleasantly and in tune".

Table One: Talent verses Training Belief - Pre-Test (N=61)

Item	Strongly Agree/Agree	Disagree /Strongly Disagree
I think people are born with good voices	39%	58%
I don't think you have to be talented to sing well	44%	56%
I think most people could be trained to be good singers	52%	45%

Two questions elicited information about their beliefs in their own ability to improve their singing. The majority of the sample (70%) indicated they believed that a singing teacher could help them improve their singing voice. Only half the group indicated they believed they could be trained to be a "good" singer. Again, the reason for the difference in responses is not clear. The question is "what makes a good singer" in their minds. Although they agree that a teacher could help them improve, they don't seem to necessarily think the improvement will qualify them as a 'good' singer.

Table Two: Personal Singing Potential Beliefs - Pre-Test (N=61)

Item	Strongly Agree/Agree	Disagree/ Strongly Disagree
I think if I had a singing teacher, my singing voice would improve	70%	39%
I think I could be trained to be a good singer.	51%	46%

Students were asked to indicate their perception of the quality of their voice compared to the voices of their peers. In the pretest, no students indicated a belief that their voice was "well above average". Slightly over half of the group (52%) indicated a belief that compared to their peers, their voices were "average". One quarter of the sample (25%) believed their singing voices were "below average" and 20% felt their voices were "well below average".

One set of questions aimed to identify students' confidence to sing in four different situations: (1) when no other adult was around, (2) when singing with a group of adults or peers; (3) when singing alone within hearing range of another adult or peer-, and (4) when working on their own with young children.

A large majority of respondents indicated a willingness to sing along with the radio or recordings if no one was listening (95%). Most indicated they would "enjoying participating in singing games during the music lectures (70%) and 57% agreed or strongly agreed that they would "feel comfortable singing with others in this class". Respondents also agreed and strongly agreed that they would "enjoy teaching a song to young children

in a preschool (95%) and enjoy playing singing games with children (94%).

Their confidence level dropped considerably when asked whether they would enjoy singing by themselves in the music lecture. Most of the students (87%) said they would not enjoy singing by themselves or teaching a song to their peers (80%). When asked to compare their own confidence with their peer's confidence, 53% of the group indicated they perceived their confidence in singing in front of peers was below or well below the average confidence of their peers. However, compared to their peers' confidence in ability to teach songs to children, 89% of the sample rated themselves as average or above average. The group also indicated that they believed they would be good at teaching young children to sing (66%).

Discussion

As reported in other studies, preservice teachers enter teacher education with strongly held beliefs and images about good teaching and learning based on their own experiences as students (Calderhead and Robson, 1990- Richards, 1996). It is reasonable, therefore, to expect that preservice teachers would hold beliefs about singing and the value of singing in education. Most of the students in this sample were able to identify specific positive and negative singing experiences. These tended to come from their formal schooling and may in part account for the reason 41 % of the group did not view singing as an enjoyable activity. This has implications for all educators. The quality of singing experiences provided for students during formal schooling is important, not only for the skill development, but for the attitude about the activity that is developed simultaneously.

The sample was fairly evenly divided on the issue of whether good singing was the result of talent or training. The decision whether to engage or not engage in an activity may depend on how relevant, the activity is seen to be, how meaningful the activity is, and how great the chances for success appear to be to the potential participant (Cameron & Bartel, 1998).

Beliefs that only people with "good" voices should sing, or that only a few people are born with "good" voices may discourage potential participants from involvement in certain types of singing activities. The definition of what constitutes a 'good singer' or a 'good singing' voice was unfortunately not covered in this research. Although a majority of the sample believed a singing teacher would improve their voice, fewer felt they could be trained to be a 'good singer'. Research by Bowie-Russell (1988) claims that students feel the standard of skills needed to teach music is actually much higher than is necessary, particularly at the early childhood and primary level. It is possible that the students in this sample also feel that a 'good' singer is a professional singer. Future research would help to clarify what constitutes 'good singing and good singers' in their minds.

Although half of the group reported believing the quality of their singing voice was 'average', a large percentage (45%) believed the quality of their voices were "below" or "well below" average. Again, these beliefs may be connected to what constitutes an average voice.

Despite having an average, below average, or well-below average voice, 95% of the sample indicated they were confident singing when no one was around. The majority was confident singing with peers and other adults and confident singing with children and leading singing activities with children. Most expressed a confidence in their abilty to teach young children to sing. The confidence diminished if asked to sing alone in front of peers or other adults. The explanation given was that children are non-judgemental but adults are judgemental. The challenge for teacher educators is to improve the confidence and willingness of preservice teachers to sing with children, but also with other adults in groups or by themselves as in peer teaching. Whether that confidence can be significantly improved during the course of a music foundations course of a semester or year length was also examined in this study.

Participation in Music Foundations and Confidence in Singing

Group A attended lectures/workshops for 3 hours per week for one year in a music foundations subject. As previously stated, one hour was devoted to the development of keyboard skills. The lecture/workshops normally followed the same format. Students would work with one or more musical concepts or elements (duration, pitch, tone colour, structure, style, harmony). The lecture would use repertoire and activities that were appropriate for use with young children. The intention in the lectures was to model good teaching techniques that could be used when designing and implementing musical activities with young children. Simultaneously, preservice teachers would be developing skills and knowledge of musical elements. Singing was a normal part of each lecture. The activities encouraged students to learn by doing, so all participated in singing games, singing songs with movements and clapping patterns and learning to accompany songs. The program for Group B used the same format but ran for only one semester.

Results

During the last lecture for each group, the post-test was administered. Results for each group are reported separately. T-tests were used to compare differences in responses between the means for the pretest and the posttest.

Table Three: Singing Confidence Survey: Section II Semester Students

Item	Mean		Mean	
	Pre-test	Std. Dev.	Post-test	Std. Dev.
1. Singing is an activity I enjoy.	2.7	0.85	2.9	0.64
2. I will sing along to the radio or recordings if no one is listening.	3.5	0.51	3.6	0.49
3. I will sing along to recordings or the radio, even f my friends are around.	2.8	0.78	3.0	0.50
4. I enjoyed singing in the primary choir	2.3	1.1	2.1	1.4
5. 1 enjoyed singing in the choir in the secondary school.	1.5	1.3	1.2	1.5
6. I would feel comfortable singing with others in this class.	2.7	0.78	2.8	0.65
7. I would feel comfortable singing with young children I was teaching.	3.1	0.70	3.2	0.56
8. I think people are born with good singing voices.	2.4	0.78	2.3	0.82
9. I think if I had a singing teacher, my singing voice would improve.	2.8	0.60	3.0	0.78
10. I would enjoy peer teaching a song to the rest of this class.	1.9	0.73	1.9	0.78
11. I would enjoy teaching a song to young children in a preschool.	3.1	0.68	3.2	0.49
12. I would feel comfortable singing by myself in this class.	1.6	0.76	1.5	0.77
13. I don't think you have to be talented to sing well.	2.4	0.68	2.4	0.70
14. would enjoy playing singing games with children.	3.1	0.73	3.1	0.86
15. I would enjoy participating in singing games in my music lectures.	2.7	0.78	2.9	0.72
16. I would enjoy having 'singing conversations' with young children in preschools.	2.9	0.53	2.9	0.56
17. I think most people could be trained to be good singers.	2.5	0.69	2.9**	0.50
18. I think I could be trained to be a good singer.	2.5	0.65	2.7	0.65
19. I think I would be good at teaching young children to sing.	2.7	0.52	2.7	0.62

N= 37 **p<.01

In the one-semester group, the means for items 9 and 18 (beliefs regarding singing potential) increased, though not significantly. The item that had a significant difference was " I think most people could be trained to be good singers". In the post-test, the mean for that statement was higher. The means for items dealing with confidence in singing alone (Item 2), when other adults are around (item 3), with the music

foundations class (Items 6, 15) and with young children (Item 11) also increased in the posttest, though not significantly. Confidence in singing alone in front of the class or other adults did not improve (Items 10, 12).

There were significant differences in responses in the post-test to three items concerning personal confidence. Compared to their peers, the means for confidence in singing in front of their peers, in singing with their friends and the quality of their voices had improved (Table Four).

Table Four: Confidence in Singing Survey - Section III Semester Students

Item Compared to others in this class, I think my...	Mean Pre-test	Std. Dev.	Mean Post-test	Std. Dev.
1. ...singing voice is...	2.4	0.83	2.8**	0.60
2. ...confidence in singing with my friends is...	2.7	0.71	3.1**	0.37
3. ...ability to teach songs to children is...	3.0	0.46	3.1	0.54
4. ...Confidence in singing in front of small children is...	3.1	0.54	3.2	0.60
5. ...confidence in singing in front of my peers is...	2.5	0.83	2.8*	0.63

N=37 *=p<.05 **=p<.01

The results (Table Five) for preservice teachers in the year-long group were encouraging.

Table Five: Confidence in Singing Survey Full Year Students

Item	Mean		Mean	
	Pre-test	Std. Dev.	Post-test	Std. Dev.
1. Singing is an activity I enjoy.	2.5	1.1	3.1**	0.74
2. I will sing along to the radio or recordings if no one is listening.	3.4	0.72	3.6	0.65
3. 1 will sing along to recordings or the radio, even if my friends are around.	2.8	0.82	3.0	0.82
4. I enjoyed singing in the primary choir.	2.1	1.2	2.4	1.2
5. I enjoyed singing in the choir in secondary school.	1.4	1.4	1.3	1.4
6. I would feel comfortable singing with others in this class.	2.2	1.0	2.9**	1.1
7. I would feel comfortable singing with young children I was teaching.	3.3	0.63	3.4	0.65
8. I think people are born with good singing voices.	2.0	0.98	2.3	0.79
9. I think if I had a singing teacher, my singing voice would improve.	2.7	0.76	2.9	0.77
10. I would enjoy peer teaching a song to the rest of this class.	1.8	0.72	2.1	1.1
11. I would enjoy teaching a song to young children in a preschool.	3.4	0.58	3.4	0.50
12. I would feel comfortable singing by myself in this class.	1.4	0.72	1.9**	0.91
13. I don't think you have to be talented to sing well.	2.2	0.70	2.5*	0.83
14. I would enjoy playing singing games with children.	3.4	0.58	3.5	0.51
15. I would enjoy participating in singing games m my music lectures.	2.8	0.94	3.1	0.89
16. I would enjoy having 'singing conversations' with young children in preschools.	3.0	0.69	2.8	1.0
17. I think most people could be trained to be good singers.	2.3	0.86	2.7*	0.61
18. I think I could be trained to be a good singer	2.2	1.1	2.8*	0.79
19. I think I would be good at teaching young children to sing.	2.7	0.62	2.9	0.6

N=24 *= p<.05 **=P<.01

In the Year-long Group, the means for items 9 and 18 (beliefs regarding singing potential) increased, in item 18 significantly. There was also a significant difference in the pre- and post-test means of items 13 and 17 which dealt with the talent verses training issue. The

respondents seem to indicate that they are more inclined at the end of the program to believe that good singing can be taught and that they could improve with training. The items that reported the largest significant difference were the ones dealing with confidence in singing with others in the group (item 6), singing alone in the class (item 12), and singing as an enjoyable activity (item 1).

Table Six : Confidence in Singing Survey - Section III Full Year Students

Item Compared to others in this class, I think my...	Mean Pre-test	Std. Dev.	Mean Post-test	Std. Dev.
1. ...singing voice is...	2.3	0.94	3.0***	0.83
2. ...confidence in singing with my friends is...	2.4	1.0	3.2***	0.89
3. ...ability to teach songs to children is...	2.8	0.83	3.2*	0.41
4. ...Confidence in singing in front of small children is...	3.0	1.0	3.4*	0.77
5. ...confidence in singing in front of my peers is...	2.2	0.92	2.7*	1.0

N=24 *= p<.05 **=p<.01 ***=p<.001

The most significant differences were found in preservice teachers' perception of the quality of their singing voice and their confidence compared to their peers. Table 6 shows significant differences in responses for all items between the pre and post tests. These responses indicate that students' view of their own ability compared to their peers had improved considerably over the course of the subject.

Discussion

As a teacher educator, I find the results of this study to be both encouraging and discouraging. They are discouraging firstly because the findings are not new. Numerous studies reports have been conducted over the past two decades which report the link between confidence in their own musical ability and teaching music at the primary level (Calouste Gulbenkian Foundation, 1982; Cleave & Sharp, 1986; Mills, 1989; Gifford, 1993). It has been clear to music educators for a long time that an important outcome of primary and early childhood teacher education is the development of confidence in making music and the development of a positive attitude to music. It has also been clear, that negative attitudes towards music are often the result of negative experiences. These have been described as "abusive or self confidence-shaking episodes with significant teachers that leave them with lasting discomforts or inhibitions contributing to a tendency to disengage from music" (Cameron & Bartel, 1998: 1). These episodes remain as powerful images in the minds of preservice teachers and colour their attitudes towards music and their willingness to participate in the full range of musical activities.

Many of the negative 'episodes' are the result of formal primary and secondary school experiences. Certainly one main focus of early childhood and primary music foundations

subjects has been the development of confidence and a positive attitude for over 20 years and yet students of teachers trained in this region still arrive at university with negative images and a lack of confidence. More research is needed into why this cycle has not been broken, and what teacher educators can do to improve the attitudes of incoming preservice teachers.

The encouraging results of this study are that participation in a music foundations subject that has confidence as a ma or outcome will achieve some success in raising the confidence level of preservice early childhood teachers. It appears that, at least in this instance, the longer students have to develop skills and confidence, the greater the level of confidence that is developed. This is a concern because in the present climate, education courses seem to be cutting back on the number of music (and other arts) subjects that preservice teachers are required to do. The continuing cycle must not continue. Music must be seen by teachers and students as enjoyable, worthwhile, relevant and positive.

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Appendix I: Singing Confidence Survey: Section II Both Groups

Item	Strongly Agree		Agree		Disagree		Strongly Disagree		Not Applicable	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1. Singing is an activity I enjoy.	8	14	28	33	18	14	5	0	2	0
2. I will sing along to the radio or recordings if no one is listening.	30	39	28	20	3	2	0	0	0	0
3. I will sing along to recordings or the radio, even if my friends are around.	8	12	39	40	10	8	3	1	1	0
4. I enjoyed singing in the primary choir.	6	9	23	24	17	12	7	4	8	12
5. I enjoyed singing in the choir in secondary school.	6	6	5	9	22	12	6	5	22	29
6. I would feel comfortable singing with others in this class.	5	9	30	39	16	9	9	2	1	2
7. I would feel comfortable singing with young children I was teaching.	17	23	39	34	4	4	0	0	1	0
8. I think people are born with good singing voices.	3	3	21	21	26	30	9	5	2	2
9. I think if I had a singing teacher, my singing voice would improve.	6	13	37	36	16	10	2	1	0	1
10. I would enjoy peer teaching a song to the rest of this class.	0	3	11	15	30	20	19	23	1	0
11. I would enjoy teaching a song to young children in a preschool.	17	20	41	40	2	1	0	0	1	0
12. I would feel comfortable singing by myself in this class.	1	3	6	6	18	22	35	30	1	0
13. I don't think you have to be talented to sing well.	1	4	26	27	27	26	7	3	0	1
14. I would enjoy playing singing games with children.	20	23	37	36	3	0	0	0	1	2
15. I would enjoy participating in singing games in my music lectures.	9	14	34	35	13	8	4	0	1	0
16. I would enjoy having 'singing conversations' with young children in preschools.	10	11	39	32	12	17	0	0	0	0
17. I think most people could be trained to be good singers.	2	6	30	41	25	14	2	0	2	0
18. I think I could be trained to be a good singer.	3	7	28	33	23	19	5	2	2	0
19. I think I would be good at teaching young children to sing.	3	5	37	37	21	18	0	1	0	0
20. I enjoyed singing in Eistenddfords.	5	4	6	11	14	7	5	4	31	34
21. I enjoyed singing in a band or group.	4	6	8	11	16	6	4	4	29	33
22. I enjoyed singing in a Karaoke bar.	2	4	15	12	17	8	2	3	25	33
23. I enjoyed singing in a church choir.	4	3	6	10	19	9	3	2	29	36

N=61

Chosen Voices: Recruitment in Victorian Children's Choirs

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Abstract

This paper considers some of the implications of a research project investigating children's choirs in Victoria. The choirs involved were all independent choirs (in the sense of not being attached to a school or church) and included boys', girls' and mixed choirs, both in Melbourne and in regional centres. The first stage included observations of rehearsals, collection of documentation about the choirs, and interviews with choral directors about their alms for the choir and the ways in which they tried to achieve them. A later stage of research will consider the experiences and perceptions of the children who sing in choirs, and of their parents. This paper explores the reasons behind the selectivity of participants which characterizes most of the choirs investigated, and the implications of this for choral music education.

Introduction

The resurgence in choral singing in Australia, and the steady increase in the number and quality of children's choirs in recent years are often cited as one of the real advances in Australian music education. it was partly a desire to investigate a positive development, rather than look at one of the seemingly insoluble problems with which researchers are so often concerned, that led me to research in this area. The project on Victorian children's choirs is still in progress, but some conclusions can be drawn from the completed first stage. in this paper 1 consider the question of access to children's choirs, and the reasons behind the extreme selectivity which characterizes many of them.

Description of the project

The project investigated fourteen children s choirs in Victoria, eleven in Melbourne and three in country towns. All were independent organizations (in the sense of having no - b a school, church or similar body). Youth choirs, whose members strong connections wit were exclusively teenagers or young adults, were excluded, although many of the children's choirs retain members until they are seventeen or eighteen. There were two girls' choirs, four boys' choirs and eight mixed choirs.

The first stage of the project involved collection of documentation, interviews with the musical directors, and, in most cases, observation of rehearsals. The aim was to build up a picture of the nature of the choral experience from the point of view of the musical directors, who were asked about their aims, methods, relationship with children and parents, and their general view of the life of the choir. During the second stage of the project, the experience of parents and children in a smaller number of the choirs is being explored in depth through surveys and interviews.

Selection of choristers

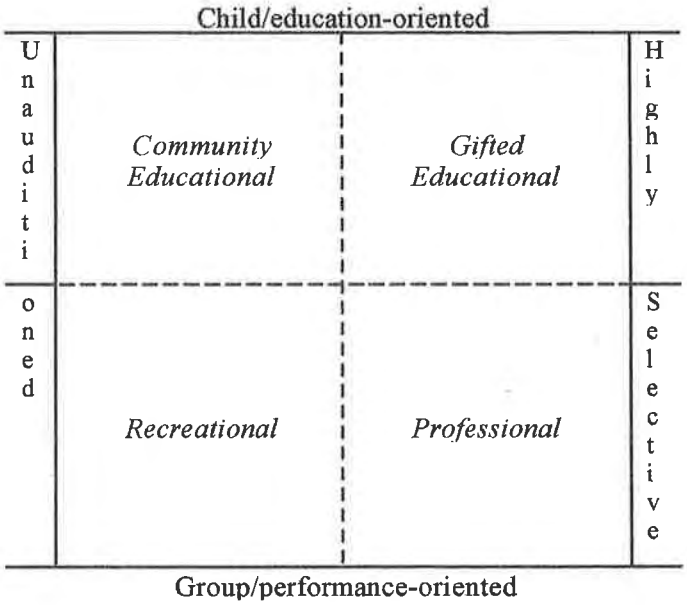
Among many issues that emerged from the interviews with musical directors was that of auditioning and selection of choristers, a matter of great concern to most of those with whom I spoke. Almost every choir auditioned children before accepting them, and many were extremely selective, accepting only a small number of the many they heard sing. The question that must be asked is: why is it necessary to insist that choristers should already display vocal and musical development well above the average for their age in order to gain entry to an Organisation whose purpose is presumably to facilitate that very development. Musical directors often speak in terms of seeking children with aptitude rather than ability, but given that the children are often seven or eight, or even younger, it is clearly inappropriate to 'udge an undeveloped voice as lacking the potential to develop. The work of Welch and others (Welch & Murao 1994, Welch, Sergeant & White, 1995/6, Phillips 1992) has established the wide range of ages at which children's singing ability develops.

Do these recruitment practices mean that many musical directors are only interested in conducting an elite group of extremely talented children? Is it perhaps that their concern is purely with producing an excellent performing ensemble and not with the children's music education? Or do these practices stem from an underlying attitude in our society that music is a matter for specialists, and for the gifted?

Classifying children's choirs

By analysing the statements of the musical directors about their aims for the choirs, and their attitudes to selection, as well as their auditioning and performance practices, I arrived at a model for classifying children's choirs according to these criteria (Fig. 1).

Fig. I : Model for classifying children's choirs



In this model the choirs are positioned along two axes (the doffed lines). The vertical axis ranges from those choirs whose musical director was primarily concerned with the children and their musical education (at the top), to those choirs (at the bottom) where the concern was mainly with developing a performing group of excellence. The horizontal axis runs from the choirs that will accept any child (on the left) to those that are highly selective (on the right).

Most choirs seemed to fit clearly in the top half of the diagram, since the conductors expressed their aims in terms of the children's education or development, and detailed what they hoped the children would gain from their experience. In most cases the choirs had a clearly articulated educational policy and training program, with several distinct levels within the choir to facilitate the singers' development.

While only one choir could be positioned entirely in the bottom half of the diagram, a few could be said to spread from the child-centred half through to the group-centred half, since the most advanced group within the choir was much more concerned with performances, and was sometimes run almost as a professional performing group. In discussing performance and education in their choirs, most conductors recognized the degree to which the two were intertwined, and the shift in balance as the children developed in skill. One stated:

> I guess from the amount of time we spend on it we are probably more educational than performance. But of our public face needs to be more performance. But that's only at the top level. Our younger groups really are 95% educational.... Performance for the younger groups can be a nuisance because it's a distraction from what you are trying to do educationally. And, sure, the performance is part of the education, but it can take up more time than you really have to spend on it.

On the horizontal axis of selectivity, the choirs were spread out, with a concentration at the right end. Most of the choirs towards the non-auditioned end were small, regional choirs. Only one of the city choirs allowed open access, but this was rather a case of delayed auditioning: anyone could join for the first level, but an audition was required to progress to a higher level. Others saw this practice as undesirable because of the need to reject some children after they had been with the choir for a year:

> I know some people would say 'Give them a go - let them have some training. They can't sing if they haven't been taught.' And fair enough. But it's too upsetting to ask someone to go after they have been with you for a year. It's much better not to let them in.

The larger, multi-level choirs could also be seen as spanning a considerable distance along the horizontal axis, since they became more selective in the higher levels of the choir. In some cases many or even most children would never be chosen for the most prestigious group.

When the choirs are positioned according to this model, they can be seen as grouped into four categories, with some large choirs spanning more than one category:

- *community educational* choirs (top left), which are unrestrictive in their membership

and concerned mainly with the musical education of their members

- *gifted educational* choirs (top right) which have similarly educational goals, but restricted their membership to the gifted or talented
- *recreational* choirs (bottom left) which are open to all and aim to bring about enjoyable performances for the group
- *professional* choirs (bottom right), where the focus is on producing the best performances possible in a professional music context.

The overwhelming majority of the choirs investigated are situated in the *gifted educational* category, which raises again the original problem of which membership in most choirs is so restrictive. It seems from the above analysis that the answer is not that musical directors are concerned only with the product of a performing choir of excellence. Not only their stated aims but also the carefully developed educational programs and the pastoral care evident in many of the choirs demonstrate that this is not so.

Discussions of recruitment revealed it was an issue of importance to virtually all music directors, and a source of intense competition among most of the choirs, not only to attract enough members each year, but also to attract the best available. Most choirs gained access to primary schools and spoke to children about their choir, usually conducting preliminary auditions in the school and issuing invitations to some children to come to the choir for a further audition and interview.

The competition between choirs, and their economic situation, seem to account to a large degree for the recruitment practices. Most choirs are either non-profit incorporated associations or profit-making private companies. In both cases they depend mainly on fees for income, and need to maintain a certain number of recruits each year to remain economically viable. In the case of the private companies, the choirs are run as businesses and the aim is to produce a profit; so these choirs tend to be much bigger, usually with a number of branches or chapters in different locations, and the total membership may number in the thousands. The competition for recruits is thus for many a matter of survival.

This competition can affect quality as well as quantity, even though the need for adequate numbers might be expected to result in a less discriminating selection. It is easier for parents and others to judge the quality of a choir on the basis of its performance standard than to assess the different training programs offered; so choirs also compete for the children who seem most likely to succeed, and to progress quickly. The conductors are well aware that the standard of their concerts is the gauge by which their success is measured. As one put it: "Even though the children need the experience, I've got to watch the name of the Organisation, and there's a lot of very good choirs out there..." This in turn puts more pressure on the numbers: there must be a large pool of children in order to guarantee a large enough performing choir at the top level.

These issues are especially crucial in boys' choirs, where the short life of a treble voice means a high turnover of singers, and a shorter time available to bring the boy up to the standard of the too performing level of the choir. It is not surprising that -the competition is strongest among boys' choirs, all four of which were located close to each

other in Melbourne's east. Another factor which intensifies competition among boys' choirs is the greater demand for their work in professional contexts, because the nature of the repertoire means that it will most often be a boys' choir which is required by an Organisation such as the Melbourne Symphony.

A number of conductors seemed concerned about possible charges of elitism, but these were more related to social 'justice issues than to the fact that they catered only for the most talented. All charged fees, in some cases as much as $1,000 or more, including charges for uniforms, camps, tours etc., and some made provision for scholarships. The Melbourne choirs are clustered in the more affluent middle-class suburbs of the east; but although some conductors regretted that the same opportunities were not available to children in the west, most accepted it as a fact of life. A typical comment was: "I think it's controversial but quite true to say that the majority of people interested in the arts are in the eastern and northern suburbs and perhaps some of the southern suburbs." There is, however, some evidence to suggest that even if the demand for arts activities and organisations is less in the western suburbs, it exists, and is not being adequately catered for (Jackson, 1996).

Conclusion

Although there is a positive side to the recruitment practices of children's choirs, in that they probably contribute to higher standards of performance, it is impossible to deny the elitism that characterizes many of them. Not only are they geographically and financially inaccessible to many children, but in some cases only those who are advanced in their musical development will be accepted. This might be understandable in a choir whose expressed aim was to achieve the highest possible standard of 'professional' performance; but seems at odds with a stated goal of teaching children to sing. The independent children's choirs are often held out as providing an effective alternative to the inadequate music programs in many of our schools; but it seems that they fill the void only for certain kinds of children. The practices of these choirs seem to provide yet another example of our society's attitude towards music performance and education noted by Davidson, Howe and Sloboda (1997) when they commented on "the 'art' culture, which promotes the notion that most people are incapable of high achievement, and, through the increasing professionalization and specialization of musical activity, makes access to appropriate training more and more difficult."

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Trends in Music Education Research in Australia with Implications and Recommendations for the Twenty-First Century

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Abstract

This paper reports on the current state of 'award' research in music education in Australia using data from the 'Bibliography of Australian Music Education Research' (BAMER) Project. The findings from an analysis of data from approximately 350 research theses—including both 'completed' and 'in-progress' studies—undertaken for higher degrees at Australian tertiary institutions are discussed. Conclusions are drawn regarding the level of the higher degree work being undertaken (honours, masters and doctoral degrees), the demographic spread across the various states, the distribution of music education research across the major educational research paradigms, and the focus of research in relation to both content/subject and educational sector. The paper also identifies general trends and issues in relation to these aspects as well as making recommendations for promoting research as we approach the new millennium.

Introduction

This conference—the twentieth such annual meeting of tertiary music educators and other music education researchers—is testimony enough to the continuity of music education research in this country since the late 1970s. Moreover, the fact that there have to date been two hundred masters degrees with a music education research component and thirty–six music education doctorates awarded by Australian universities should, as I have argued previously (Stevens 1993), be a source of pride to the music education profession as a whole. However there is considerable ground still to be covered before we can feel fully secure—if we ever can—that music education research is informing music education practice in schools, universities, private teaching studios and other music educational settings to the extent that it should.

This paper will report on findings from the Bibliography of Australian Music Education Research (BAMER) Project. I will discuss the 'current state of the art' as well as trends in music education research from a number of perspectives including patterns of growth over the past twenty years, the degrees for which research studies are being presented, the type of research being undertaken, the educational sector to which research has been directed, and the content or subject matter being researched.

As with any new year, decade, century or now millennium, there is always some degree of reflection on the past as well as a looking forward to the future. Despite the now considerable body of research studies in our discipline area, it is most certainly the case, as van Ernst (1993) has suggested, that 'for so many music educators, these theses are the first and last piece of research they conduct' (p.15). The challenge is therefore not only to maintain and hopefully extend the number of higher degrees research studies in music

education—particularly in the face of the seeming inevitability of full-fee post-graduate courses—but to maintain a climate in schools and universities where music educators are both motivated and able—in terms of time—to undertake 'professional' research in areas which will indeed inform and enhance music teaching practice. I will conclude with what I hope are some constructive suggestions for the maintenance and expansion of music education research in Australia into the next millennium.

Part 1—The BAMER Project

Sources, Presentation and Analysis of Data

Information for the BAMER database has been obtained from several sources[5] and accordingly has varied considerably in the level of detail. It has therefore been necessary for me to make an informed judgement in several instances—particularly in relation to content, type and sector focus of research studies.[6]

Prior to the establishment of the BAMER database and of papers emanating from the BAMER project (Stevens 1992; 1993), the only review and analysis of Australian music education research was by Lett (1984; 1988). Although Lett considered both higher degree studies and non-award/professional research studies when Australian music education research was in its infancy, his study is utilised in the present paper as a framework for analysis and also as a point of comparison for the present state of music education research with what it was in 1978 (the year taken by Lett as the 'cut-off' point for his analysis and review).

Analysis of the data from the BAMER Project will involve firstly the categorisation of the research studies according to (i) their status as either 'completed' or 'in progress' and (ii) the degree level at which a research study has been or is being undertaken—undergraduate honours degrees, masters degrees or doctoral degree level.

The second form of analysis is demographically-based. The data is considered in terms of the state/territory location of the institution through which the higher degree was or is being undertaken.

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[5] Data for the BAMER Project has been gathered from a variety of sources as follows: (i) from existing bibliographic sources including the research directories and scholarly journals and more recently from the on–line / CD-ROM *Australian Education Index* database (ACER); (ii) from bibliographic information supplied by libraries of various tertiary institutions (the 1989 questionnaire); (iii) from individual researchers (both post-graduate research students and supervisors) by soliciting information from individuals or from information submitted in response to a *pro forma* questionnaire or 'call for information' published annually in publications of the Australian Society for Music Education; (iv) from 1993 'National Survey of Music Education Research' questionnaire ; and (v) from the network of 'Research Reporters' (one from each State and Territory) established by the Australian Society for Music Education in 1990/91.

[6] Due to information obtained from a 'National Survey' questionnaire in 1994 and some loss of data from the BAMER database in 1995, a reorganisation and revision of the database was necessary. Accordingly, although similar tables appear in present paper to those in Stevens (1992; 1993), there are significant differences in the actual data presented due to more comprehensive information being available at the time of reconstructing the BAMER database.

The categorisation for the third form of analysis is derived from the most commonly-accepted division of educational research into the four basic types or paradigms of philosophical, historical, experimental and descriptive research[7] as well as a 'not apparent' category for those research studies where the research type could not be determined with reasonable accuracy. Although hybrid types of research which combine two or more of these four basic research types, all of the research studies in the BAMER database have been categorised according to the *predominant* type of research represented.

The fourth analysis is based on the educational sector to which the research study has been directed. The categories here are derived from the *Australian Thesaurus of Educational Descriptors* (Lavandar & Findlay, 1984). These include early childhood education, primary education, secondary education, tertiary education (including teacher professional development), adult/community education, and general education, the latter being for non-sector-specific research studies. An additional category—primary-secondary education—was adopted for research studies which appear to be cross-sectoral such as private/studio teaching of instrumental and/or vocal music.

The fifth form of analysis is based on the music education content of the research studies. The criteria here are largely derived from Lett's (1984; 1988) review and analysis of research in music education in Australia in which he tabulated Bridges' (1975; 1978) listings of music education theses into the eleven content areas which are listed in the left hand column of Table 1 below. However, in view of the nature of the research studies included in the database, this list has been expanded to incorporate additional areas of music education content, making a total of eighteen in all.

[7] Opinion varies on what the major research paradigms in music education are. However, after referring to various sources including Abeles (1992), Kemp (1992), Phelps (1969), Rainbow & Froehlich (1987), and the Council for Research in Music Education, the categorisation above was decided upon as being the most widely accepted.

Table 1

Categories employed for the Analysis of Music Education Content

Lett's (1984) content descriptors	Content Categories	Inclusive Content
• Theory / philosophy	• Aesthetics / Philosophy of music education	
• Class teaching /	• Class music teaching school music	
• Curriculum and content	• Curriculum development / evaluation	
• Radio / TV and music	• Educational media	audio-visual media computer-based media
• Instrumental teaching / orchestras	• Instrumental teaching	sight reading
• Music appreciation	• Music appreciation	
• Attitudes	• Music psychology / perception	aptitude / cognition / attitudes / abilities
• Music therapy	• Music therapy / Special education	disability / sight &/or hearing impairment
• Special music teaching systems	• Teaching methods	Orff / Kodály / Dalcroze / Yamaha / Suzuki / etc.
• Vocal music	• Vocal / choral teaching	singing
• History / biography	• History / biography	
	Additional Content Categories	
	• Assessment	
	• Community music	
	• Creativity	composition / improvisation
	• Ethnic music	ethnomusicology
	• Music educational systems	comparative educ. / policy studies
	• Popular music	jazz
	• Teacher education	

The BAMER database currently has 346 'award' entries which have been classified as either undergraduate or post-graduate research studies at Australian universities with the following results:

- Undergraduate Research Studies - 31 *completed* and 2 *in progress*
- Post-graduate Research Studies (Masters and Doctoral degrees)
  - 236 *completed* and 77 *in progress*

These are then further classified into masters level and doctoral level research as indicated in Table 2 below.

Table 2
Research Studies according to Degree Level and Completion Status

Degree	Number of research studies (n=346)	
	'completed'	'in progress'
Undergraduate degrees	31	2
Masters degrees	200	41
Doctoral degrees	36	36

The growth in the numbers of research projects undertaken in music education at Australian universities is demonstrated in the following summary of theses submitted over five year intervals for the past twenty years (1977 to 1997) together with a projection to the year 2002.

Table 3
The Growth of Research Studies according to Degree, 1935-1997 with a projection to 2002

Degree	Cumulative numbers of completed research studies (n=267 / 346*)					
	≤1977	≤1982	≤1987	≤1992	≤1997	≤2002*
Undergraduate degrees	25	25	27	28	31	33
Masters degrees	21	38	65	121	200	241
Doctoral degrees	2	3	9	15	36	72
Totals	47	66	101	164	267	346

* the projection to year 2002 is based on the assumption that the 'in progress' research studies will be completed by that time and that any studies which remain incomplete will be replaced by new completed studies.

The next table indicates the demographic distribution of higher degree research studies across the six states and two territories in terms of completed studies and the total of both completed and in progress studies—the latter shown in parenthesis.

Table 4
The Demographic Distribution of Research Studies according to State/Territory

State	Number n=267 (n=346)		% age	
Australian Capital Territory	9	(9)	3.4	(2.6)
New South Wales	73	(98)	27.3	(28.3)
Northern Territory	0	(1)	0.0	(0.2)
Queensland	30	(46)	11.2	(13.3)
South Australia	9	(14)	3.4	(4.1)
Tasmania	6	(6)	2.2	(1.7)
Victoria	96	(112)	36.0	(32.4)
Western Australia	44	(60)	16.5	(17.3)

The analysis according to 'type of research' indicated in Table 5 below reveals that the vast majority of the research studies to date have been descriptive, with each of the other types—experimental, historical and philosophical studies—being far less numerous. Again the total of both completed and in progress research studies is shown in parenthesis.

Table 5
Research Studies according to Type of Research

Type	Number n=267 (n=346)		% age	
Philosophical	11	(12)	4.1	(3.5)
Historical	20	(24)	7.5	(6.9)
Experimental	35	(36)	13.1	(10.4)
Descriptive	184	(238)	68.9	(68.8)
Not apparent	17	(36)	6.4	(10.4)

The analysis according to the educational sector to which these research studies have been directed reveals that those concerned with the primary and/or secondary levels of education, and with non-level-specific research were predictably well represented (see Table 6 below). On the other hand, research focussed on the early childhood and particularly adult / community levels is markedly under represented.

Table 6
Research Studies according to Educational Sector

Educational Sector	Number n=267 (n=346)		% age	
Early childhood	12	(13)	4.5	(3.8)
Primary	59	(72)	22.1	(20.8)
Secondary	59	(69)	22.1	(19.9)
Primary-Secondary	55	(77)	20.6	(22.3)
Tertiary	32	(35)	12.0	(10.1)
Adult / Community	6	(11)	2.2	(3.2)
General (non-specific)	44	(69)	16.5	(19.9)

In the case of the 'music education content' area, one only of the possible categories—that which appeared to be the *major* content focus of each research study—was selected in order to enable a comparison with Lett's (1984) content analysis. Table 7 below indicates the distribution of the research studies across the various content areas.

Table 7
Research Studies according to Music Education Content

Content Area	Number n=267 (n=344)		% age	
Aesthetics / philosophy	3	(4)	1.1	(1.5)
Assessment	4	(6)	1.5	(1.7)
Class music teaching	14	(18)	5.2	(5.2)
Community music	1	(1)	0.4	(0.3)
Creativity	22	(25)	8.2	(7.2)
Curriculum development / evaluation	28	(38)	10.5	(11.0)
Educational media	12	(16)	4.5	(4.6)
Ethnic music	7	(14)	2.6	(4.0)
Generic	5	(7)	1.9	(2.0)
History / biography	16	(16)	6.0	(4.6)
Instrumental teaching	51	(64)	19.1	(18.5)
Music appreciation	11	(12)	4.1	(3.4)
Music education policy	12	(19)	4.5	(5.5)
Music psychology / perception	18	(24)	6.8	(6.9)
Music therapy / special education	15	(18)	5.6	(5.2)
Popular music	9	(10)	3.3	(2.9)
Teacher education	12	(12)	4.5	(3.4)
Teaching methods	14	(16)	5.3	(4.6)
Vocal / choral teaching	13	(26)	4.9	(7.5)

Observations and Discussion

One of the most striking aspects of the above data (Tables 2 and 3) is the amount of research which has actually taken place and is presently underway in music education. Lett's (1984) review and analysis of research in music education cites Bridges' (1975, 1978) listings of music education theses completed up until 1978 (many of which were undergraduate honours theses) as totalling 55 in number. In comparison, the number of research studies presently listed as 'completed' in the BAMER database is 267, there being 31 undergraduate theses, and 236 post-graduate (i.e. masters and doctoral) theses. The present figures indicate the phenomenal growth that has taken place in *post-graduate* studies which has taken place during the two decades between Bridges' initial listing of music education theses in 1975/78 and the present time. Moreover, given that there have been 36 PhD degrees awarded in music education (or in the allied field of music psychology / perception) to date and that there are currently 36 PhD theses 'in progress' or 'in examination', research in music education in Australia can therefore be considered to be in a comparatively good state of health.

However, in relation to *undergraduate* research, it is interesting to note that the situation with undergraduate honours or other bachelors degree research studies is one of marked decline with few if any research now being undertaken at this level. The principal reason for this is that many music education courses are now post-initial-degree courses and as such articulate directly into masters level courses. Unlike other disciplines where an honours degree is generally the only means of entry to a higher degree course, professional courses such as teacher education are able to give direct entry from an undergraduate course to a higher degree by research thesis or with at least some component of research. This situation gives rise to the problem of adequate preparation for research which is taken up later in this paper.

In relation to the demographic distribution of higher degree research (Table 4), the situation is—as expected—that the greatest proportion of the research has been undertaken in Victoria and New South Wales at the older and better established universities—for example, in Victoria, 51 of the 96 research studies in music education have been undertaken at the University of Melbourne, the first having been submitted in 1936. Other universities—those in the 'group of eight' which have a greater orientation to research than some of the newer universities—explain the growth in higher degree research in Queensland and Western Australia represented in the difference between number of completed research studies and the total of those completed and those presently in progress. It is also pleasing in terms of a national profile to note that higher degree research is being undertaken in all of the Australian states including the two territories—the Australian Capital Territory (through the University of Canberra) and the Northern Territory (through Northern Territory University).

In contrast to the situation in the United States which even from a cursory perusal of current American music education research directories such as *Approved Doctoral Dissertations In Progress in Music Education* (Council for Research in Music Education) reveals a predominance of experimental research, the situation in Australia is one where

descriptive studies are the predominant type of research being undertaken (Table 5). Other research types are certainly represented but it is noteworthy that philosophical research is the least well represented. The need for more philosophical research has been well argued by Stowasser (1993) as follows:

> ... consensus on music education is as elusive as ever and I believe that our failure to reach agreement on *why* music education is so important is the reason why so many members of the society in which we live regard it as irrelevant and expendable. ... If music education is to survive into the next millennium we will need to come down to a more practical basis for its philosophy ... (p.13).

Her concerns are borne out by the available data which suggests that this type of research is vastly under-represented in our national research profile.

Higher degree research in relation to the particular sectors of Australian education (Table 6) indicates that the majority of research studies have focussed on primary, secondary and the cross-sectoral 'primary–secondary' areas of music education (including private / studio teaching) with which—it is probably true to say—the majority of Australian music educators are concerned. It is pleasing to note that Russell-Bowie's (1989) concern that 'very little research of note in the area of Primary School Music Education Research in Australia has been found' has now been at least partially overcome in terms of the available data. Nevertheless two of the sectors which other writers have commented on—the early childhood education and tertiary education sectors—have received comparatively little attention.

The content of music education research (Table 7) is perhaps the most focussed indication of the strengths and weaknesses in Australian music education research. By far the greatest number of research studies have addressed the area of instrumental music pedagogy. Other areas appear to be adequately well represented, particularly those such as class music teaching which are in fact better represented than the present subdivision of content categories indicates—certain of the studies in categories such as creativity, ethnic music, music appreciation and popular music also relate to class music teaching.

A consideration of the present situation with that in 1978 provides a worthwhile indication of trends in research interest. Lett (1984) undertook an analysis of music education theses for the period up to and including 1978 using the content categories cited previously in the left hand column of Table 1. A direct comparison of data drawn from Lett's study and of data included in Table 7 above indicates some major changes in the pattern of music education research in Australia[8] (see Table 8 below).

[8] Note that the categories used to describe music education content are those employed in Table 8 and that equivalent terms to Lett's (1984) categories are shown in Table 1.

Table 8
A Comparison of 1978 and 1997 Data on Completed Research Studies according to Music Education Content

Content Areas	Lett (1984)—1978 (% age)	Current—1997 (% age)
Aesthetics / Philosophy	7.3	1.1
Assessment	—	1.5
Class music teaching	32.7	5.2
Community music	—	0.4
Creativity	—	8.2
Curriculum development / evaluation	20.0	10.5
Educational media	3.6	4.5
Ethnic music	—	2.6
Instrumental teaching	9.1	19.1
Music appreciation	5.5	4.1
Music education policy	—	4.5
Music psychology / perception	3.6	6.8
Music therapy / Special education	5.5	5.6
Popular music	—	3.3
Teacher education	—	4.5
Teaching methods	5.5	5.3
Vocal / choral teaching	3.6	4.9

In some content areas, there has been a more or less consistent level of interest shown by Australian music education researchers during the period 1978 to 1997. Interest in the areas of educational media, music appreciation, music therapy / special education, teaching methods, and vocal / choral teaching has remained at approximately the same levels. In other content areas, there have been some changes in the pattern of research interest. The most marked of these may been seen in the number of research studies in the area of instrumental teaching which has virtually doubled over the period. Another content area in which there has been an almost doubled interest over the period is that of music psychology, in particular research which focuses on musical abilities (pitch discrimination, rhythmic response, etc.) and on musical cognition (development of sight reading skills, etc.).

There has also been an emergence of interest in researching in the newer and more specialised areas of music education such as assessment of music learning, community music making, musical creativity (including technology-based approaches), popular music, and the role of ethnic music's (including Aboriginal and South-East Asian music) in music education programs. There has also been an emergence of interest in researching music education / arts education policy and in teacher education. As mentioned above in relation to types of research, the content area of aesthetics and philosophy of music education has received proportionately less attention by Australian music education researchers over the period. Another area of seeming decline in interest—that of class music teaching—may not necessarily be the case as many of the research studies previously assigned to this content area have, in the present study, been designated as

being more appropriately placed in one of the 'additional' content areas cited in Table 8 above.

Summary of Findings

The findings from some of the analyses undertaken are acknowledged to be tentative and can therefore be an indication of general trends only. The tentative nature of the data is due to my personal interpretations of categories from such aspects of the research studies as title, abstract, key–word descriptors, etc. being unable to be verified, particularly in relation to research type and subject-matter content, by individual researchers—in some cases verification is simply not possible. Also, many of the research studies, although presently assigned one content area only, will obviously relate to more than one music education content area. It will therefore be necessary at some later stage to allow for multiple content descriptors to be assigned to all research studies.

Nevertheless the findings of this project, aside from identifying most of the post-graduate research in music education to date[9], indicate the following trends:
(i) there has been a considerable increase in both the number and the degree level of research studies in music education being undertaken for higher degrees at Australian universities over the past two decades;
(ii) most of the research work undertaken in music education for higher degrees appears to be directed towards the primary and/or secondary school levels of music education as opposed to the early childhood, tertiary, or adult / community levels of education which suggests that the latter areas are currently being 'under-researched' by music education researchers;
(iii) unlike the situation in the United States, the predominant type of research work undertaken in music education for higher degrees appears to be descriptive as opposed to philosophical, historical, or experimental research; and
(iv) certain content areas which have been identified as the principal focus of higher degree research appear to be of fairly constant or increasing interest to music education researchers (these include the areas of educational media, music appreciation, music therapy / special education, teaching methods, vocal / choral teaching, music psychology and instrumental teaching) and in addition, several new areas have emerged more recently as being of interest (assessment of music learning, community music making, musical creativity, popular music, and the role of ethnic musics).

Part 2—Implications and Recommendations for the Future

There are several implications for the future which are suggested from the present review of data from the BAMER Project. The first of these is that there are now sufficient research studies in most areas for music education researchers—both university academics and post-graduate students—to be able to draw upon previous work of Australian (as opposed to overseas) colleagues for contextualising their own research. Greater use of the findings from 'indigenous' research is undoubtedly one aspect of van

[9] A complete listing of both 'completed' and 'in progress' higher degree research studies is available on the World Wide Web at http://www2.deakin.edu.au/e&c/BAMER/

Ernst's (1994) plea that we should be more effectively building upon each other's work . In addition, it is only by drawing upon and drawing together the findings from each other's work that a synthesis of research in a particular area can begin to influence and improve music teaching practice in the way that it should.

Secondly, it is worth mentioning that several of the respondents to one of the items on a 1995 BAMER questionnaire which asked researchers to nominate the research methodology(ies) that best related to their research study indicated either contradictory methodologies or, in some cases, all of the possible methodologies listed. Although it is readily acknowledged that many research studies can employ combined, multiple or hybrid methodologies, many of these responses indicated that the researchers concerned had little or no understanding of some of terminology and basic paradigms of research referred to. The level of understanding of research methodology *per se* among music education researchers appears therefore to be an area of concern for supervisors and other tertiary music education academics. More attention needs to be given to preparatory studies in research methodology before students come to focus on their selected research project.

Thirdly there is now a sufficient number of suitably qualified tertiary music educators to provide supervision for most types of music education research and in many of the music education 'content' areas. The need for music educators interested in pursuing higher degrees by research (or by coursework with a research component) to undertake their work overseas is now well passed.

Based on an identification of the areas of strength and deficiency as well as reference to specific research studies in the BAMER database, it may be possible for supervisors to direct post-graduate students towards research topics which will either 'fill some of the gaps' in our national music education research profile or enhance existing research findings through replication studies or extension of the topic into a new area. Access to the BAMER database and to findings from this review of trends in music education research will hopefully be of use in this respect.

The following practical suggestions for improving music education research in Australia emanate both from the outcomes of the BAMER project and from my own deliberations:

- there is a need to ensure post-graduate research students at all levels (masters and doctoral degree levels) are more fully conversant with the range of research methodologies that apply to music education. Given that many universities are now engaged in the production and use of on–line delivery for units or subjects at the post-graduate level—for example the University of Newcastle and Deakin University—an 'introduction to research methodologies in music education' unit / subject covering all of the principal research paradigms and drawing upon expertise of staff from several universities could be collaboratively developed on an inter-institutional basis and the unit / subject made available Australia–wide through the AVCC–approved 'complementary' enrolment system and via Internet delivery.

- there is a need for establishment of a register and/or network of research supervisors who could provide expert support for higher degree candidates. Although post-graduate students are likely to apply for higher degree candidature to a university on the basis of expert supervision being available in a particular research area, there are instances where, for geographic location reasons, students may choose to enrol in higher degree courses at a local university where expert supervision may not be available. The establishment of a system which provides for the appointment of external supervisors with specialist skills would enable students to have access to the supervision of a local, although perhaps non–expert supervisor for contiguous support while an academic from another university with particular expertise could be appointed as an external supervisor. Such an arrangement could work well, particularly if all concerned had access to electronic mail facilities.

- there is also the need for a mechanism for supplying bibliographic information about papers published in conference proceedings and articles published in scholarly journals as well as completed theses or research papers to the Australian Council for Educational Research for publication in the *Australian Education Index* and other bibliographic databases. The situation at present is that many worthwhile research reports—conference papers and journal articles—are not included in the Australian *Education Index* due to the lack of an adequate 'reporting' mechanism.

- finally there is a need to ensure that music education practitioners—teachers in primary and secondary schools in particular—are familiar with the ways in which they might keep abreast of and utilise the findings of research in music education in their own teaching. Mention has been made by several writers—including van Ernst (1994) —in support of de-mystifying research for classroom teachers and ways of both making research findings more accessible to teachers and actually engaging teachers in classroom–based research. Accordingly, there is a strong case for the inclusion in pre-service and post-initial courses of music teacher education of a module which introduces students to appropriate content.[10]

As indicated in the introduction to this paper, the occasion of a new millennium gives us the opportunity for reflection on the past and a looking forward to the future. Bridges (1970) pointed out almost thirty years ago that the role of research is a crucial one in finding solutions to the problems which confront teachers. As I see it, it is our task as tertiary academics to provide the sort of leadership necessary to promote research so that it becomes relevant to and informs the whole of the music teaching profession. Such action will hopefully avert the situation that Colwell 1988) has described as 'music educators [walking] backwards into the future'.

[10] For an example, see Grenfell and Stevens' (1995) chapter on 'Research in Arts Education' in *Directions in Arts Education: Contemporary Issues,* an off-campus unit available within the BEd, GradDip(ArtsEd) and MEd courses at Deakin University.

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A Comparison of the Responses of Four year-old Children to Music and Movement Experiences in Two Different Contexts: A Specialised Music Program and as part of a Daycare Curriculum

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Abstract

The rapid increase in specialist programs for young children and daycare centres invites closer scrutiny of the efficacy of alternative models. This study compares the music and movement experiences provided for four year olds in a specialised music program with those of a daycare centre. By contrasting the children's responses to the music/movement activities in these two programs, differences and similarities were made evident. Implications for practice in the provision of music and movement experiences for young children, in these contexts and more generally, are also considered.

Introduction

In recent years there has been an increase in the provision of specialist programs for young children, particularly those who have not yet begun school. Specialist programs for children under five years of age are diverse in their focus and include pursuits such as swimming, gymnastics, computer skills, dance and music. In such programs parents generally pay a fee to enrol their child/ren for a series of classes, usually held once every week. Parents themselves are often required to be active participants in the classes along with their child/ren.

This pilot study is an investigation of a specialist music program and a mainstream daycare service within an Australian context. The music and movement experiences provided for four year olds in these two programs were studied.

An examination of the literature related to the provision of music and movement experiences within the total curriculum of early childhood settings serving children from birth to five years has been documented by writers including Bayless and Ramsey (1991), Chenfeld (1995), Isenberg and Jalongo (1993), Neilsen (1988), Author (1996) and Wright (1991). Such programs include among their goals for young children the development of aesthetic sensibilities, acquisition of positive attitudes towards participation in music and movement and the development of understandings and skills. Other writers, including Beaty (1996), advocate the importance of music/movement activities in early childhood learning programs because of their potential to enhance the physical, social, emotional, cognitive and language development of young children. However, regardless of emphasis, there appears to be consensus that music and movement are important components of

early childhood curricula and have the potential to promote the development of the whole child.

The rapid growth in specialist early childhood music classes in Australia has not been reflected in the research to date. Literature relating to child-parent music programs catering for children aged from birth to five years comes mainly from North America, Europe and Israel. Such programs are documented in the work of Andress (1989) and Fox (1989) from the United States of America, Cass-Beggs (1990) from Canada, Turel (1990) from Israel,

from the Music on the lap programs from the Netherlands (Albers & van Gestel, 1992) and Suthers (1998) from Australia. Such programs tend to have goals oriented towards musical development and achievement. While in their implementation, teachers in the programs are clearly mindful of the developmental needs of individual children in their group, the overall aims appear to be music-centred rather than child-centred.

In this comparative study the children's responses to the music and movement experiences provided by the two programs was examined. Answers were sought to the following questions:

- Were there similarities in the children's responses ?
- Were there differences in the children's responses ?
- Are there implications for practice that can be drawn from either program?
- Are there ways in which the programs could positively influence each other ?

Research Design

To seek answers to these questions the researchers undertook a naturalistic investigation (Lincoln and Guba, 1985; Miles and Hubermann, 1994; Patton, 1990; Smith, 1987) of the music/movement experiences provided for four year olds in two programs. By conducting a naturalistic inquiry, the researchers undertook a study of "a naturally occurring event, program... [with] no predetermined course established by and for the researcher[s]" (Patton, 1990, p. 41).

The daycare context was the four-year-olds' playroom in a 90-place setting in suburban Sydney. The specialist program context was a Saturday morning music class, in the same geographical area, which was part of a large specialist music program run by a tertiary institution. It should also be noted that of the eight children in the specialist music program five attended daycare or preschool, and one of the 16 daycare children was also enrolled in a specialist music program. The study was conducted late in the 1996 school year. Thus all the children were familiar with the music/movement experiences in their program, well-acquainted with many of the games and songs, and knew their teacher and her expectations. All the children in the study were to begin school three months later.

The researchers attended music experiences in each program as non-participant observers (Miles and Hubermann, 1994; Patton 1990). Prior to attending the music classes, they conducted semi-structured interviews (Burns, 1994) with both of the teachers to explore

their personal philosophies, approaches and ideas related to early childhood music education. A variety of recording techniques was used to gather data - video, audio tape, and note taking. A purpose-designed observation schedule was developed and used to record child responses to the experiences. The schedule focused on items such as attendance to task, demonstrated enjoyment, tolerance to frustration, perseverance to task, independence, sustained involvement, individuality of response and reaction to new stimuli. The researchers completed the child observation schedule independently as they observed the music experiences.

The data sets relating to the two programs were analysed and compared. Child responses were scrutinised for similarities, differences and emerging patterns; other significant considerations were also noted.

Results

The daycare music/movement experience was conducted by the teacher, Sally (pseudonym), in the playroom for 17 minutes prior to morning tea. Sally had planned the experience around a theme of horses, which she had observed was currently popular in the children's play. The music/movement experience comprised two singing games involving movement in and around the tables as well as dramatic enactment; a song with a chorus and three verses; listening activities - rhythmic echoing and a gallop and stop game; and two language-based activities - a discussion about horses and their different movements and a transition which combined recognition of name cards with horse movements. The sequence and detail of the experience is given in Table 1, below.

The specialist music program class for four year olds lasted 50 minutes. Eight children, each accompanied by an adult, participated. At the start of the experience all children and adults joined in; but after about ten minutes the teacher, Melanie (pseudonym), invited parents to sit on the sidelines, and she continued to work with the children. The music /movement experience for four year olds in the specialist music program comprised 13 short activities: four singing games; four songs; two games involving playing instruments; a listening game; an echo song accompanied by a picture book (We're going on a bear hunt; Rosen, 1989); and a song (There was a princess; Clark, 1995) with dramatic enactment and instrumental accompaniment. Details of the activity sequence of this music/movement experience appears in Table 1, below.

Table 1
Comparison of Music/Movement Experiences in the Two Programs

Daycare Program	Specialist Music Program
16 children	8 children
teacher	teacher + 8 adults
duration: 17 minutes	duration: 50 minutes
• Little grey ponies (singing game) • Horses, horses (singing game) •Rhythmic echoing of galloping sounds •Gallop and stop (listening) •Brumby Jack (song) 3 verses & chorus •Discussion about horses & how they move •Transition to morning tea Name card recognition & movement to bathroom like a horse	•Greeting songs • Jimmy clap hands (singing game) •Rig a jig jig (singing game) •Zimty timpty (listening game) •Pumpkin pie (song) singing in head; 2-part singing •Who stole my chickens? observation game + castanets •Can you be a kangaroo?) (singing game •Bingo (singing game) •Little black cat (quiet song) •Bear hunt (echo song + book) •There was a princess (song with enactment, props & instruments) •Goodbye song

Discussion

After video recordings, transcripts of the interviews, field notes and observation schedules were analysed, data related to the children's responses from the two programs were compared and similarities and differences determined.

Similarities

The teachers in both programs used similar types of activities with the four year olds: singing games, songs, listening activities, and opportunities for movement and enactment. The specialist music program also provided opportunities for the children to use a variety of simple instruments. Much of the teachers' verbal interaction with the children focussed on explaining, reminding, reinforcing and praising. In both programs, the music/movement experience comprised a number of short, quick-paced activities and both programs offered children opportunities to respond as a member of a group and individually.

The most obvious similarity between the two programs was the positive responses of the children. Both groups displayed high levels of engagement throughout the experience and were enthusiastic in their participation. The children in both groups appeared keen to join in, make suggestions and take turns. Games and activities that involved locomotor

movement and enactment appeared to elicit the highest levels of enjoyment - smiles, laughter, confident and joyful singing and sheer delight in kinaesthesia, as well as the most whole-hearted participation. There are many practitioners who would argue that positive attitudes towards participation in arts experiences, such as those displayed in both contexts, are most worthwhile outcomes of any early childhood music/movement program.

Differences

The children's responses to the two experiences did differ in some ways. Many of the differences were a function of the different purposes of the programs as well as the composition and dynamics of the two groups. Aside from the structural differences related to the number of children participating, the settings and the duration of the experiences, there were other significant underlying distinctions between the programs.

The teacher of the specialist music program focussed more on the transferral of musical knowledge and skills than her counterpart in the daycare program. Melanie explained that in her specialist program "many of the parents have high musical expectations for their children". She also reported that in planning experiences for the group, she was mindful of the program's goals. The presence of adults in the class also created a different dynamic in that group compared with the daycare playroom. By contrast, Sally, the daycare teacher, knew the children in her group extremely well having taught them for 10 months. She was highly responsive to input from the children in both her planning and teaching. Sally appeared to be less constrained by set curricula than her counterpart and related that she also liked to let music and movement permeate into other activities and routines through the day.

In terms of the children's responses there were differences related to the musical sophistication of the tasks and the opportunities for individualised response to them. In musical terms, the children in the specialist music program were required to undertake some activities that needed higher levels of musical skill than their peers in the daycare program. They were asked to sing as a group, and alone and in two parts; they were asked to listen to a drum pattern and echo it; to respond with movement to musical cues and move with a partner. In the daycare program the children sang and moved as part of the group and were not asked to sing or repeat patterns alone, although they did move individually in the transition activity.

There were also differences in movement responses between the children in the two programs. In the specialist music program Melanie used movement principally to reinforce musical understandings: children tapped the beat on their shoulders or changed their movement to match a new section in the music. Children were often invited to suggest actions for games. However, once these had been determined, she generally anticipated that all the children would perform this same action or pattern; which they did most competently. Enactment was used twice only in thirteen activities - in an original singing game *Can you be a kangaroo?* and in dramatising *There was a princess.*

By comparison, in the daycare program, Sally appeared to have a more integrated view of music and movement. Children moving as part of the group were encouraged and

commended for interpreting given movements in their own way. Alternative ways of moving, in this case as a horse, were discussed and labelled, and creating novel and interesting movements - find "your own special way of being a horse or a pony" - was advocated. In both individual and group movement activities, children responded to Sally's encouragement and guidance and some were also influenced by their peers, imitating others' movement ideas. Sally also noted that for some of her energetic and exuberant boys, it was essential that she provide "lots of opportunities for vigorous physical movement". The children clearly responded positively and with unmistakable enjoyment to the opportunities for lively action and dramatic enactment. Both enactment and creativity were encouraged in the children's movement to music.

Conclusions

This study examined the music and movement practices of two practitioners in two programs. It has the potential to initiate more substantive studies involving larger numbers of programs and teachers. However, in terms of this investigation, it was noted that the provision of appropriate music and movement experiences for four year olds in both the specialist music program and the daycare centre models had positive aspects which practitioners may like to consider.

In this study it appeared that the attention to developmental sequencing of music experiences apparent in the specialist program was reflected in the children's slightly higher music skills and knowledge. In contrast children for whom music was part of a daycare curriculum did not experience a high degree of adult directive teaching and exhibited more individuality in their responses. The sequential presentation of knowledge and skills alongside the nurturing of potentially creative behaviours may well provide sound foundations for appropriate music and movement programs for young children.

There are also some specific implications for practice which can be drawn from this study.

Implications for Practitioners

1. Potentially, some children may demonstrate a greater degree of involvement over longer periods of time if afforded opportunities to engage in a range of different forms of motoric response, dramatic enactment and creative movement. Movement affords the young child a way of internalising musical understandings (Jaques-Dalcroze, 1967) and an equally valuable means of self expression.

2. Opportunities for and affirmation of individualised child response in music and movement activities appears to be a crucial element in maintaining on task behaviour with young children. In particular, some four year old boys may be more likely to engage in music experiences if they have ample opportunities to move freely to music in a variety of ways. Encouraging children to move "in your own way" or more specifically, to find a "jumpy way of moving to this music" not only empowers children to make choices and decisions but ensures that they move in ways compatible with their inchoate physical development. This later point is stressed by Metz (1989), in a study of two, three and

four year old children, in which she states that music and movement activities must be matched "with the psychomotor developmental capabilities of the child" (p.58).

3. An effectively planned music and movement program is one which provides a wide variety of well-paced experiences catering for differing ability levels. Encouraging children to respond together but in their own ways, may be an effective strategy for catering for diverse developmental levels within a group of young children.

Music and movement are important elements of early childhood curricula. A range of services, including daycare centres and specialist music programs, provide such experiences for young children. In whichever context music and movement activities are presented, it is essential that practitioners are mindful of the needs of individual children in their planning and implementation. And, if catering for each child's needs is paramount in any program of music and movement experiences, it will provide opportunities for individual growth, self-expression, achievement and satisfaction, as well as the potential for developing skills, understandings and, ultimately, artistry.

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Computer-aided instrumental practice: The influence of instructional and motivation applications on performance achievement

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Introduction

Previous investigations have reported the influence of practice on instrumental learning (Brown, 1933; Rubin-Rabson, 1939; 1940a; 1940b; 1941a; 1941b; 1941c; 1941d; Leonard & House, 1972; LaFosse, 1973; Warner, 1975; Anderson, 1981; Rosenthal, 1984; Wolf, 1984; Rosenthal, Evans & Greenwalt, 1988; Price, 1990; Sloboda & Howe, 1991; Barry, 1992; Ericsson, Krampe & Tesch-Romer, 1993; Sloboda, 1993; Weidenbach, 1995, 1997). However, exploration of the interactive use of computers for the purpose of aiding and monitoring instrumental practice has not appeared in the literature. An investigation was conducted to probe the practice strategies of a group of novice instrumentalists to determine how performance outcomes were influenced by practice. Central to the study was the exploration of the extent to which students were metacognitively engaged in practice planning and implementation. How thinking about practice, pre-practice planning and physical rehearsal affected post practice outcomes were key elements, while how to make most effective use of the computer was also investigated.

This paper focuses on one particular aspect of the larger study, that is, how the incorporation of computers within the teaching environment influenced student practice and performance outcomes. Incoming status of students' ability to use computers and attitude to computers was assessed. During the study, measures were taken of students' use of the computers, both instructional and motivational applications, from both researcher and student perspectives. Measured outcomes included performance achievement and student attitudes towards computer aided practice.

Evidence showed that using the computer influenced performance achievement positively. Students who used the computer primarily for instructional purposes made significant gains over those who did not. Contrary to previous studies which found that students use computers more for motivation than for instructional qualities, this belief was not upheld in this study.

Subjects and Setting

The study was conducted with twenty-one students enrolled in a pre-service primary education program. None of the students had previously learned to play any keyboard instrument. The setting was a Micro Technology Music Laboratory in which Roland KR33 keyboards were connected to a Master Teaching Console with an interactive

communication system. A Roland MT100 Sequencer/Sound Module was attached to each workstation. The teaching materials included piano tutors and a range of software supporting the music texts.

Design and Methodology

The purpose of using computers was to complement instructional procedures, to aid practice, and to provide a means of collecting data on students' psychomotor behaviours. The study also explored students' instructional and motivational use of the computers.

Ability to use computers

Students' ability to use computers was measured on a researcher-constructed self-report item and since the items correlated 0.9, their sum was used to measure students' computer experience.

Attitude towards computers

The Francis (1993) Attitude Towards Computers Scale was developed for use with undergraduate college students and, on the basis of published data, was considered a reliable and valid uni-dimensional scale.

Instructional and Motivational use of the MT100

During private practice sessions, observational data were collected via intermittent time sampling procedures to measure students' specific use of the sequencer. These measures recorded students' Observed Instructional Use of the MT100 (OIUMT) and Observed Motivational Use of the MT100 (OMUMT). At the conclusion of the same sessions, Self-Reported Instructional Use of the MT100 (SRIUMT) and Self-Reported Motivational Use (SRMUMT) data were generated from students' self-reported analysis of how they perceived they had used the computers.

Specific Instructional Applications of the MT100

At the conclusion of the intervention, students were asked to report on how they had specifically used the MT100 for instructional purposes across the period of the intervention. Students self-reported on a five-point scale four discrete uses of the MT100 during practice.

Computer Aided Practice

For the purpose of determining student attitude to the use of the MT100, a questionnaire was given at the conclusion of the study. The Attitude to MT100 scale (ATMT) was operationally defined as the sum of five self-report items (each on a five-point scale). The scale had high internal consistency (Cronbach alpha = 0.8) and was used as a measure of attitude to the computer as an aid to keyboard practice.

Performance Achievement

Students performed three set works and two of their own choice for performance assessment. Performance achievement was determined by the criteria described in the results section.

Repertoire Progress

It was anticipated that some students would be more concerned with gaining marks for performance accuracy rather than extending their repertoire to more difficult pieces. Since each new piece in the tutors was progressively more difficult, a weighting was assigned to each successive piece so that the extent to which students had progressed in terms of difficulty in each of the texts could be valued.

Procedure

Students attended a three-hour per week session for keyboard instruction. The first hour was used for teacher directed instruction, the second for group practice, and the third for private practice. During the private practice session, the researcher was also present to give assistance if required by students, and to take data.

During the first three weeks, students were taught how to use the computer and its facilities. Software was available which provided pre-recorded demonstrations of the music. The models could be accessed as piano only version or with enhanced orchestral accompaniments, and students could use the sequencer in a variety of other ways.

Students were provided blank computer disks on which they were to self-record, save, and submit, the final ten minutes of each weekly practice session. These recordings were then analysed by the researcher and returned with written feedback to the students prior to the next session. On five specified occasions across the period of the study, students also recorded their complete practice sessions which provided more information on students' concentrated practice strategies.

Observational data on student use of the sequencer were collected during private practice sessions.

Results

Ability to use Computers

In the group of twenty-one students studied, approximately half showed confidence in using computers and reported regular use. Thus, in response to items on the initial questionnaire, fifty-seven percent of the students agreed or strongly agreed that they "use a microcomputer" and forty-eight percent agreed or strongly agreed that they "use computers regularly." These two five-point items (familiarity and use) were summed to give a score on ability to use computers (mean = 6.8, s.d. = 2.4; Cronbach alpha = 0.9).

Attitude to Computers

The Francis (1993) Attitude Towards Computers twenty-four item scale was modified, based on initial analysis, by the removal of two items, after which the Attitude to Computers scale (ATC) produced a Cronbach alpha of 0.9. Figure 1 indicates generally positive attitudes to computers (mean = 84.3, s.d. = 10.2), and since students varied on this measure, it was used as a potential predictor of subsequent practice strategies and performance outcomes.

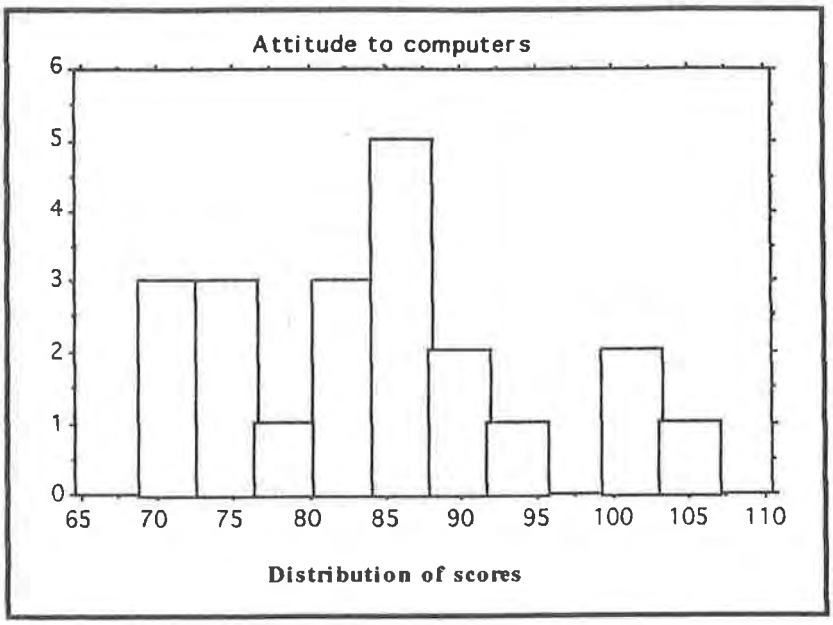

Figure 1: Attitude to computers

MT100 Applications

Observed Instructional use of the MT100 (OIUMT)

In comparing the frequency of individual student use of the MT100 for instructional applications, the data showed a wide range of scores between students, from sixteen incidents to forty-six for the same number of opportunities during which data were collected. These results produced a raw score (mean = 30.6, s.d. = 8.5), which was used for later comparison with other data. From the distribution of scores (Figure 2), the spread of student use of the MT100 for instructional purposes is evident.

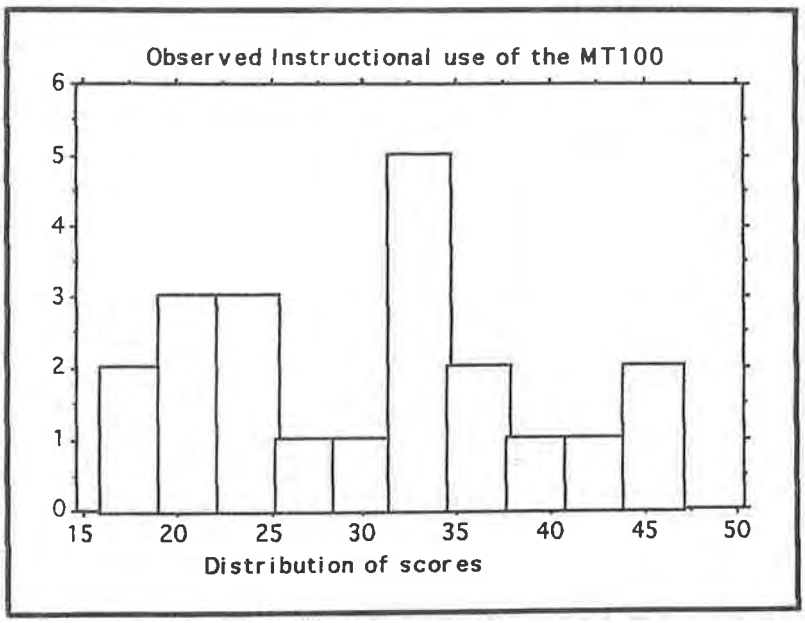

Figure 2: Observed instructional use of the MT100

All students used the MT100 for self-instructional purposes. They listened to the demonstration model, rehearsed with the model, self-recorded, listened to own recorded performance, and/or manipulated various functions of the MT100 to suit individual needs. Those students who demonstrated high or moderately high use for these purposes made up twenty-eight percent of the students.

Self-reported Instructional use of the MT100 (SRIUMT)

Students reported their use of the MT100 on a five-point scale which ranged from "not used at all" (1) to "used most of the time" (5). These measures aggregated yielded a mean = 73.0, s.d. = 19.0, while the distribution of scores can be seen in the bar graph in Figure 3.

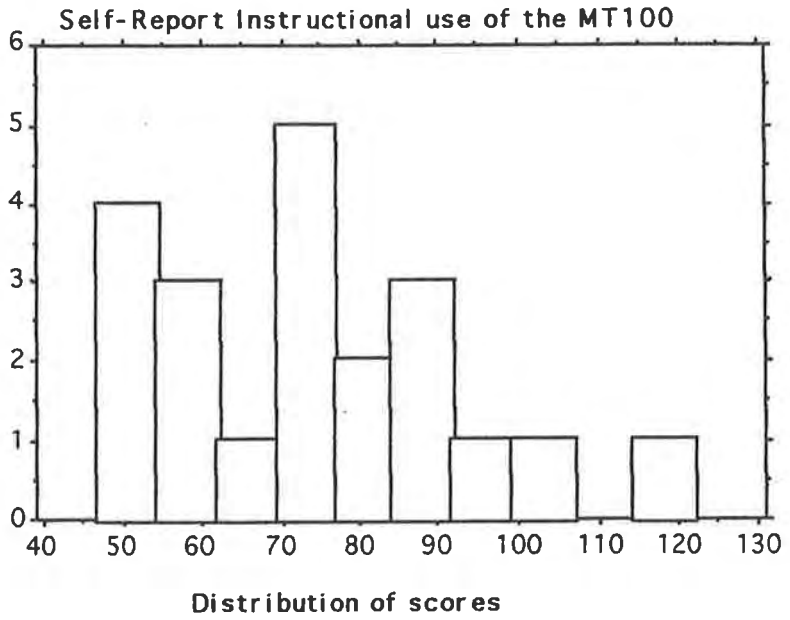

Figure 3: Self-reported instructional use of the MT100

According to student perception, fourteen percent made moderately high to very high use of the computer for instructional purposes. As a measure of concurrent validity, these data -- Observed and Self-reported Instructional Use of the Computer -- correlated to a moderately high level of 0.75.

Observed Motivational use of the MT100 (OMUMT)

In comparing the observed frequency of individual student use of the MT100 for motivational purposes, the data showed a wide range among students, from five incidents to twenty-eight for the same number of opportunities. The measure of observed use of the MT100 for motivational purposes showed a mean = 12.9, s.d. = 6.6, while the spread of scores can be seen in Figure 4.

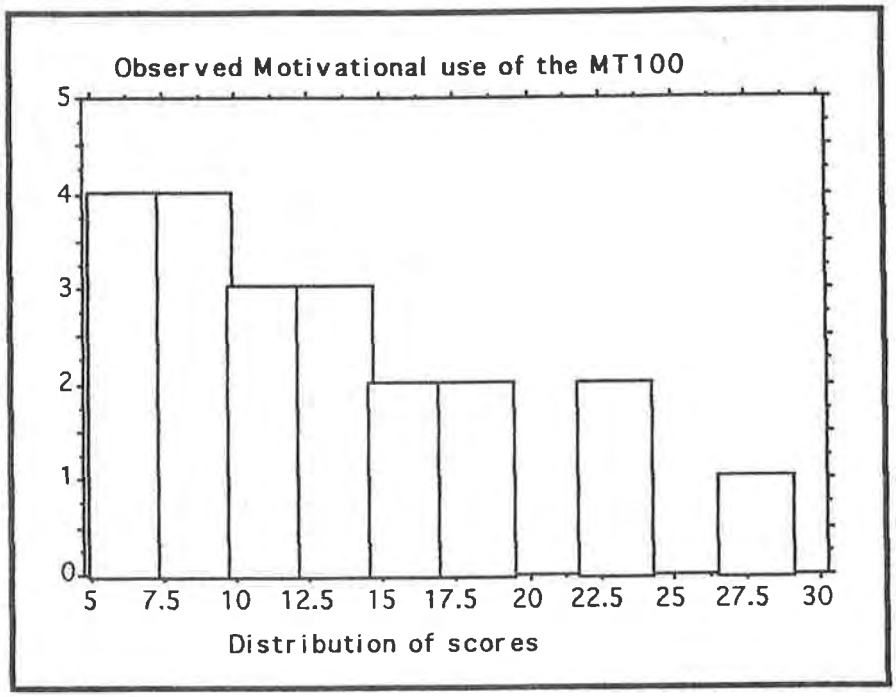

Figure 4: Observed motivational use of the MT100

All students used the MT100 for motivational purposes. They rehearsed with the orchestral accompaniments, manipulated various dimensions of the pre-recorded enhanced backgrounds, listened to unknown pieces and manipulated those accompaniments. The data are positively skewed showing that the majority of the students generally did not use the computer for motivational purposes to a high degree, only fourteen percent being in the upper levels.

Self-Reported Motivational use of the MT100 (SRMUMT)

The measure of self-reported use of the MT100 for motivational purposes provided the following data shown in Figure 5. The students' scores ranged between thirteen to seventy-eight producing a mean = 30.5 and s.d. = 13.6.

The results of students' use of the MT100 for motivational purposes were positively skewed. Generally, the majority of students made less use of the sequencer for motivational purposes than for instructional purposes. Their own perception was that they sought motivation from the computer less frequently than the observed data demonstrate. As a measure of concurrent validity however, these data, observed and self-reported motivational use of the computer, correlated at the level of 0.9.

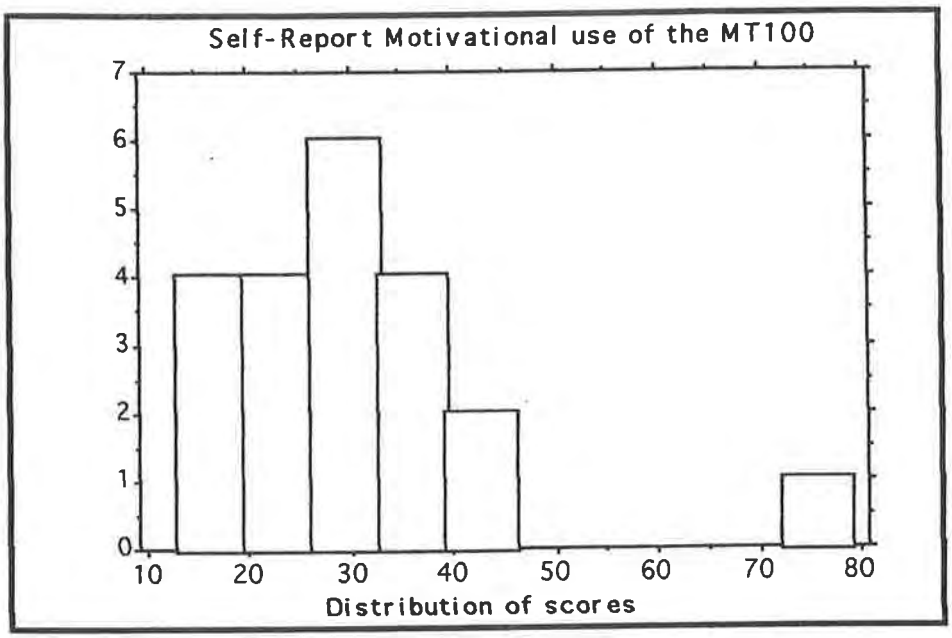

Figure 5: Self-reported motivational use of the MT100

Specific instructional applications of the MT100

At the conclusion of the study, students were asked to describe, via questionnaire, the instructional purposes for which they had mostly used the MT100 over the period of the study. Data from four questions, each on a five-point scale, are shown in Table 1.

Table 1: Specific Instructional Applications of the MT100

Description	Statement	% students
Self-record	Agree/ strongly agree	33%
Listen to self-recorded Performance	Agree	38%
Listen to recorded performance for analytical purposes	Agree/ strongly agree	38%
Listen to demonstration model before rehearsal	Agree/ strongly agree	53%

Computer Aided Practice

At the conclusion of the study, students' provided answers to five questions concerning the MT100 which gave an indication of their attitude to the ease of use of the computer, their willingness to use it, and the extent to which it had assisted their keyboard learning.

Results in Figure 6 showed that students were generally very positive to the use of the computer as an aid to practice. The scale produced a mean = 19.2, s.d.= 2.6.

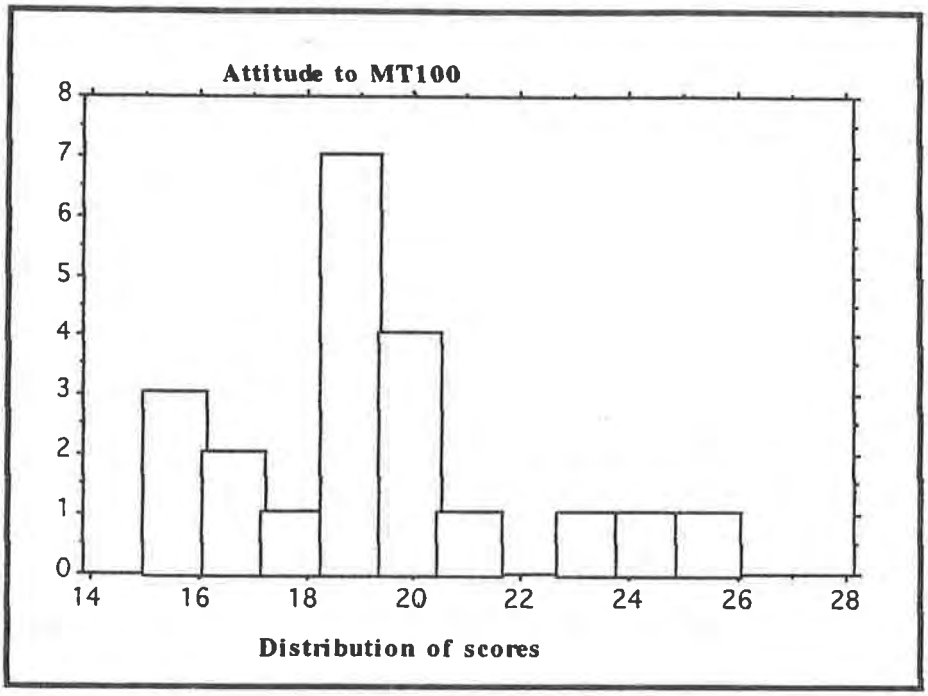

Figure 6: Computer aided practice

Performance Outcomes

The performance of each work was measured on a five-point scale. The performance criteria addressed aspects of pitch, rhythm, tempo, expression, phrasing, technique and style. A final performance score was collated from the sum of each of the five pieces performed. The range of scores as shown in Figure 7, was 51 to 101, mean = 78, s.d. = 14.0, indicating a spread of achievement across the twenty-one students (the maximum score possible being 125). Those students who scored ninety marks or higher, played with accuracy and musical expression, between seventy and eighty-nine, students played with moderate levels of accuracy and fluency. while those below seventy performed at the lowest level of the measures.

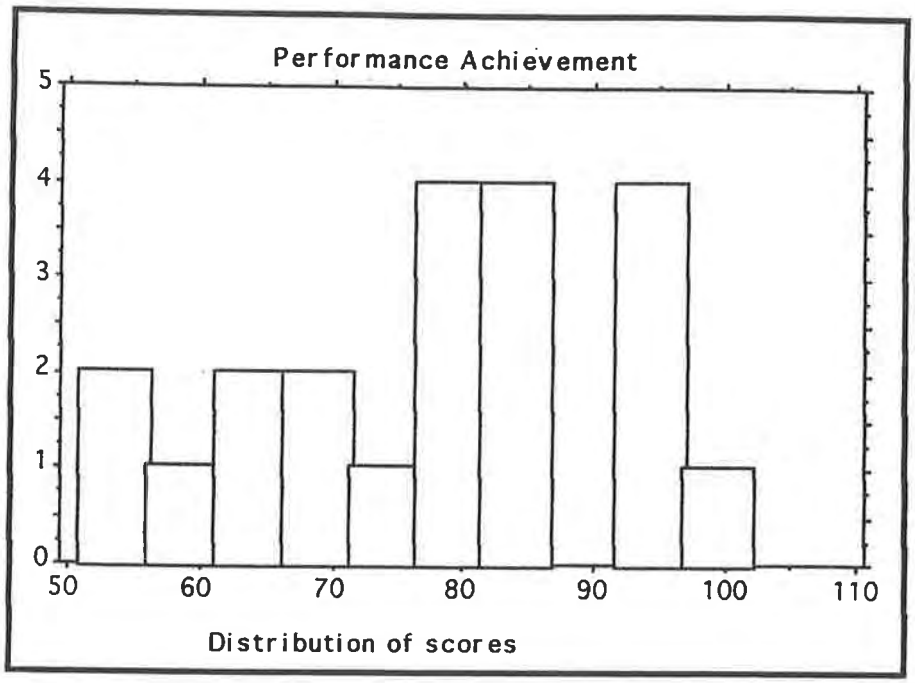

Figure 7: Performance achievement

Repertoire Progress

Some students might have concentrated practice on relatively fewer pieces, aiming for perfection, without extending their repertoire. As a consequence they could have achieved a higher score than those students who were challenged to increase the number of pieces they were learning to demonstrate greater competence. Students were to progress to new pieces as soon as they felt able, and were told that additional marks would be given in the examination for more advanced repertoire. A weighting of one point per piece was awarded. This somewhat arbitrary figure acknowledged that each subsequent piece in the tutor was at an increased level of difficulty without adding excessively to the score. In terms of extent of repertoire, students demonstrated considerable disparity of progress (twenty-one points to fifty), the distribution of scores being shown in Figure 8. There was a mean of 35.1 and s.d. = 8.4.

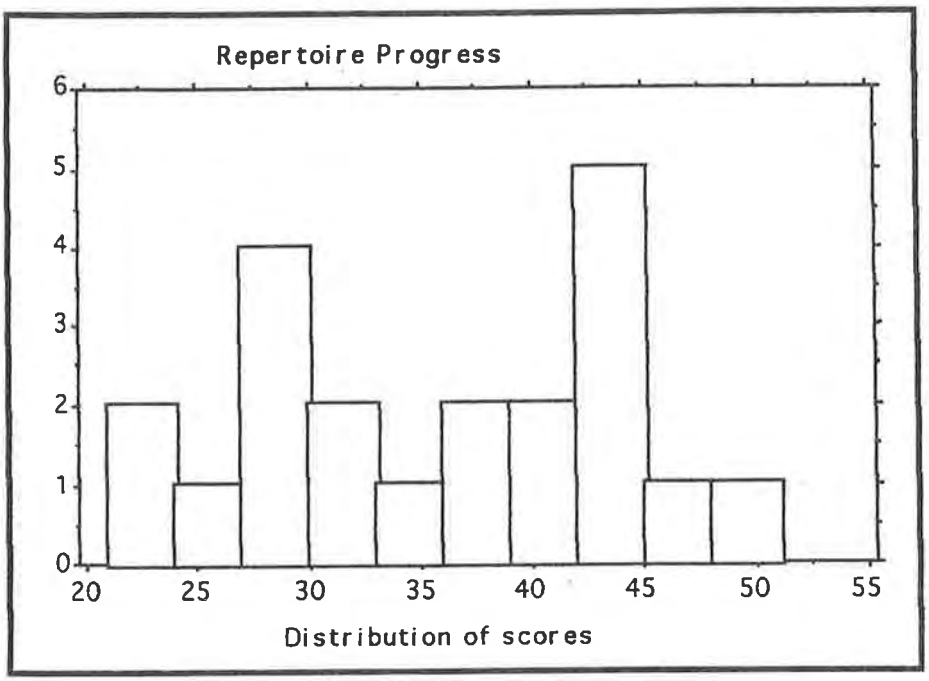

Figure 8: Repertoire Progress

Some of the struggling performers considered that mastery of each piece was essential before progressing to newer works and as a consequence did not extend their repertoire.

Discussion of Results

The relationships examined in this study use correlation techniques. Had the study involved a much larger number of students, the relationships could have been analysed using structural equation modelling to test hypothesised links in an overall model. However given the limitation of a sample of 21 students, relationships were explored in pairwise fashion and a global picture was formulated by synthesising the results from the separate analyses. The limitations involved in the approach, largely a function of the small sample size, need to be kept in mind when findings are interpreted. However, by looking for consistent patterns across the whole model, and then by seeking to understand and elaborate on the patterns using qualitative data from observations, interviews, informal discussions and students' written accounts, good interpretative sense can be made of the data.

For individual correlations, only those which are statistically significant (the generous level of $p < 0.1$ is used because of the small N) are considered. This level of significance corresponds to a moderate r of 0.36 on a two-tailed test of significance.

However, as noted above, interpretation is based on a pattern of overall relationships and takes account of the magnitude of the correlations (remembering that r 2 = the proportion of variance accounted for).

The Ability to use Computers

In this study, students were introduced to the MT100 Sequencer Sound Module, a music dedicated computer which was integral to the delivery of instruction and was also available to students, as a learning aid, during practice. Students having limited computer experience might have avoided using the sequencer as an aid during the study because of lack of computer confidence and consequently not have gained any benefit from its potential advantages. However, since it was mandatory for them to self-record, they were forced to gain skills in using, the equipment. The measure Ability to use Computers was considered a potential influence.

However, the connection between Ability to use Computers and Computer Aided Learning was not significant and this was unexpected. From this it is conjectured that because students were taught how to use the MT100, lack of prior ability to use general computers did not influence student use of the music computer during the study.

Attitude to Computers

Although this measure was considered a potential influence on students' use of the computer during practice, there was no significant correlation between incoming attitude and Computer Aided Learning. It appears that prior disposition with this group did not influence use of the computer once they were taught how to use it.

Instructional and motivational applications of computer aided learning

Results showed that although students used the MT100 for both instructional and motivational purposes, greater use was made of its instructional capabilities. Despite the generally held belief and assertions in the literature that students will use the sequencer software and synthesisers for their entertainment value rather than educational reasons; this was not supported by these results.

There were positive correlations between Computer Aided Learning and Computer Aided Practice, that is the extent to which students used the computer during practice, both instructional and motivational applications, and their attitude at the conclusion of the study, towards the effectiveness of the computer as an aid to practice.

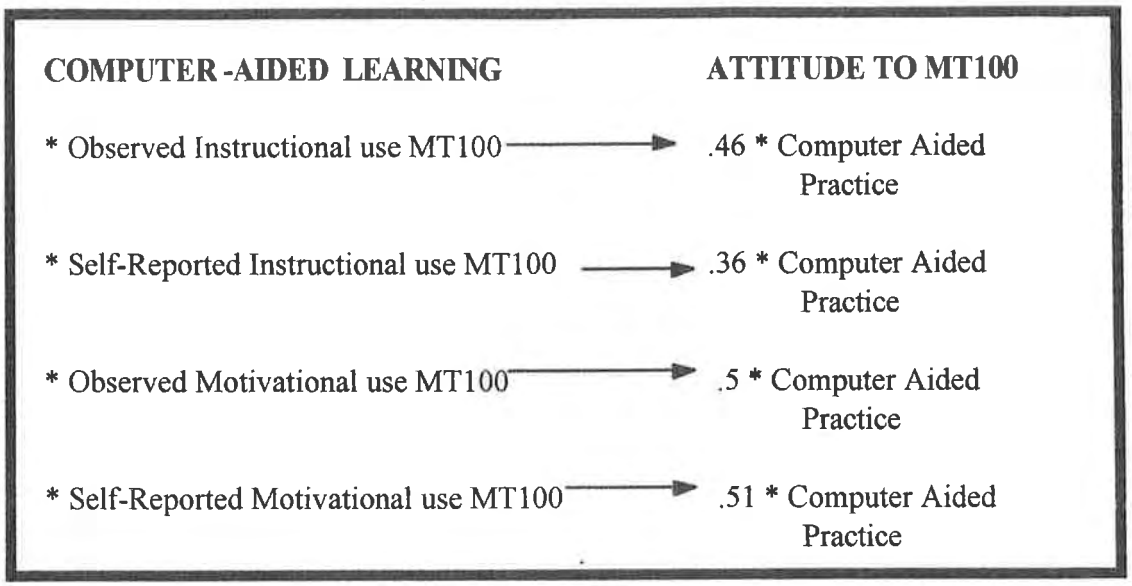

Figure 9: Relationship between computer-aided learning and computer-aided practice

This further supports the notion that specificity rather than generality is important in computer applications. That is to say, prior experience in one computer application may not necessarily transfer to another. Likewise, given specific instruction in the operation of a particular computer, students' prior attitude may have little influence on either attitude or application.

Computer Aided Learning and performance outcomes

Analysis of the affect of the MT100, when used for instructional purposes, showed that instrumental performance outcomes were affected positively. The extent to which students made progress in extending their repertoire of pieces was also influenced by instructional use of the computer. Students had access to the software demonstration models of works from all of the music tutors so they were not prevented from learning new pieces because the instructor had not introduced or modelled them. Having access to the software had two advantages. Firstly, students could progress at their own rate without being inhibited by the slower progress of their peers. They could use the demonstrations in the manner in which the instrumental teacher would have modelled the works, and provide themselves with feedback by rehearsing simultaneously with the model to assess accuracy of performance. The second advantage was being able to select any pieces to learn. This gave students flexibility in their choice of repertoire.

The extent to which students made use of the MT100 for instructional purposes impacted on Performance Achievement. That students had access to the demonstration models of the complete repertoire which they could use for a range of purposes was no guarantee that they would use it. Nor could it be assumed that it would be used effectively.

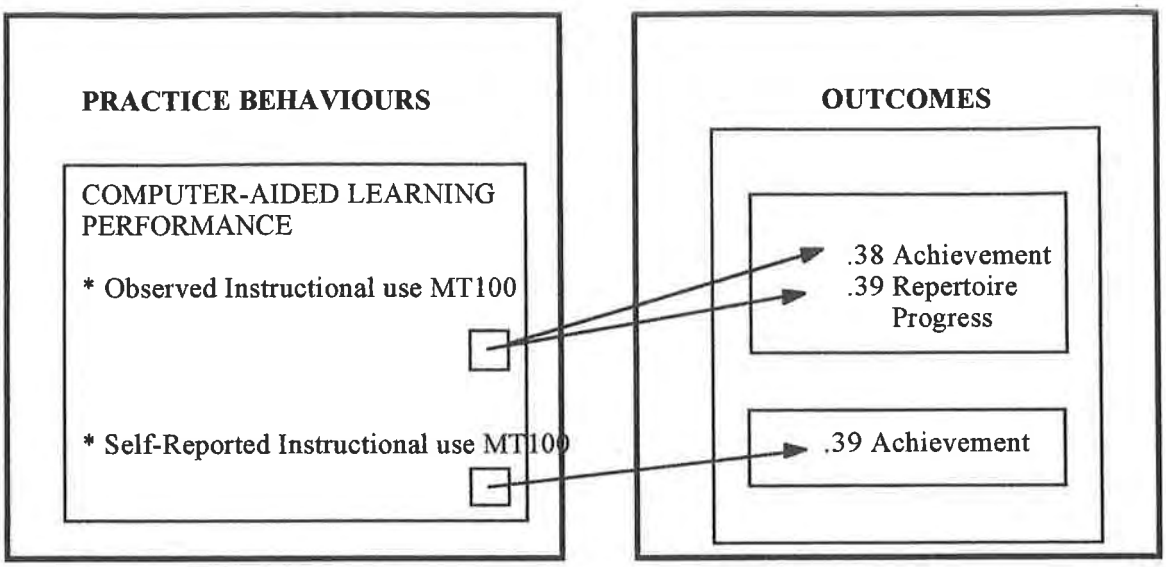

Figure 10: Relationship between computer-aided learning practice behaviours and outcomes

When the MT100 was used for instructional purposes, it affected Performance Achievement, whereas there was no significant relationship between motivational applications and Performance Achievement.

Computer Aided Practice

Computer Aided Practice, that is, student attitude to the effectiveness of the computer to enhance practice, was found to be influenced by each of the measures taken on applications of the MT100 during the study (Computer Aided Learning). The scale, Computer Aided Practice, was drawn from a questionnaire given to students in the final week of the study. Students were asked to evaluate the effectiveness of the MT100 as a tool for assisting their private rehearsal sessions. Those who expressed positive attitudes to the MT100 were shown to have used it for both instructional and motivational purposes which correlated positively with the Computer Aided Practice measure (Figure II). The levels at which students were observed using the MT100 for instructional and motivational purposes as well as their self-reported levels were reflected in their stated attitudes to the sequencer.

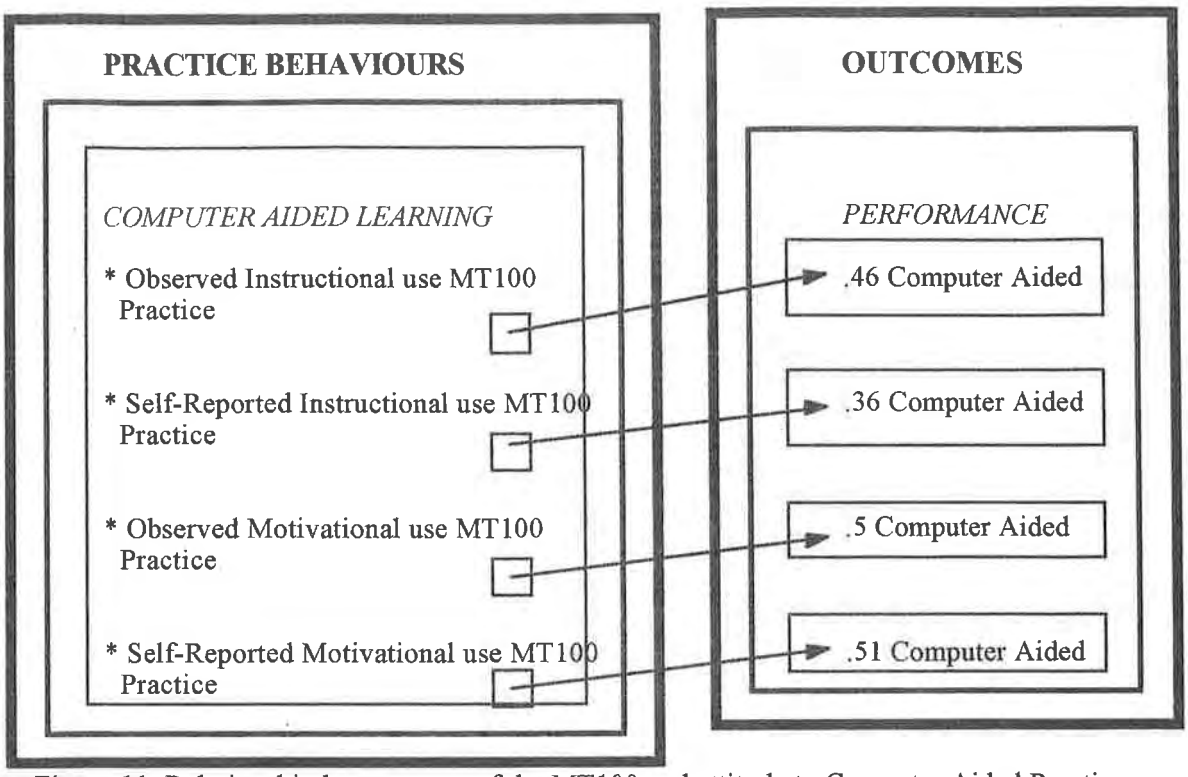

Figure 11: Relationship between use of the MT100 and attitude to Computer Aided Practice

Specific instructional applications of the MT 100

As shown in Table 1, all students used the sequencer software for self-recording monitoring self-recording, and for analysis of performance. However, the most significant use was made of the facility to preview previously unheard pieces by listening to the demonstration model before playing, more than half the students agreeing that they used it frequently. Clearly they valued this particular facility of the MT100.

Conclusions

These results. although not generalisable to the wider population, give some indication of the potential of computer assisted practice to enhance performance outcomes, particularly for novice instrumentalists. Of particular interest is that students' prior disposition towards computers did not influence their use. Although students were motivated by the various functions of the computer, they generally used it for instructional purposes rather than for motivational functions. Instructional applications influenced performance outcomes whereas there was no correlation between motivational use and achievement. Students identified the particular uses they made of the computer and acknowledged its benefits at the conclusion of the study.

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Invited Papers

Arguments Used to Support Or Oppose Inclusion Polisies: Some Applications to Music Education

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Abstract

Several kinds of arguments have been proposed to support or oppose the value of the inclusion model in the education of students with disabilities. These arguments can be placed into four basic categories. The first is the consequentialist argument which requires an empirical approach and focuses on various attempts to measure the positive and negative outcomes of inclusion policies. The second is the justice argument which focuses on the importance of equality and fairness in the delivery of services to persons with and without disabilities. The third is the rights argument which is based on the view that persons with disabilities have rights to prescribed levels of quality of service provision. The fourth is the needs argument which directs attention to the special needs of individuals with disabilities. Parents of students with disabilities often espouse the values of a high quality education and freedom of choice in regard to inclusion programs. Teachers involved in music education often oppose inclusion policies because they claim that children with disabilities do not benefit from traditional music education programs. Other music education teachers have shown that adapted music education and inclusion programs have particular benefits for children with disabilities.

Introduction

Several kinds of arguments have been used to support or deny inclusion services models. These arguments have rarely been articulated in any comprehensive way in the literature on disabilities. This is surprising as this matter is of considerable importance to policy makers and those concerned with the delivery of services to persons with disabilities. The aim of this paper is to elucidate the structure of the arguments commonly used to support or deny policies of inclusion. I will make reference to the particular problems of those involved in music education in this context.

The inclusion model is defined as an "educational model in which students with disabilities receive their education in a general educational setting with collaboration between general and special education teachers" (Accardo & Whitman, 1996, p. 157). Most educators differentiate between full inclusion in which the student with disabilities is in a full-time inclusion program, and part inclusion in which the student with disabilities is included in regular education on a part-time basis (Fuchs & Fuchs, 1994). The inclusion model is generally viewed as being an alternative to the continuum of services model (Accardo and Whitman, 1996). The continuum of services model is a

hierarchical model that provides programs ranging, from hospital-based schooling, special schools, special classes, resource centres and other facilities that extend from total exclusion in segregated environments to full inclusion in regular school settings.

Four Categories of Arguments

Four categories of arguments for and against inclusion will be analysed in this paper. These are the consequentialist argument, the justice argument, the rights argument and the needs argument.

The Consequentialist Argument

The consequentialist argument is based on the view that demonstrated or anticipated outcomes determine the worth of any activity (Scheffler, 1988). The benefits may accrue in increased student learning, or reduced government expenditure, or any other consequences that can be demonstrated to have positive outcomes. The costs may be in terms of imposts on education budgets, harm to individuals, deprivation of educational opportunity, or any other perceived negative outcome.

Those in favour of the full inclusion model have highlighted its positive effects in summary studies on inclusion of students with disabilities (Janney, Snell, Beers, & Raynes, 1995; Kliewer, 1998; Walberg & Wang, 1984); that the benefits are comprehensive in terms of social, academic and functional skills (Walberg, & Wang, 1984); and that the social and personal benefits of inclusion are considerable (Stainback, Stainback, East, & Sapon-Shevin, 1994). They have argued that if segregated facilities were disestablished this would lead to increased resources for students with disabilities in regular schools (Stainback, Stainback, East, & Sapon-Shevin, 1994). It has been claimed that many below average ability students take pleasure in music appreciation and have benefited from experience in music performance classes. Students with more severe disabilities included in regular education classes have also been given valuable experiences in music education classes.

Those on the other side of the debate contend that there are substantial costs in any arrangement that encourages full inclusion. In particular, they argue that inclusion policies involve restrictions in services to students without disabilities in regular education (Fuchs & Fuchs, 1994); that regular class teachers are not trained to deal with students with disabilities or are not able to provide appropriate services (Fox & Ysseldyke, 1997; Fuchs & Fuchs, 1994; Pearman, Huang & Mellblom, 1997); that the costs in providing a wide range of services to students with disabilities in every community school are likely to be prohibitive (Fuchs & Fuchs, 1994). Those involved in music education often maintain that an appreciation of fine music is outside the competence of persons with intellectual disabilities. They have claimed that just like calculus is outside the range of competence of persons with severe disabilities, so the specialised forms of music education are outside the range of competence of persons with the same level of disabilities.

The Justice Argument

The justice argument is usually based on notions of equality and fairness (Campbell, 1988). The essence of this approach is the view that goods and services provided by a state or local authority to persons in society should be distributed equally or on the basis of an agreed fair distribution. The notion of social justice is frequently used in this context (Dempsey, 1996; Foreman, 1996). It is often asserted that those with disabilities deserve the same level and quality of education as those without disabilities. This is the simple equality or egalitarian model. The claim is made that students in both categories deserve equal respect and consideration in regard to service provision and curriculum programming.

The dictum of simple equality appears relatively straightforward until it is applied to a practical classroom situation. The problem is that many of the groups that advocate the full inclusion model or the continuum of services model often make a plea for simple equality but also apply for a range of additional services to students with disabilities. These services may take the form of medical support, teacher aides, special equipment, special teachers or support staff in regular or segregated education settings. The principle of simple equality is therefore inadequate for policy reform and needs qualification if it is to be applied in a policy context.

The difficulty implied in the simple equality argument has been resolved to some decree by Rawls (1971). Rawls has advanced a modification of the standard egalitarian arguments for distribution of goods and services. He has sugested two fundamental principles of justice to guide action in social policy. The first is that each person should have equal rights to the most extensive basic liberties compatible with a similar set of liberties for others. In essence, this guarantees basic human liberties to all, including those with disabilities. The second is that social and economic inequalities should be tolerated, but only if such inequalities are to the benefit of all in the community (Rawls, 1971). In the context of the present debate, Rawls would argue that justice demands that the community give additional benefits to the disabled or disadvantaged so that the non-disabled and non-disadvantaged are free to pursue worthwhile projects in their own fields of endeavour. Rawls argues that adoption of such principles of justice should lead to contractual arrangements that guarantee considerable redistribution of resources to those most disadvantaged by social circumstances or disability.

Many of the arguments in this context revolve around the concept of discrimination. Williams (1996) has indicated that discrimination can be of two forms, either direct or indirect. Direct discrimination occurs if individuals with disability are given fewer services or treated differently than in a hypothetical condition in which the same individuals do not have that disability. Indirect discrimination occurs if particular policies have a discriminatory effect, even though there may have been no act or intention that could be labelled as manifestly discriminatory. There is wide support for anti-discrimination policies in Australia (Williams, 1996). Despite this support, in many states in Australia other rulings prescribe that education authorities may deny services to students with disabilities if it can be shown that non-discrimination policies impose

unjustifiable hardship on an education authority in terms of costs, or if it can be demonstrated that children with disabilities are a disruptive influence on regular school programming (Williams, 1996).

Those who support full inclusion maintain that justice principles dictate that there should be common educational programs for those with disabilities and those without disabilities (Stainback, Stainback, East, & Sapon-Shevin, 1994). They have argued that in much of segregated education the level of provision of music education is at a lower level than that provided in regular education. Those who argue for a continuum of services model claim that a commitment to justice does not entail that there should be the same kind of music education for the disabled as for regular class students. Further, that there is great value in a range of service provisions and additional resources for the disabled, and that a good quality adapted music education is consistent with provisions proposed by Rawls (1971).

The Rights Argument

The rights argument is based on the view that human rights are the fundamental concern in any debate about inclusion. The rights of the person with disabilities is said to be paramount in any judgement about service delivery (Burdekin, 1995). The rights arguments entails notions of duty imposed on others. If it is argued that individuals have a right to a service of benefit, then it is presumed that education authorities have a duty to supply such services or benefits. Dworkin (1978) has advocated the view that "rights are trumps" in all such disputes.

Several international and national bodies have given support to the view that human rights are deserving of universal respect and this view is widely accepted in many societies (Burdekin, 1995). The authors of the United Nations Convention on Human Rights espouse such a view. American law is strongly supportive of the rights agenda. Australian anti-discrimination acts give inherent support to notions of individual rights. It is now unlawful to discriminate against individuals in education because of impairment or disability (Williams, 1996).

Despite the above, the common law in most countries has a relatively restricted view of the rights argument (Waldron, 1984). An accepted principle in law is that all individuals have rights and a set of rights proposed for any one group of individuals cannot disallow the rights of others. On one side it has been argued that the rights of persons with disabilities should guarantee access to a standard of educational services equal to that given to others in regular education. On the other side it has been argued that the non-disabled also have rights, and that if persons with disabilities impede normal progress or inhibit the legitimate social and academic activities of others, then it may be necessary to consider some form of special education provision for persons with disabilities. An individual with an inadequate singing voice may be excluded from a choir. In like fashion, those with disabilities must face the same selection criteria as others if talent is of major concern in conditions required for public performance.

Persons who support the inclusion model have often used the rights argument in the

courts to support their cause. They claim that the continuum of services model is tantamount to an exclusion provision. They assert that music education is the right of every child. The logic of their argument is very similar to that employed by the supporters of the civil rights movement in the United states in the sixties. Those who support the continuum of services model have also used the courts to advance their case. Not surprisingly, they have argued that the quality of any segregated program should be equal to that of the regular class program. They claim that students with disabilities have a right to high quality music education within a program that provides a range of educational services. Advocates of this approach have also championed the cause of the non-disabled in the regular school system. They make the point that the rights of the non-disabled should not be restrained by individuals with disabilities who are unable to make reasonable progress in regular school courses or who cause disruption of regular school programs.

The Needs Argument

The needs argument has a long history in psychology and special education (Orelove & Sobsey, 1996). It is claimed that student needs should be the basis for all important decisions in the provision of education for students with disabilities. According to this view, diagnosis of individual needs is the primary around for decisions about service provision. Only when the pattern of disability is known and parent and child needs have been determined can an informed decision be made in respect to the kinds of special or regular school programs that should be put in place (Orelove & Sobsey, 1996).

Braybrooke (1987) has advocated the importance of a needs policy in social welfare provision. He claims that personal needs have received too little attention in critical areas of education, social welfare and economics. His view is that society can designate the needs of particular groups of persons within any population and that such specifications of need can be used to determine the level and type of allocations of resources to these individuals.

Braybrooke (1987) has defined several concepts in his exposition of the needs argument. The first is the distinction between needs and preferences. Needs are specific requirements for adequate functioning in society. They are different from preferences which are less substantive and invariably linked to discretionary wishes, desires, or hypothetical goals. Braybrooke suggests that all policy makers should make explicit the differences between needs and preferences in their respective domains. Needs must satisfy clearly articulated criteria. They must be genuine, they must take precedence over preferences and must serve functional purposes.

Those who advocate the inclusion argument usually claim that the need for social relationships with non-disabled individuals takes precedence over claims that the child should receive specialist care outside the regular classroom (Stainback, Stainback, East & Sapon-Shevin, 1994). They assert the primacy of the need for social contact between persons with disabilities and those without disabilities. They claim that the aim should be for the child with disabilities to work in an integrated non-segregated community without support. It is asserted that those with disabilities often indicate a need for

experience of music. In contrast, proponents of the continuum of services model maintain that the social and intellectual needs of persons with disabilities are very different from those of non-disabled persons and that these needs are usually satisfied in other ways. They make the point that students with disabilities also have very diverse needs and that these cannot always be fulfilled in a regular educational environment (Fuchs & Fuchs, 1994). Those educated in segregated settings can be given individual support to allow maximum development of individual social and personal needs.

Discussion

Several kinds of arguments can be applied to support or oppose the value of the inclusion model in the education of students with disabilities. These arguments can be placed into four basic categories. The first is the consequentialist argument, the second the justice argument, the third the rights argument and the fourth the needs argument. Each has some force in debates about inclusion and how to provide an appropriate role for children with disabilities in music education classrooms.

It is not enough to state a preference for segregation or inclusion. Those involved in music education should be clear about the kinds of arguments they wish to use to support their views about inclusion. Factors such as the difficulty of the subject area, level of curriculum goals and required levels of student expertise may well impinge on these matters. Teachers involved in music education often oppose inclusion policies because they claim that children with disabilities do not benefit from traditional music education programs. Other music education teachers have shown that adapted music education and inclusion programs have particular benefits for children with disabilities. Music is a very specialised subject area. But is it so specialised that it needs to be dealt with in ways that are different from other subject areas? Is inclusion likely to be introduced to music education as it has to much of the rest of the school curriculum?

The notion of individual freedom is central to this debate. In this case the freedom of parents and their children should be considered. Buchanan and Brock (1989) have shown that in many instances agencies of government ignore individual freedoms and take a protective or authoritarian role in deciding the kinds of services that should be made available to persons with disabilities. The authors argue that parents of children should oppose such restrictive government policies in this area. It is claimed that parents should be given more responsibility to choose a form of schooling that best suits their views about appropriate education for their children. In the present context, parents of students with disabilities would be allowed a key role when decisions are made between the inclusive education program or the continuum of services program. By extension, they should asked about what kind of music education might be best for their children.

Proponents of both the inclusion and continuum of services models have been ambivalent about the notion of choice. Supporters of the inclusion model have often presumed that all students with disabilities are best placed in an integrated setting. They support various forms of inclusion for students with disabilities and the possibility of a choice of a segregated education is rarely given any consideration.

Likewise, supporters of the continuum of services model have often presumed that they have the right to make decisions about the level and kind of service provision that should be provided to these students. Those who oppose inclusion have often presumed that all students with disabilities are best placed in some form of segregated settings.

Music educators must often make decisions about how to provide programs for individual students with disabilities. In Such situations it may not be appropriate to be committed to a policy that supports universal acceptance of either inclusion or segregation. Perhaps parents and teachers should act collaboratively and sort these matters out without recourse to external policy constraints. In most cases it may be best to let teachers, parents and students to decide which form of education is best suited to individual children.

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A Profile of Music Education and Children with Special Needs in Selected Western Australian Schools

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Abstract

The education of children with special needs is one area of the curriculum which has undergone significant change since 1993. The shift to educating such students where possible in the mainstream has necessitated changes to school policy. Policies requiring accountability and educational standards have made teachers more aware than ever of the need to provide quality education for all students. Often when a special needs child is placed in the school system, one of the first classes the child may be included into is the general music education class. However, it is difficult to ascertain what provision is made for the special needs student in the music education class. It is the aim of this research to investigate the provision of music education for children with special needs who attend educational support centres in the metropolitan area of Perth, Western Australia. To this end music specialist teachers and special education teachers were surveyed regarding their attitudes towards the value of music education for the special needs child. The survey also ascertained the music qualifications special education teachers possess, the practical experience music specialists had in teaching music to children with special needs and the approaches used to teach music in the classroom.

Author's Note: Appropriate Language
Recent developments in the education of children with special needs have seen the abandonment of the term *integration* in preference for *inclusion.* During the time that this study was undertaken the placement of the child with special needs into the least restrictive educational environment was considered the practice of integration. It is the authors belief that in this study the 'regular' classroom music programme was adapted and modified to include the child with special needs. Therefore in this paper the term *inclusion* can be substituted for *integration.*

Introduction

Background

In ascertaining the place of music in the education of the special needs child, it is necessary to understand how special needs students are identified and placed in a learning environment which will most suit their needs.

The referral and subsequent placement of a special needs child into the most suitable education setting involves a series of steps. Placement occurs after the parents, school principal and school psychologist have completed interviews and diagnostic tests, a necessary process to ensure that the social, emotional and intellectual needs of the student will be catered for in the best way possible. (W. A. Ministry of Education, 1993, p. 8) Where possible, special needs children are integrated into mainstream classes for some of their lessons.

Music in Special Education

Recent discussions with principals and teachers in special education schools and centres have identified differences in how music education is taught to special needs students. Some reasons for those apparent variations include:

- scarcity of teacher expertise in music education.
- apparent lack of music teachers trained in special education.
- Western Australian State Education Department schools may choose only one specialist subject and specialist subject teacher.

The above mentioned facts raise some important issues, which include school priorities and the scope and quality of music teaching in schools in which children with special needs are placed.

The Integration Process and Music Education

It is apparent that music education occurs in some educational settings more frequently than others. For instance, if a special needs child is integrated into the regular class, he or she stands a greater chance of receiving music education on a more regular basis. However, it appears there are further variations with regard to the type of music instruction the special needs child receives in an integrated class setting. It is evident that music specialists have expressed doubts about their ability to teach the special needs child.

Hock, Hasazi and Pattern (1990) states that:

> Even before the mainstreaming movement of the 1970s, music educators were typically among the few non-special educators who had regular contact with special education students, a dubious distinction shared with the other "specials" - art, physical education, home economics, and industrial arts teachers and librarians. As a rule, these contacts have been positive and productive despite the fact that music educators for the most part, have not been trained specifically to work with students who are handicapped. (p. 45)

A Rationale for Music Education for Children with Special Needs

Music provides a means of expressing ideas and emotions and can be important in the personal development of a child. "All children should be given the opportunity to develop skills and competencies which will enable them to appreciate music in its many forms and varieties" (Birkenshaw-Fleming, cited in Rebollo Pratt & Hesser, 1989, p. 45).

Therefore in order to provide appropriate experiences for the special needs child in a particular school setting the music specialist teacher and the special education teacher need to discuss appropriate teaching strategies that will assist the child's understanding of music.

Important consideration must be given to the aims and objectives of each music education programme designed for the special needs child. The programme may have either a musical or a non-musical purpose, or a mixture of both. It may be that a series of music

lessons is structured to assist in the interaction and socialization of the special needs child with other members of the class.

Another focus of a set of music lessons may be to direct the special needs child to explore various musical concepts. In this instance lessons may be structured to assist the special needs child to perform a specific musical task. The teacher may want the special needs child to explore rhythm, melody, timbre and dynamics in order to tell a story, or to express an emotion or feeling. Overall the desired outcome is for the special needs child to successfully encounter meaningful musical experiences upon which he or she can develop a greater understanding.

In order for the special needs child to become involved in the music lesson it is important that he or she is offered a variety of ways in which to experience music. The ability of the special needs child to become involved in the music process would seem to be the key to a successful experience. In a study by Sturgess (1986, p. 18) it was found that special needs students were more engaged in activities where "the emphasis was on participation and action rather than appreciation". The type of impairment the child has should influence the choice of musical activity. However it is possible to work around such problems either by varying the activity or the skill level required. McCoy (1982) adds,

> To reinforce motor skills (both lateral and directional) use movement, instrumental work, folk games and dances. Reinforcement of learning skills can be aided by sequential memory activities. Use songs chants and movements. (p. 51)

While there are many factors to be considered when teaching children with special needs choosing appropriate activities is not an unrealistic expectation for the music specialist teacher. Frequently amongst the students in the music class it is evident that there are a number of diverse ability levels.

Many external factors affect the levels of ability of the students in the music class. Such factors include the difference in ability levels between the children who learn music privately and those who do not and the interest by members of the family in music education for their child. Therefore accommodating the special needs child is only part of the adjustment that the music specialist has to make when teaching musical concepts and ideas.

The versatile nature of a music education programme in the school setting can only enhance its place as one subject which may benefit children with special needs. The diverse ways the subject matter can be experienced may benefit the special needs child (Birkenshaw-Fleming, 1992).

Policy and Guidelines

In an attempt to standardise the education of students with disabilities the Education Department of Western Australia (1993) has published the document "Policy and Guidelines for the Education of Students with Disabilities". This document provides the framework for which all students with disabilities will have access to quality education.

Included in this document are guidelines suggesting that students with disabilities have access to schooling which best meets their developmental needs. If the main objective is a better overall education for the special needs child then music must have adequate time allocation in the curriculum.

However, at present this does not appear to be the case. Education Support Centres are allocated half a day per week of specialist teacher input. The specialist teacher may come from any of the following disciplines; dance, drama, media, music, visual arts or physical education.

In the primary school system the principal decides which specialization he or she wants for the half day per week. While one could argue strongly against this policy it would seem that this is the system in place. Therefore any consistent music education that the child receives must come from the special education teacher. Unfortunately, many non-specialist teachers do not have the expertise to provide students with regular music instruction. This problem exists in the area of special education.

Purpose of the Study

The main purposes of this study were to:

- ascertain whether the special needs child did or did not receive regular music education in selected education support centres in Western Australian government schools;
- identify the mode in which music was taught to children with special needs;
- survey the teachers' attitudes towards music education at the school level.

Definition of Terms

In this study 'students with special needs' is defined as "those students with an intellectual, physical or sensory disability who are educated in a school setting". This definition is that used by the Western Australian Ministry of Education (M.E.W.A., 1993, p. 5).

For the purpose of this study the 'Primary Music Specialist Teacher' refers to the person who takes/is given responsibility for the music education section of the curriculum.

The term 'integration' can be defined as, "the inclusion of students with special needs in the regular education system" (Casey, 1994, p. 23).

Methodology

Research Design

The research was of a descriptive nature and data were collected through the administration of questionnaires. Although similar in design, two different questionnaires were circulated. The questionnaires comprised two main sections: section one required mainly a yes or no response; section two was a five point Likert type scale, where

respondents were asked to circle the responses which most closely matched their attitudes.

One questionnaire was sent to primary music specialist teachers who taught in primary schools which had an educational support centre attached to the school. The other questionnaire was sent to special education teachers and teaching principals who worked in the on-site educational support centres.

Special education facilities in the Perth metropolitan area providing education in a school setting may be divided into government and non-government. It is estimated that there are between 60 and 70 government education support schools, satellite classes, education support centres and education support units. This information was obtained from the Social Justice Branch of the Education Department of Western Australia, which provided a list of educational support centres in the Perth metropolitan area. Educational support centres were the target group identified for this research as children attending those centres were more likely to be integrated into the 'regular' on-site school for some of their lessons. It is assumed that there is a greater chance that they may be integrated with their aged cohorts for lessons such as music education.

Data Collection

Twenty two questionnaires were sent to music specialist teachers in metropolitan government primary schools which have an Educational Support Centre on the same site as the regular primary school. Incorporated with the questionnaire was a self addressed postage paid envelope in order to encourage persons to respond. Twelve persons responded making a 54.45% return.

Ninety six questionnaires were sent to special education principals and teachers in metropolitan government Educational Support Centres. Incorporated with the questionnaire was a self addressed postage paid envelope in order to encourage persons to respond. Forty eight persons responded however, one copy was blank leaving forty seven, making a 48.95% return.

As well as providing postage paid return envelopes, subjects who did not returned the surveys were telephoned and asked if they were having difficulties with the survey. At the same time they were asked if they could return the survey at their earliest possible convenience.

Instruments

Two different questionnaires were designed. The first questionnaire was aimed at the primary music specialist teacher and comprised 33 questions in two sections.

The second questionnaire was sent to special education teachers and teaching principals. These people all taught in educational support centres which were attached to a regular school. This survey was also in two sections, comprising of 28 questions.

Conclusions

The following conclusions are based on the data analyses as they relate to the research questions.

Allocation of Time for Music Education with the Special Needs Child

Children with special needs spent between 44 minutes and 63 minutes per week in the integrated music class. The amount of time spent at music lessons depended on the grade into which the special needs child was integrated. In addition, 78% of the special education teachers indicated that they carried out music activities with the special needs child once or twice per week on a regular basis.

The above-mentioned time allocation for music lessons appeared to be similar in most special education centres. The majority of special education teachers and music specialist teachers were keen for the special needs child to attend music lessons in either or both the integrated and the segregated setting.

However, timetabling appeared to be the single most important factor affecting the regular attendance of the special needs child at music classes. The organization of the timetable prevented children with special needs from attending music classes.

The results of this study indicated that of those music specialist teachers surveyed, 25% had not previously taught children with special needs. In addition, 25% of the music specialist teachers had had less than 5 years experience teaching music education. It is possible that those teachers were working for the first time in a school with an on site educational support centre and had not yet worked with special needs children.

It is also possible that owing to timetabling constraints and the part time nature of the music specialist teachers work, that music lessons were held at a time when it is not possible for the special needs child to attend. Anecdotal remarks made by music specialist teachers supported this notion.

In the majority of cases, the special needs child does received weekly music classes but in one quarter of the cases no special arrangements were made. It was up to the teachers to arrange a time in which the special needs child did attend music classes. It would seem that music education is not a subject which was timetabled into the school curriculum so that all special needs children could attend weekly music classes in an integrated setting with the music specialist teacher.

Almost 80% of special education teachers carried out musical activities with their students. Of this group, 61.7% participated in musical activities at least once or twice a week with the special needs children in their care. However, only 22.6% of the teachers of special education felt capable of teaching music education to children with special needs. Furthermore almost 85% of special education teachers were not able to audit an integrated music class and therefore were unaware of activities that they might use with the special needs children in follow up lessons in the classroom.

From the above analysis there is a case that the time the special needs child spends in various music education classes could be timetabled in a more efficient way. This would enable the special education teacher and the music specialist teacher to develop a more suitable music programme for the special needs child.

Attitudes of Special Education Teachers Towards a Regular Music Education Programme

From the information gathered it was evident that the majority of special education teachers either strongly agreed or agreed that music education was important both within the school curriculum and as a part of the special needs child's education.

A majority of 66% of special education teachers had completed at least one unit in music or music education during their teacher education course. In the special education classroom 78.7% of special education teachers carried out musical activities with special needs children and of this group, 61.7% carried out musical activities on a regular weekly basis. However, only 22.6% of special education teachers strongly agreed or agreed that they felt capable of teaching music education to children with special needs.

Although the special education teachers carried out musical activities other than those taught by the music specialist teachers, there appeared to be some diversity among the types of activities taught by the special education teacher to the children with special needs. The most frequent types of activities that the special education teachers carried out with the children with special needs were; singing (including singing games and action songs), music and movement, listening/music appreciation, rhythm games and activities, percussion and recorder lessons. These activities would all be carried out in the segregated classroom by the special education teacher.

That so many special education teachers did regular music activities with the students is interesting, as it is unlikely that the same percentage of general class teachers would do this on a regular basis. The majority of special education teachers indicated that music is a worthwhile part of the special education curriculum.

Attitudes of Music Specialist Teachers Towards a Regular Music Education Programme for Children With Special Needs

From the data collected, the majority of specialist music teachers surveyed had a positive attitude towards involving children with special needs in a regular music programme. Results collected indicated that 83.3% of music specialist teachers strongly agreed that music education was an important component of the special needs child's education, worthy of a place in the school curriculum.

At the time of the survey 83.3% of the music specialist teachers were teaching children with special needs in an integrated setting on a regular weekly basis, and 25% were teaching children with special needs in a segregated setting on a regular weekly basis. Some music specialist teachers were teaching in both settings.

While the majority of music specialist teachers had completed units in music or music

education during their teacher education course, only 16.7% had completed units in special education. Many of the music specialist teachers had adapted their teaching methods to incorporate the special needs child into the music class and in addition held regular discussions with the special education teachers.

However according to the data provided by the music special teachers there appeared to be a number of difficulties which hampered the successful implementation of a music education programme for children with special needs.

There is little doubt that there are positive and negative aspects when teaching children with special needs in either the integrated or the segregated classroom. However, the majority of music specialist teachers indicated that they were involved in teaching children with special needs in an integrated setting. The difficulties encountered by the teacher in this setting are considered below.

When a special needs child is included in the regular music class, 91.7% of the time he or she is placed according to age and not musical aptitude. There are many reasons for this, not the least being that the special needs child is to be socialized with his or her age cohorts. While placement according to age may be only a minor problem in the first year of school, by the time a special needs child is eleven or twelve years of age he or she may be experiencing a great deal of difficulty keeping up with the regular children. This is a problem when the regular children have had six or seven years of music education and the special needs child has only just joined the school or the class often without any prior experiences in school-based music education. As the special needs child requires greater assistance under these circumstances, the teacher is taken away from the larger group to spend time with the special needs child.

According to the music specialist teachers interviewed, only 16.7% of teachers had a teacher assistant with them when the special needs child was present in the integrated music class. Furthermore, 50% of the music specialist teachers stated that the behaviour of the regular students was worse when a special needs child was integrated into the regular music class. A further 33.3% were undecided as to whether or not the behaviour of the regular students did deteriorate when the special needs child was in the music class.

When one considers that a music classroom is an unconventional setting, unlike other classrooms within a school setting, difficulties may occur. In most primary school music rooms there are no desks or chairs; instead there is a wide, open space in which children can move around. The music room is often filled with various types of percussion instruments which are very attractive to young students. Occasionally the music specialist may be required to assist the special needs child. If the rest of the class is left unsupervised, students maybe tempted to experiment with the instruments in an

uncontrolled manner. If there is someone present to assist the special needs child then the music specialist teacher is able to direct and supervise all students.

75% of music specialist teachers reported that it was necessary to develop additional teaching strategies in order to include the special needs child into the regular music class.

A further 58.3% either strongly agreed or agreed that they altered their teaching style when special needs children were integrated into the regular music lesson. The teachers were not required to explain how or why they altered their teaching style when children with special needs were integrated into the regular music class.

There were mixed reactions from the music specialist teachers when asked about their preference for teaching children with special needs in an integrated rather than a segregated setting; 25% strongly agreed, a further 50% were undecided. Music specialist teachers thought the integrated music class was a good setting in which to teach children with special needs. However, it was not necessarily the preferred place for including children with special needs.

Lack of initial training and expertise in special education, may contribute to the difficulties experienced by music specialist teachers who have special needs children placed in their regular music classes. While 41.5% of music specialist teachers strongly agreed or agreed that they would still include children with special needs into the regular music class if given a choice, 41.7% of the music specialist teachers were undecided, and 16.7% would not include special needs children if they were given the choice.

Limitations

A number of factors limited the study. Educational support centres were selected for this study because they are located on regular school campuses and generally cater for students with less severe disabilities than those in other educational facilities. Therefore the children with special needs who attend an educational support centre are more likely to attend regular music classes than those children whose disabilities are more severe.

This study did not investigate the procedures used by teachers to teach music education in facilities other than educational support centres. Therefore the findings from this study cannot be extrapolated to other facilities such as education support schools, satellite classes, education support units, or visiting teacher services used in the Perth Metropolitan area. Furthermore, owing to the small size of the study and the different facilities provided for children with special needs in other parts of Western Australia and interstate, the findings from this study cannot be implied in other situations.

These results indicate that while children with special needs receive regular music education from either the music specialist teacher or the special education teacher, the majority of those teachers feel less than capable of providing a satisfactory education in this subject. In addition, school timetabling affected the frequency of music classes given by the music specialist teacher for the special needs child.

Implications

It is likely that the Integration Policy along with the Curriculum Framework document and the Arts Student Outcome Statements will require music specialist teachers and special education teachers to make a greater commitment to music education with the special needs child.

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Is Inclusivity an Apologist's Reconstruction of Assimilation? The Issue of Inclusively in Contemporary Music Education

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"Relax!"
"Breathe deeply!"
"... repeat after me ... "
Sing 'Hello Bayberry!' (Willberg & Clarke, 1988:28)
"Now - do you feel included?"

We could be forgiven for being suspicious, particularly in the current post-Mabo political climate of late twentieth century Australia, that the notion of inclusivity is a construct rather like that of Aboriginality, invented by west-centric control freaks to justify bringing 'those people' over to 'our' worldview.

I view inclusion and exclusion as the opening and closing of gates to participation in contexts related to attributes or cultures.

Relative to my work in diverse cultural settings, I went in search of references to inclusivity (Smith, 1998). While the word or variants of it appeared frequently in what I would describe as west-centrically oriented publications, perhaps not surprisingly I found few in texts written by Indigenous 'First Nation' or migrant Australians. I say this because implicit in most of those texts appears to be a deep mistrust even of west-centric participation in the processes of reconciliation or of interest in anything but the mainstream's west-centric worldview.

If it were otherwise I might expect, for example, that 'inclusivity' would have currency in such as the 1997 exclusively Aboriginal symposium 'Our Land is Our Life'. Instead more typical is what Mike Dodson says there:

> We have suffered the consistent invalidation and devaluation of our world view and experience. The arrogance of presuming that one world view is more valid than another can only be maintained by the force of the law of the state. The force of one legal system denying another. (Dodson, 1997:42)

We like to perceive of ourselves as tolerant and our nation as, if not multicultural, at least accommodating of other than a west-centric worldview. The nervousness, the hysteria, the support and affirmation which recently accompanied the advent and evolution of Pauline Hanson's One Nation Party indicate that this perception may not be as secure as we might wish to believe.

When we talk about disadvantage in music education, hearing impairment stands out as the most obviously closed gateway to the physical and subsequent aesthetic joys of music. However gates may also close to students for equitable participation in music education programs in their possession of any one or combinations of attributes of gender, ethnicity, economic disadvantage, aptitude, ability or intelligence and physical or intellectual impairment.

In this light it is worth considering McClintock's (1989) list of ways in which minority peoples also can be disempowered and then included but on the majority's terms. She identifies these as excluding, avoiding, ignoring or forgetting them, 'testing' their loyalty, stereotyping, generalising about their culture, staying 'one-up', being over-protective, through privileged group solidarity, forcing their integration or by expecting 'them' to teach 'us' about their group's culture.

In 1984 Doreen Bridges contended that the academic bent of contemporary British colonial mentality still thrived in west-centric Australian music education, particularly through organisations like the AMEB. And, more recently, in 1992, Roylance agreed. West-centric music education, she said, continues to be embedded in west-centric high-art discourse, empowering mainstream students at the expense of others. This, she suggested, can only change with attention to the nexus between music, social and material privilege, educational capital, national identity and religion.

I would like to examine briefly some potentially 'excluding' assumptions regularly made about west-centric music education. I will then attempt to mate each with an 'including' response by people who regularly move between worldview domains, particularly migrant and Indigenous Australians.

* ASSUMPTION: All students need competence in reading and writing west-centric staff notation.
* RESPONSE: The west-centric assumption that music must be written is a consequence in part of a society which makes much of the individual. On the other hand orally transmitted music encourages collective input reflecting the collectivist cultures of many migrant and indigenous communities.

I am reminded of the story of two guitarists sharing a drink. One asks the other, "Hey man, do you read music?" to which the second replies "Not enough to spoil a performance!"

* ASSUMPTION: There is a hierarchy of musical genre, with 'International' (west-centric) high art music prioritised (as 'real' music) and other genres diminishing in significance from there.
* RESPONSE: This assumes that the value of one culture's music can be measured as superior to others. Rather, my informants contended, appraising students of both the uniqueness and of the commonalities of every society's or culture's world view of music should be encouraged as a long term outcome of equitable inclusive programs. A real concern, alluded to in McClymont's list, is that the devaluing of others' music may confirm existing oppression.

* ASSUMPTION: Consequently, music history is best taught from a perspective of the 'great composers'.
* RESPONSE: It might be appropriate to teach from a 'great composers' stance in a society which glorifies the individual but this approach is inappropriate for societies which perceive composition as a collective or anonymous activity.

* ASSUMPTION: Learning about 'other' musics may serve a useful purpose as a vehicle for teaching the theory and elements of a west-centric worldview of music.
* RESPONSE: Diverse music worldviews deserve in-depth investigation for the strong potential they have to enable intercultural communication, of influencing attitudes and behaviour and in encouraging tolerance.

* ASSUMPTION: Anybody can teach 'other' musics.
* RESPONSE: Enlisting teachers with west-centric world views to teach the music of other cultures could mean that people from those cultural settings lose control of their music. The danger too of misrepresenting minority groups' performing arts may put the cultural integrity of its music at risk.

* ASSUMPTION: Music is most effectively taught in the context of a separate subject area.
* RESPONSE: Music is taught more appropriately and effectively when it is integrated with related cultural activities. The integral nature of music in other cultural world views is dissonant with the compartmentalisation of learning areas as these occur and are now rationalised for example by the national statements and profiles.

* ASSUMPTION: Music is most effectively taught and learned indoors in customised spaces.
* RESPONSE: 'West-centric' educational settings may be inappropriate for, for example, indigenous Australian students who often still prefer to learn out of doors.

There is one other more general assumption with which we need to deal if we are to address any sort of equitable communication between the way things are for west-centrically oriented people and for people from other culturally oriented settings. This is our assumption that, for everyone, the 'arrow of time' moves in a linear way, from the past through the present and into the future.

Considering that nature operates in a cyclical manner it is probably more natural to perceive time as a cyclical set of events, with our west-centric 'linear' view the 'abhorrent' one! We can predict with reasonable certainty that the sun will rise in the morning, pass through day and on into another night, returning to proceed through a similar cycle on the following day. The moon functions cyclically, as do the tides it affects. There are seasons. People are born, live their lives, and die in the cycle of life.

Hall (1976) depicts these two extreme views as 'M time' for a linear and 'P time' for a cyclical time worldview. A society driven by 'M time' perceives that time can be controlled and codifies it to fit a mechanical structure of seconds, minutes, hours, days

and so on. People work to time and time is 'wasted'. On the other hand people who operate within a 'P time' worldview see time as a cycle of events, points dotted randomly across a non linear timescape. Each 'point-in-time' event may be held sacred but not the time it takes to get to or which follows the event.

For example, a collective of 'P time' people might decide that they need to gather to organise some sort of ceremonial event. No 'time' value is placed on how long it takes to get to the meeting. People who arrive first simply wait for the others to follow. In our time perspective this might take hours or even days. The time of the meeting, when it eventually happens, is 'recorded' as a significant event in their perspective of their own 'history'. The notion of 'wasting' time has no significance.

These seemingly incompatible time perspectives impact on many assumptions we make for example about Indigenous Australians. West-centric people have reconstructed Indigenous Australian Dreamings to fit into their historic traditions of west-centric fairy tales and myths. But for Indigenous Australians the Dreamings are not a series of myths from the past, but an ever present reality or set of truths. For, in 'P time', past, present and future are inextricable.

West-centric music educators often tell me that they would like to have informed Aboriginal elders work with their classes to share music and dance. However their attempts are frustrated by the apparent failure of the elders to keep appointments or fit teaching timelines. We need to remember that our obsession with working to the clock may also be very puzzling and perplexing to people who place a totally different set of values on time. I suggest that, if we are to benefit from the enormous musical wisdom of informed Aboriginal people, we might need to re-think and somehow overcome the difficulties inherent in our own preoccupation with 'keeping to time'. We might start by encouraging greater time 'flexibility' within our school programs to cater for such visits.

Realistically then, how might the inclusivity of existing music education programs be enhanced? Boggs (1985) recommended adapting delivery to more culturally affirming environments. In 1990 Lipka cited the employment of indigenous Alaskan teachers in their own cultural settings applying familiar teaching and learning strategies in equally familiar activities. I suggest that we need to consider pedagogies which incorporate other than elementally based approaches to music. Desirably these might involve less analysis, anathema to many cultures, and more holistic, multi-faceted hands-on delivery of music understandings to students.

I have already referred to the need for attention to the ways people may have of socialising and behaving in non-individualist collectivist societies. Identifying or focussing attention on individuals here may be very inappropriate and result in passive or even active resistance. Protocols attached to aspects of music and its relation to living in general may have great consequence. Ways around this may be in the study of music alien to all class members or of both- or 'many-' ways sharing of cultural learning to promote all points of view.

At the end of the day there may be no definitive means of making music education

perfectly inclusive. Effective teachers will always assess each situation as it arises, considering sympathetically and empathically the needs and rights of all students to a fair deal in every music education setting.

In summary the thesis of this presentation has been that music education can only be genuinely inclusive when music learning is equitably 'both-ways'. I contend that notions of inclusivity in music education depend on who we are, from whence culturally, socially and otherwise we are coming, and on the context of the settings within which we operate. In fact inclusivity must equate with assimilation when the process is only one-way otherwise, by this thesis, 'inclusivity' could imply the opposite, 'assimilation', and 'inclusivity' may in reality become its own antithesis, 'exclusivity'.

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Round Table Papers

The Effects of Lip-Slur Practice on Increasing Pitch Range in BrassWind Instrument Students

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Introduction

The study investigated a view commonly held by brasswind instrumentalists in which practising lip-slurs is a method of increasing the range of one's high register. This study concerned itself exclusively with the physical aspects of brasswind playing which enable musicians to play with musicality style and taste. While musicality, style and taste are important goals, this study confined itself to the measurement of physical factors.

Background to the study

Many trumpet and trombone parts, in both the orchestral and jazz idioms require players to play in the extreme high register above the eighth harmonic to as high as the sixteenth or twentieth harmonic, and in rare cases, higher. This requirement has its origins in the clarino trumpet, soprano trombone and alto trombone playing of the Baroque period and continues for all brass instruments to the present day. This presenter has observed that many professional and proficient amateur brass players use lip-slurs as one means of securing the high register.

There are other techniques for increasing range in the high register, such as long setting and playing increasingly higher scales and arpeggios. Many players use a mixture of all methods. Savits (Muscle Training Techniques applicable to methods incorporating myological principles in elementary brass embouchure training curricula, 1982. pp. 22-24) interviewed several hundred professional brass players and five hundred advanced college and high school students in the USA to find out what methods they used to develop range and endurance. The most commonly used method books utilised the myological principles of isotonic and isometric exercises, and interval training.

Many professional brass players include muscle development techniques in their practice routines, using methods developed by Maggio, Shuebruk, Gordon, Caruso and others. In their definitive works on brass playing, both Edward Kleinhammer (The Art of Trombone

Playing, 1964) and Philip Farkas (The Art of Brass Playing and The Art of Horn Playing, 1962) paid considerable attention to the physical aspects of brass playing and in particular, the facial musculature involved.

The desire to improve the playing skills of students has been helped by the use of sporting metaphors and analogies in this presenter's own teaching practice. These analogies are used to explain various physical factors of brass playing such as skills acquisition, strength and endurance. From this, it was a short step to asking whether the ideas were not only analogous, but could also be adapted for better rehearsal techniques.

The researcher's original intention was to adapt a Myological study from the human movement field to a brasswind practice purpose, and then replicate the study as a brasswind practice routine. However, Myer Savits (1982) had already studied embouchure development using myological principles, establishing a link with the myological principles used in the study of human movement. Savits described commonly used embouchure building practice routines as either Isometric or Isotonic exercises. Isometric exercises included exercises such as playing long notes, particularly in the high register, and *long-setting* playing a series of short, high notes. lip-slurring was described as an Isotonic exercise. While Savits mentioned *isotonic* exercises, his study concentrated on *isometric* exercises, and the results refer mainly to *isometric* exercises.

Purpose of the Study

The purpose of the study was to examine the effect that a graded series of lip slurs had on the acquisition of the upper pitch range by brasswind students. It was predicted that practising lip-slurs would enhance the acquisition of high notes. From the data collected during the study it was inferred that under similar conditions, using a practice program of graded lip-slurs as a supplement to their regular instruction program, other students would be able increase their high register and make their high register more secure. The lip-slur program was not intended to replace the normal teaching program, but to be a supplement to that program. It was intended that that the results of the study will enable teachers to confidently design courses in brasswind study aimed at increasing pitch range.

Research Questions

Major Questions

Will a series of graded lip-slurs, when included in a normal brass teaching curriculum, enable students to more easily acquire a higher range compared to students who do not have a series of graded lip-slurs in their curriculum?

Do lip-slurs play an important role in the acquisition of the high register by brasswind players?

Subsidiary Questions

In what way/s can lip-slurs be employed in designing effective practice routines?

Using evidence collected from the Student Profile questionnaire, in what ways do Family Background factors influence practice routines?

Using evidence collected from the Student Profile questionnaire, what effects do Family Background factors play in student achievement?

The Null Hypothesis

That a series of graded lip-slurs when used as a supplement to a standard brasswind teaching curriculum will have no observable effect on the acquisition of higher range compared to students who do not have a graded series of lip-slurs as a supplement to the teaching curriculum.

Historical Context

Brass instruments of various kinds such as the Greek salpinx, Roman buisine, buccina and lituus, and the Jewish shofar have existed since Biblical times. Similar instruments are still found in many Asian cultures (Apel, 1970, p. 109). Like modern bugles and cavalry trumpets, they did not have valves, relying only on the naturally occurring harmonics of the instrument to produce notes of varying pitch. These instruments were used primarily for ceremonial and military signalling purposes in much the same way as bugles and cavalry trumpets are used today. The method of playing valveless instruments can reasonably be assumed to have stayed much the same throughout history.

Edward Tarr (1977/88, p. 95) described the apprenticeship and examination of prospective trumpet players during the Baroque era. Apprenticed trumpet players had to be able to play certain military signals and show some knowledge of clarino playing. *As today, he first learned to play in the low register, gradually ascending higher and higher.*

John Hyde was the pre-eminent slide trumpet player of Britain in the 1700s. In 1798 he wrote a method book entitled Complete Preceptor for the Trumpet and Bugle Horn. On the subject of embouchure Hyde advised (cited in McCann, 1989, p. 38): *draw your lips tight over the teeth; then put your tongue between your lips and place the mouthpiece firm on the centre of your mouth, a little more on the upper lip than the lower one.* With the exception of placing the tongue between the lips this is remarkably similar to the modern method of setting the embouchure. On the subject of playing higher notes Hyde advised "contract your ambesure [sic], press your instrument harder on your lips, and strike your tongue."

McCann (1989, pp. 38- 40) wrote that the method advised by Hyde was repeated by other authors such as J. Pashen (1825), T. Bull (1835), B.A. Burdett (1850), John Distin (1851), Alfred Sedgwick (1873 & 1876) and Winner (1877). These were in line with the practice favoured in the nineteenth and early twentieth century, and advocated by Arban (1859/1907), of increasing mouthpiece pressure to play high notes. Although mouthpiece pressure was advocated, Hyde still recommended contracting the embouchure as Arban later did in 1859, implying that the muscles of the embouchure should be involved.

Arban and others indicated that the range of the cornet or trumpet was two and a half octaves from written f sharp to written ciii. But performance practice in both the Baroque era and the Twentieth Century requires trumpeters to play in extreme high registers, unlike

during the late eighteenth and nineteenth centuries, when the art of clarino playing was apparently lost.

Edward Tarr (1977/1988) argued that Baroque trumpeters must have used techniques similar to modern trumpeters when he stated that:

> In the Baroque period, when trumpeters had to play melodies in the fourth octave of the harmonic series, they corrected the impure partials by a change in the lip tension. Modern day trumpeters employ the same technique, called *lipping*, in order to correct occasional deviations in pitch; deviations, however, which are much smaller than those encountered by the Baroque trumpet. We can therefore say that the trumpeters of the Baroque era needed more lip strength in order to play their instrument in tune. (p.14)

In making that statement, Tarr was comparing the demands made by contemporary jazz and symphonic writing upon modern trumpet players with the demands clarino playing made upon Baroque players. In doing so, Tarr postulated that because the players from both eras faced similar problems, then the solutions to those problems must also be similar. Physical inspection of a Baroque trumpet mouthpiece reveals a very sharp, narrow rim, which if used with the pressure method, would cut painfully into the lips. The only reasonable technique would have to have been to use limited mouthpiece pressure, which is the desired practice today.

In a discussion on lipping out of tune partials into tune, Tarr (p.89) argues that lipping requires light mouthpiece pressure and that this is the method used by all professional players today. He goes on to say that modern trumpet methods emphasise light mouthpiece pressure and correct breathing. Tarr argues that modern and Baroque embouchures have much in common. In discussing lipping downwards, Tarr argues that the player needs a slightly puckered embouchure with as much upper lip as possible in the mouthpiece.

In his discussion of modern trumpet technique, Tarr (p.195) pointed out that orchestral trumpet playing has been influenced by jazz, and that modern players have learned to play in the register ciii to ciiii and sometimes higher. Tarr claims that this is accomplished not by the nineteenth century *smile* embouchure advocated by Arban, Hyde and others, but by "pushing the stiffened corners forward a bit, although allowing the lip muscles themselves to relax as far as possible." This is the *puckered* embouchure recommended by modern authors such as Farkas (1962/1965), Claude Gordon (1975/1977) and others (Savits, 1979, p. 88).

Arban and other authors in the nineteenth century advocated varying pitch by varying the mouthpiece pressure using the left arm as a regulator (Arban, 1859/1907, p.5). Those same authors also claimed that the range of the cornet (or any other brass instrument as indicated by the titles of the many *preceptors* cited by McCann) was only two and a half octaves. It is possible to argue that as extreme range was commonly used in both the Baroque era and in the twentieth century using the *puckered* embouchure and light mouthpiece pressure,

then the restricting factors in the nineteenth century were the *smile* embouchure and the use of excessive mouthpiece pressure.

The change in ideas from the nineteenth century methods to modern methods began during the late eighteen hundreds. By 1886 authors such as E. Bourke, in his ABC Instructor (cited in McCann, 1989, p. 40) had begun to advocate using breath pressure and lip tension in combination to produce differing pitches. McCann quotes Bourke as saying

> By gentle compression of the lips and, blowing softly, the lower notes are produced; and by pressing with more firmness, contracting the lips more and blowing harder, the high notes will be produced. The aperture between the lips is larger for lower notes. (p. 40)

It is interesting to note that although variations in mouthpiece pressure were still recommended, the concepts of air pressure and lip control were advised, as well as possibly the first use of the term aperture and its relationship to pitch.

Authors Pietsch, Hofman and Koslek in the late eighteen hundreds and early nineteen hundreds emphasised stretching the lips, attention to breathing and lip-slurs and trills (McCann, 1989, p. 57). Their technique for slurs was to change the vowel shape of the mouth in a way that arched the tongue to ascend and lower it to descend. This is a very modern concept, widely accepted, and advocated by Schlossberg who was the teacher of many first chair American trumpeters and is still a widely influential figure, even after his death, through his book Daily drills and technical studies for the trumpet (1959). That Schlossberg was a pupil of Kosslek, a Russian Jew who migrated to USA in the late eighteen hundreds, and that Schlossbergís work is still influential, is an extant example of the passing down from one generation to the next the skills and techniques of brass playing. Those skills were passed down both within and across cultures. Lip-slurs and trills are part of that tradition indicating that lip slurring and trilling have probably been passed down through many generations of brass players. Given that modern brass players face some of the same performance problems as ancient players, then lip-slurring may have been one of the techniques passed down from very old origins indeed.

During the nineteen twenties various new methods began to appear, particularly in the USA, which advocated non-pressure methods, correct muscle control and buzzing of the lips. McCann (1989, p.57) cites H.A. Vander Cook in his Modern Method of Cornet Playing (Chicago, 1922) as advocating the correct system of muscular contraction, controlled buzzing of the lips in all registers, particularly without a mouthpiece, and tongue arching techniques to aid in lip-slurring. McCann (p. 57) also cited O. A. Peterson (The Cornet, 1924) advocating playing without mouthpiece pressure: *Try to push the lips away from the teeth a little. This will produce the right effect. Long tones, lip-slurs, consistent practice and frequent rest are all recommended.* Vander Cook and Peterson in the nineteen twenties advocated ideas which in the late twentieth century are virtually universally accepted. Specifically, the modern ideas were the use of non-pressure, achieved by muscle control and the use of lip-slurs and frequent rests to achieve that. Modern writers such as Philip Farkas (1962/1965), Claude Gordon (1965/1975), Carmine Caruso (1979) and others have expressed those ideas in their various methods and treatises.

Anecdotal Evidence versus Research

This presenter conducted an extensive search over a period of three years for both dissertations on brass player's embouchures and journal articles about brass player's embouchures. To date this researcher has found only one dissertation, by Myer F. Savits, (1982), which discussed the use of lip-slurs as a means of strengthening the brass player's embouchure, and one dissertation, by Roger Dane (1983), which investigated embouchure and breathing in relation to sound production on the trumpet. Savits' dissertation was an unpublished doctoral thesis titled: Muscle training techniques applicable to methods incorporating myological principles in elementary brass embouchure training curricula. Savits investigated the use of a variety of muscle strengthening exercises to develop the brass wind embouchure as a means of increasing range, endurance and improving tonal quality. He argued that performance on brass wind instruments is a muscular activity and that endurance, range and certain aspects of tonal quality are dependent upon the development and coordination of Obicularis Oris and its associated musculature. Savits concluded that embouchure strength could be increased by exercises utilising the overload principle. Those exercises may be *musical* such as long tones and lip-slurs, or *clinical*, such as statics, lip-buzzing and pedal tones. Savits based his study on a questionnaire asking many hundreds of leading New York brass players which books or methods they used to strengthen their embouchures, and then using that data to analyse the exercises according to myological principles.

Dane's dissertation was an unpublished doctoral thesis titled Theories on embouchure and breathing: an analytical investigation into the functions for sound production on the trumpet. Dane concentrated his study on the use of air and mouthpiece placement, but in doing so acknowledged the role of embouchure strength and muscular considerations.

In his chapter on embouchure, Dane (pp. 34-44) described the function of the lips and facial muscles when forming an embouchure. He described smiling lips as fuller while stretched lips were thinner. He observed that most methods designed for power, extreme range and endurance favour the puckered embouchure in preference to the smile embouchure. Dane maintained that the smile embouchure had gone out of favour during the 1920s or thereabouts.

By contrast there is a large number of journals containing articles written by a wide range of authors which mention using lip-slurs as a means to strengthen the embouchure. Many of the articles have been written by eminent authors such as Claude Gordon, Carmine Caruso, Philip Farkas, John Swallow and others. Many other articles are interviews with the above authors or prominent players. A representative sample of such journals would include The Instrumentalist, Brass Bulletin, ITA Journal, ITG Journal, Horn Call and TUBA Journal. From a research viewpoint these articles can be considered as anecdotal evidence. Although the articles contain views that are widely accepted, they are not supported by the rigours of research, rather, they represent the body of the oral tradition of brass playing.

Significantly, as previously discussed under the heading of historical context, the oral tradition (the currently accepted wisdom) is prone to shifts in what is accepted as best

practice. The long running arguments on pressure playing versus non pressure playing, and mouthpiece placement, which occupied much of nineteenth and twentieth century discourse are such examples.

Experimental Design

The design of the study was based on Reflective Eclecticism as postulated by George J. Posner in his book Analysing the Curriculum (1992). In that book Posner put forward the idea that to stay within one paradigm excludes all possibilities not included in that paradigm. A more useful approach is to make a considered decision to include ideas from many paradigms if it makes the development of a particular curriculum more relevant to the students' needs. In this study that idea was expanded to include applying the Reflective Eclecticism approach to research as well as to curriculum design. This study included, as part of its Reflective Eclecticism, ideas from the following sources: Structures of the Disciplines perspective, particularly Burner's Spiral Curriculum model and his view of treating the student as an acolyte in the discipline; Behaviourism; and the three domains from Bloom's Taxonomy of Educational Objectives (1956), namely: Bloom's Cognitive Domain (1956), Krathwohl's Affective Domain (1964); and Harrow's Psychomotor Domain (1972).

Reflective Eclecticism

Posner (1992, p. 3 and pp.258-263) postulated:

> Reflective eclecticism is based on the assumption that, much as we would like to deny it, there is no panacea in education. People who are looking for 'the answer' to our educational problems are looking in vain. Different situations require different practices. The curriculum *cultists* make a fundamental error in assuming that they have the answer to any problem, regardless of the particulars of the situation. What curriculum decision-makers need is an understanding of the myriad curriculum alternatives. But to avoid the trap of garbage-can eclecticism, they should understand the dilemmas that underlie each curriculum decision and be able to unpack the tacit assumptions behind each alternative. When they can do this, they will have gained the ability to assess critically the alternatives and the claims their proponents make.

This presenter's experience indicates that for a given situation most practical teachers select the most useful ideas from any paradigm. Although Posner talked about curriculum development, this study extended the concept of reflective eclecticism to research generally.

Normally, experimental design will attempt to isolate the independent variable from all other variables to ensure that the measurement of the dependent variable is solely attributable to the independent variable. Subjects used in this experiment were drawn from Education Department of Western Australia classes, operating within the range of influences that impinge upon all secondary school students. It was neither practical nor desirable to isolate the subjects from contact with their surroundings. Therefore this study

did not attempt to isolate the independent variable from all other variables. Instead an attempt was made to identify the variables, particularly family background factors, which may have influenced the subjects performance during the experimental phase, and measure the effect they had. Within this study, the collection of data from a number of sources as part of the design of the study demonstrates the eclectic concept.

The Study

The study was designed with two components, the first an experiment using a Control Group and an Experimental Group, and the second, analyses of a questionnaire and student Practice Journals. The experimental component was used to examine the effect of the lip-slurring program. The questionnaire and Practice Journals were used to determine the effect, if any, that variables external to the treatment had on the results of the experiment. All of the collected data were expressed in the form of numbers in an interval scale, ordinal scale or nominal scale as appropriate and entered into a data matrix, which was then used to calculate statistics for the necessary comparisons. In order to avoid researcher bias, two highly qualified and competent teachers employed by the Education Department of Western Australia performed the teaching phase of the experiment.

The Experimental Component

The experimental phase used the Pre-test and Post-test Comparison design. Subjects were chosen for the Control Group and the Experimental group using the Matched Subjects design to control variables caused by individual performance experience, instrument played, school attended and by which teacher they were taught.

The experimental phase of the study was conducted in three stages. The first stage was a pre-test to determine the students' abilities at the beginning of the experiment, the second stage was the teaching program and the third stage was the post-test to determine the students' abilities at the conclusion of the experiment. Progress was calculated by subtracting pre-test from post-test, resulting in a gain score for each student.

The pre-test and post-test were administered to students in both the Control Group and the Experimental Group, and gain scores were calculated for the students in both groups.

Each of the teachers taught their normal teaching curriculum to the students in each of their groups. The lip-slur program was added only to the curriculum of those students in each teacher's Experimental Group. Although the two teachers had their own personalised teaching methods, the teaching of the lip-slur program was the same for each teacher's Group. In this way, the effect of the lip-slurs was measured, not the effectiveness of the teacher's individual teaching styles.

The Student Questionnaire

It was not possible to isolate the subjects from all other variables that may have influenced the results. Instead, as many variables as possible were identified and an attempt made to account for those. This was accomplished in the form of a Student Questionnaire designed to assess the families' cultural capital and attitudes to music. The subjects were asked to

respond to thirty-two questions which were then grouped into eleven categories. Those categories were; Cultural Capital, Family Attitude to Music, Family Attitude to the Students' Instrument, Family Attitude to Home Practice, three reasons why the family does not like home practice, how many family members play a musical instrument, the student's self rating of how much they enjoy listening to music, and whether a brass instrument was the students' first, second or third choice. The results of the questionnaires were entered into the data matrix for analysis.

Student Practice Journals

The amount of practice done by each student was identified as a variable that might have influenced the results of the experiment. Practice Journals were used to collect this information. The practice records contained in the Practice Journal of each student were used to calculate the weekly average number of minutes of practice for each student. This number was entered into the data matrix and used to determine associations with questionnaire categories and with experiment data.

Ensuring that each student did exactly the same amount of practice per week would have been an impossible task. Moreover, it would have been undesirable to restrict the more motivated students to a minimum amount of practice. It was more desirable to monitor the amount of practice done by each, determine whether or not practice was a significant variable, and then interpret the results of the experiment accordingly.

Data

The collected data for each student included the Pretest result, the Post-test result, Gain, High/Low Pretest, High/Low Gain, the average number of minutes of practice per week and the results of the Questionnaire. The results were entered into a data matrix, by group, for analysis using SPSS.

Analysis techniques included: Bivariate Correlations with two-tailed T-tests at 0.05 significance; Means and Standard Deviations; Cross-tabulations and Pearson's Chi-Squared at 0.05 significance level.

Results

The results indicated three features:
A Ceiling Effect limited gain for high performers.
Students who practiced more were higher performers but had the least gain scores, reinforcing the concept of a ceiling effect and eliminating practice as a variable effecting the measurement of gain caused by the treatment.
Initial low performers benefited most from the lip slur routine.

Analysis of the questionnaire confirmed that:
In terms of family cultural capital and family attitudes, the groups were evenly matched.
Socio-economic circumstance was not an influencing factor.
Family background factors did not influence the experiment.

Family background factors influenced the amount of practice done by the students, but as practice times did not directly influence the effectiveness of the lip-slur routine, this did not influence the experimental results.

Conclusions

The results of this study lead to the conclusion that lip-slurs do play an important role in the acquisition of the high register by brasswind students. The degree of importance is dependent on various factors. From this study, it appeared that a major factor is the ceiling effect. This knowledge can be used in two ways.

First, it appears that low achieving students can gain rapid initial benefit from the inclusion of lip-slurs. Therefore it would be an effective way of solving a range problem for an inexperienced student when for example, there is a range difficulty in a band part. In this context, lip slurs could be used as a *quick fix* in a band or performance situation. The result would be entirely dependent on how close the student was to his/her individual ceiling at that time.

Secondly, if it is true that the ceiling effect includes the possibility that high achievers benefit over a longer period of time, then lip-slurs could be used as part of a longer-term strategy for developing the high register.

The two teachers who conducted the experimental phase of the study reported that according to their observations, the better players did not increase range by much, but that their sound opened up and flexibility became much improved.

The students who received the lip-slur practice routine also tended to practice more. This might be a consequence of the Affective Domain. One of the implications of Krathwohl's Five Levels of the Affective Domain is that when a person recognises a benefit from a practice, then that becomes internalised as a value, leading to a desire to do that practice. It could be that one of the effects of the lip-slur treatment was to motivate the Experimental Group to do more practice than they would otherwise have done.

Keeping the above comments in mind, lipslurs would be useful as part of a balanced practice routine that would also include isometric exercises such as long notes and long-setting. As part of a long-term strategy, this would help develop the physical strength needed to play in the high register, the flexibility needed to execute arpeggiated passages or passages containing large intervals, and the endurance needed by brass players.

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An Investigation into the Nature and Benefits of Specialist Pre-Tertiary Music Education

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Abstract

Research directed towards the study of the development of musical ability has mainly taken the form of empirical studies, case studies, and philosophical analyses. While numerous case studies have been undertaken in recent years, many of these have taken either taken place in retrospect (Bloom, 1982; Macrae, 1989) or have only occurred over a short span of time (Howe and Sloboda, 1991a,b). Much of the literature lacks the type of descriptive evidence needed to provide accurate and detailed accounts of young performers' lives over lengthy periods of time. This paper presents the initial findings of a three-year longitudinal study investigating the development of secondary-level students enrolled at the Queensland Conservatorium of Music's junior music programme. The intention of this paper is to report preliminary findings which relate to students' levels of musical skills, listening habits, progress, and in particular, their ability to integrate their learning experiences with their musical studies and involvement outside the programme. Outcomes at this stage in the research indicate that the majority of students are able to successfully link their learning in a variety of situations and apply aural and theoretical skills to the practical context.

Pre-tertiary Programmes

Numerous pre-tertiary music programmes which aim to provide for the education of exceptionally musical children exist, both overseas and within Australia. One of the main goals of such programmes is to extend students and enable them to increase their musical skills by providing training and opportunities within a specialized environment which values creative music-making, shared learning experiences and social interaction amongst students of similar musical abilities and interests.

The Queensland Conservatorium of Music's pre-tertiary programme for school students has undergone significant expansion in recent years. Currently students participate in a comprehensive programme which comprises a balance of practical, aural and theoretical training. All secondary students involved in the study (N=82), in addition to their practical lesson and group activities, attend one Musicianship class each week which involves a variety of activities, including listening, theory, and compositional activities. These classes are arranged in eight levels (Primary to Secondary); however, as the students involved in this study are secondary-school aged (12-18), the minimum Musicianship level being undertaken is Level 4 and the maximum, Level 8.

Methodology

The participants involved in this research include students, teachers and parents who are currently involved in the 'Young Conservatorium' programme. The purpose of this study is to measure the extent of student learning, progress and achievement occurring

within this specialised music environment and identify the extent to which certain factors influence these outcomes.

The two main aspects of the research being addressed at this stage of the study relate to firstly, the extent to which secondary students integrate their learning within the programme and relate it to their other musical experiences; and secondly, the relationship between these students' personal and musical backgrounds on their initial and continuing engagement in the programme and the extent to which these factors influence successful learning outcomes.

The extent to which students are able to integrate their musical experiences and learning has been measured through using students' weekly comments and responses taken from reflective journal entries. The data being used to identify the relationship between students' backgrounds and their engagement and achievement in the programme, while also being drawn from these reflective journals, has also arisen from general questionnaire information, students' self-perceptions of their musical ability, and students' results from an aural test. Much of this data has been analysed using SPSS.

The information below firstly serves to provide a general profile of the students involved in the programme; and secondly, presents initial findings which relate to these students' perceptions of their musical skills and progress, their listening habits and, most importantly, ability to relate what they learn in the programme to their outside musical studies and experiences.

Preliminary Findings

Who is participating in this study?

Student enrolments in the programme represent a wide range of backgrounds and musical abilities. A summary of the total student population according to age, gender and nationality (Figs. 1a,b,c) indicates that over half of these (64.4%) of these are 15 and 16-year olds, and that almost two thirds (61.8%) of the total enrolments are female. Although the programme does not discriminate according to nationality, survey results indicate that the majority of students in the study (84%) are Australian. Of the fourteen types of practical study currently being undertaken (Fig. 2), the highest enrolments (14 students) are on the violin. Students are streamed in musicianship levels, according to their aural and notational skills and the majority of them (63.5%) are attending advanced classes (levels 7 and 8) (Fig. 3).

Fig. 1a Distribution of Population by Age

AGE	Count	%
12	4	5.3%
13	10	13.2%
14	5	6.6%
15	21	27.6%
16	28	36.8%
17	8	10.5%
Total	76	100.0%

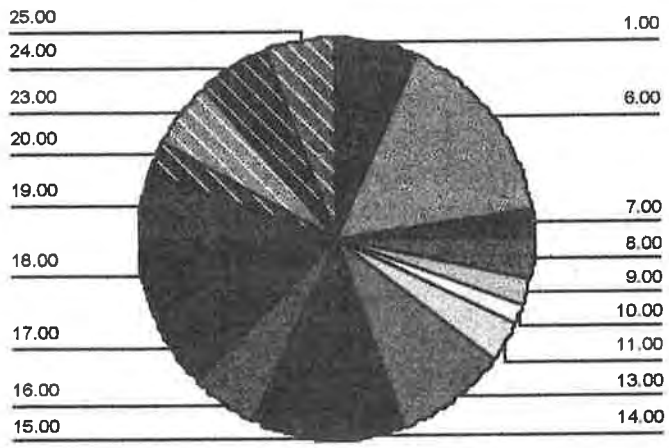
Fig. 1b Distribution of Population by Gender

GENDER	Count	%
Male	29	38.2%
Female	47	61.8%
Total	76	100.0%

Fig. 1c Distribution of Population by Nationality

NATIONALITY	Count	%
Australian	63	84.0%
European	4	5.3%
Asian	7	9.3%
Other	1	1.3%
Total	75	100.0%

Fig. 2 Practical Study



1. Piano	**6. Violin**	**11. Classical Guitar**	**16. Saxophone**	**21. Euphonium**
2. Accordion	**7. Viola**	**12. Recorder**	**17. Horn**	**22. (Other)**
3. Organ	**8. Cello**	**13. Flute**	**18. Trumpet**	**23. Percussion**
4. Elec. Organ	**9. Double Bass**	**14. Oboe**	**19. Trombone**	**24. Bassoon**
5. Harpsichord	**10. Harp**	**15. Clarinet**	**20. Tuba**	**25. Composition**

Fig. 3 Musicianship Levels

MUSICIANSHIP LEVEL	Count	%
4	7	9.2%
5	7	9.2%
6	13	17.1%
7	25	32.9%
8	24	31.6%
Total	76	100.0%

What is the scholastic background and ability of these students?

Students in the programme currently attend 63 different schools (private : N=36; state : N=27). The majority of students enrolled in the programme are currently completing senior school studies (Years 11 and 12) (Fig. 4). A grade point average (1-5, where 5=very high achievement) for each school year has been calculated by combining each student's average mark for that year (Fig. 5) and indicates that most students' overall scholastic achievement (based on 1997 semester 2 results) is quite high.

Fig. 4 Distribution by Scholastic Year

1998 Scholastic Year	Count	%
9	8	15.4%
10	4	7.7%
11	19	36.5%
12	21	40.4%
Total	52	100.0%

Fig. 5 Scholastic Average for Students in each Scholastic Year

Scholastic Year 1997	GPA
8	4.25
9	4.17
10	4.12
11	3.96

What are the musical skills of these students?

Data arising from students' responses to a questionnaire indicates at this stage a general consistency (up to an increase of 0.3 of a band) in students' perceptions of their practical (instrumental/vocal), notational (composition, reading skills) and aural (music dictation) abilities (Fig. 6). The questionnaire was administered as a pre-test (1) and post-test (2) over a semester of instruction and required students to rank themselves on a scale of 1-7 (very low - very high).

Fig. 6 Student perceptions of Music Ability

	Survey #	N	Minimum (Self-Rating)	Maximum (Self-rating)	Mean	Std. Deviation
Instrumental	1	69	2	7	5.42	.98
Ability	2	69	3	7	5.43	.90
Vocal	1	69	2	6	4.07	1.29
Ability	2	68	2	7	4.19	1.01
Music-Reading	1	68	3	7	5.57	1.01
Ability	2	69	4	7	5.72	.97
Composing	1	69	1	7	4.20	1.26
Ability	2	69	1	7	4.58	1.30
Music-Dictation	1	69	2	7	4.51	1.17
Ability	2	69	2	7	4.52	1.31

What are the music listening preferences and abilities of these students?

Students indicated their preferred styles of music in a survey and were requested to indicate their level of understanding of these musical styles on two occasions during the semester.

Results from the survey question regarding students' preferred music listening styles (Figs. 7a,b) indicate that 71.2% of students ranked popular music as their highest preference, compared with only 23.6% of students who expressed their main preference as 'classical' (the term in this context refers to mainstream Western styles; specifically Baroque, Classic, Romantic). No students listen to ethnic music as their main preference. Interestingly, a comparison of these listening preference results with students' perceptions of their ability to listen to the same musical styles with understanding, indicates that students generally have a better understanding of classical music than popular music (Fig. 8a). Whilst the range of student understanding ratings did not vary from pre-test to post-test (with the interesting exception regarding classical music - minimum (pre-test) : 3; minimum (post-test) : 1), students' ranking averages in fact reflected a slight increase for each musical style (up to 0.15).

Figs. 8b and 8c present this data separately for Year 8-10 and Year 11-12 students respectively. An analysis of this indicates that, on average, younger students believe that their understanding has increased most in the area of popular music (increase in mean of 0.72), whereas the greatest degree of positive change in the perceptions of older students has related to their understanding of classical music (increase in mean of 0.5).

Fig 7a. Music Listening Preferences - Popular Music Ranking

Preference	Popular Music	
	Count	%
1.00	52	71.2%
2.00	14	19.2%
3.00	4	5.5%
Other	3	4.1%
Total	73	100.0%

Fig 7b. Music Listening Preferences - Classical Music Ranking

Preference	Classical Music	
	Count	%
1.00	17	23.6%
2.00	34	47.2%
3.00	11	15.3%
Other	10	13.9%
Total	72	100.0%

Fig. 8a Understanding of Musical Styles (Degree of Change: pre-test / post-test)

	Survey #	N	Minimum (Student Perception)	Maximum (Student Perception)	Mean	Std. Deviation
Popular Music	1	69	1	7	4.87	1.44
	2	69	1	7	5.01	1.30
Classical Music	1	69	3	7	5.19	1.14
	2	69	1	7	5.32	1.21
Ethnic Music	1	69	1	7	3.77	1.13
	2	69	1	7	3.80	1.48

Fig. 8b Understanding of Musical Styles (Years 8-10)
(Degree of Change: pre-test / post-test)

	Survey #	N	Minimum	Maximum	Mean	Std. Deviation
Popular Music	1	12	2	6	4.50	1.31
	2	9	4	7	5.22	.97
Classical Music	1	12	3	6	4.75	.97
	2	9	3	6	5.00	1.12
Ethnic Music	1	12	2	6	3.58	1.31
	2	9	2	6	4.00	1.41

Fig. 8c Understanding of Musical Styles (Years 11-12)
(Degree of Change: pre-test / post-test)

	Survey #	N	Minimum	Maximum	Mean	Std. Deviation
Popular Music	1	33	1	6	4.73	1.33
	2	34	1	7	4.74	1.50
Classical Music	1	33	3	7	5.21	1.08
	2	34	3	7	5.71	1.00
Ethnic Music	1	33	2	6	4.00	.90
	2	34	1	7	3.88	1.45

How accurately do students rate their progress?
Students' levels of progress were measured using data from attitude questionnaires, reflective journals, and an aural perception test.

Prior to testing, students were asked to rank themselves to reflect what they believed to be their progress in musicianship over the first term (Fig. 9). (It should be reinforced at this point that as this form of ranking was based on progress rather than achievement, the possibility exists for a more advanced or older student to rank themselves lower than a younger student with less experience or ability). Each student was also assigned a grade (1 - 10) to reflect the quality of their reflective thinking, as measured though comments and remarks made throughout the journal. A comparison of these ratings for the total number of students (Figs. 10a,b) has shown a very low correlation. An explanation of this outcome might take into account several factors, including some students' unfamiliarity with a specialist music learning environment (and what they might regard as student standards and teacher expectations), their perception of their own ability, their inaccuracy to rate themselves accurately against their peers, as well as their initial standard and measurement of what they consider constitutes acceptable progress.

Fig 9. Term 1 Progress (Self-Perception)
(As indicated through comments made in Reflective Journal)

	SELF-PERCEPTION	
	Count	%
2.00	1	1.4%
3.00	33	44.6%
4.00	27	36.5%
5.00	13	17.6%
Total	74	100.0%

Fig. 10a No. of Students per Reflective Journal rating (grouped by Self-Perception ranking)

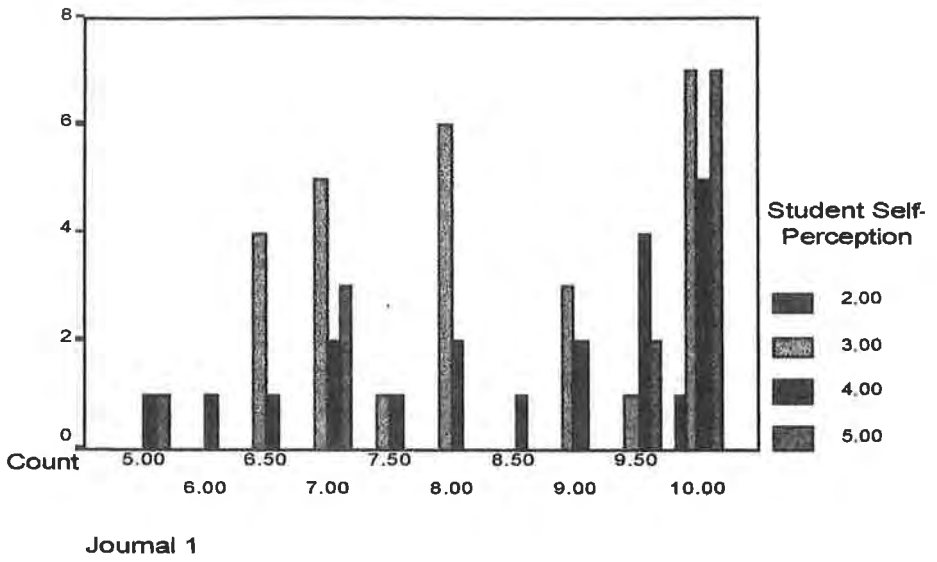


Fig. 10b Correlation between Self-Perception and Journal rating

	Self-Perception
Journal Rating	.017 (P = .410)

Students' perceptions (pre-test and post-test) of their music dictation ability (ranked as 1-7: very low - very high) (Fig. 11) revealed a downward trend (pre-test: 36.2% rated themselves average; 10.1% rated themselves below average, compared with post-test: 23.2% rated themselves average; 18.8% rated themselves below average), possibly indicating that many students had overestimated their abilities in this area at the beginning of the year or believed they had overrated their abilities earlier.

Fig. 11 Student Self-Perception of Music Dictation Skills

	Pre-Test		Post-Test	
	Count	%	Count	%
2.00	4	5.8%	4	5.8%
3.00	7	10.1%	13	18.8%
4.00	25	36.2%	16	23.2%
5.00	18	26.1%	19	27.5%
6.00	13	18.8%	13	18.8%
7.00	2	2.9%	4	5.8%
Total	69	100.0%	69	100.0%

A comparison between students' self-perception of their aural abilities (post-test) and their actual aural skills, as measured using the first-term aural test results (Figs. 12a,b), has found no correlation and seems to indicate that this test result did not significantly

influence students' overall perception of their abilities, and that many students tend to rate themselves quite low.

Fig. 12a No. of Students per Aural Skills Self-Perception ranking (grouped by Music Dictation Self-Perception ranking)

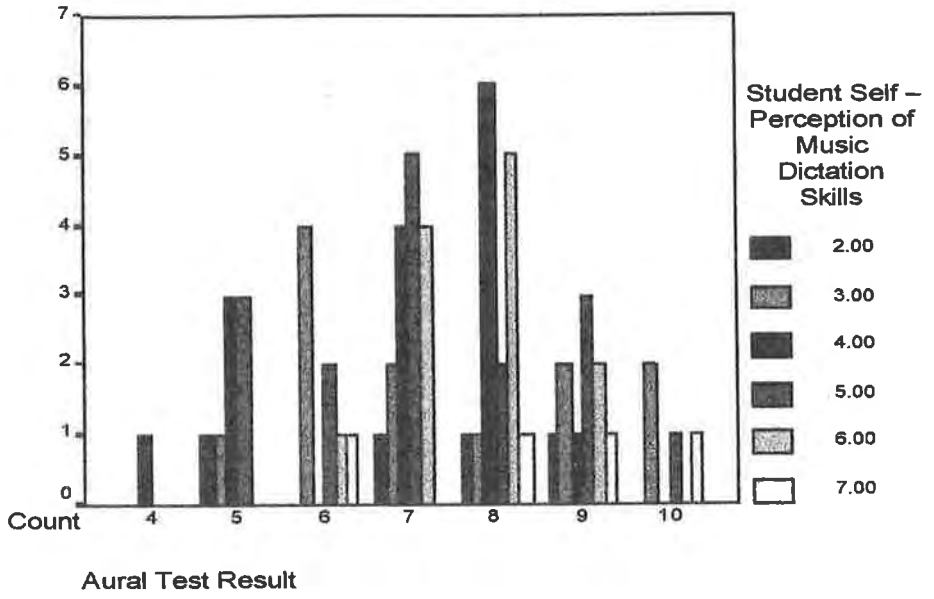


Fig. 12b Correlation between Aural skills and Music Dictation Self-Perception ratings

	Aural Result
Music Dictation Perception	.133 (P= .297)

How effectively do students integrate their learning in the programme with their other musical experiences?

Students' levels of integration were measured using data from questionnaires and reflective journals.

The majority of students in the programme are studying music as a school subject and pursue a wide range of music activities, both in and out of school. At the commencement of the year each student was requested to provide details of past and present musical involvement, including participation in ensembles (vocal or instrumental), Eisteddfods and competitions, and music camps and tours. Each student was ranked on a scale of 1-5 (very low - very high). It is significant that the majority of students, regardless of gender, are highly involved in musical activities and received

almost identical rankings (mean: 4.4 - males; mean: 4.3 - females) (Figs. 13a,b). In order to ascertain the extent to which students relate their learning within the programme to

their other music learning experiences, those currently taking music as a subject at school were asked twice during the semester to rate (on a scale 1-7: very low - very high) the extent to which they firstly considered what they were learning in musicianship to be relevant to their general music training; secondly, perceived it as similar to their school music studies; thirdly, believed it assisted them with their school music; and fourthly, considered that school music assisted them with their learning in the programme.

Fig. 13a Perception of Male Students of Integration between School Studies and Young Conservatorium Studies

	Survey #	N	Minimum	Maximum	Mean	Std. Deviation
Age		29	12	17	14.83	1.54
School Music		29	1	2	1.21	.41
Music Involvement		16	3	5	4.41	.74
General Relevance	1	24	3	7	5.04	1.08
	2	19	4	7	5.37	1.07
Similarity	1	17	1	6	4.41	1.37
	2	14	2	7	5.29	1.44
YC Assists School Music	1	17	1	7	5.06	1.34
	2	14	3	7	5.43	1.09
School Music Assists YC	1	17	1	7	4.59	1.54
	2	14	3	7	5.29	1.38

Fig. 13b Perception of Female Students of Integration between School Studies and Young Conservatorium Studies

	Survey #	N	Minimum	Maximum	Mean	Std. Deviation
Age		47	12	17	15.26	1.24
School Music		47	1	2	1.08	.28
Music Involvement		36	3	5	4.33	.59
General Relevance	1	31	3	7	5.16	1.10
	2	35	3	7	5.40	1.24
Similarity	1	26	1	7	4.81	1.72
	2	30	3	7	4.83	1.12
YC Assists School Music	1	26	2	7	5.04	1.59
	2	30	3	7	5.10	1.16
School Music Assists YC	1	26	2	7	4.31	1.62
	2	30	2	7	4.50	1.57

It is significant that students' responses to each of these questions resulted in an increase in each of the means. Interestingly, the responses of male students showed a slightly

higher degree of change (for instance, 'similarity' - increase in mean of 1.8; and 'school music assists Young Conservatorium studies' - increase in mean of 0.6) (Figs. 13a,b). Effect sizes for some changes were more than half a standard deviation.

Students' reflective journals have been a particularly valuable source of qualitative data for this aspect of the study and serve to provide a greater insight into students' engagement in the musicianship component of the programme. From week to week, the journals allowed more advanced (and usually older) students (Levels 6 to 8) the choice of either recording their thoughts and comments freely or responding to specific questions which related to what occurred during the musicianship class that day. Less advanced (and usually younger) students were asked to respond to specific questions only.

Students' responses to four specific questions were selected for analysis in this study, three of which were asked several times during the course of the first term. All quotations have been taken from students' reflective journals. To protect anonymity, only age and gender details have been included (M and F refer to male and female respectively).

Question 1

How well do you think this relates to your general musical understanding and training?

In attempting to ascertain the degree to which students perceived their studies as relevant to their general musical learning, it was found that regardless of age, students were able to able to link their learning experiences within the 'Young Conservatorium' programme with their other musical learning, both in and out of school. Most were able to recognise benefits and to successfully relate what they learnt in the musicianship class to numerous practical activities (playing their instrument/ composing/ arranging/conducting), indicate that it was exposing them to different musical styles, as well as assisting them with their A.M.E.B. theory exams, music analysis and aural perception skills. While most students were able to identify a high degree of relevance, those students undertaking the advanced levels were able to relate and apply what they learnt to more specific skill areas than that of the lower level students, whose comments were often of a more general nature.

Common to all levels and ages were students' abilities to apply what they had learnt in the classroom to the practical context. While the comments of a few students were rather limited in their perspectives, many drew stronger parallels, while yet other students' comments revealed an awareness of what constitutes the 'full musician'. It is significant that the quality and maturity of response here did not depend on the age of students, as much as their musical ability. The following remark is representative of a large number of students who indicated their successful application of knowledge and skills to the practical activity of music-making.

> (17F) Researching the composer's life and analysing the form, melody, harmony, the texture, dynamics and phrasing, knowledge of these elements led to a thorough understanding of the work. With this, I find I'm more capable of injecting my own personal expression into say how I think a particular phrase should be played, dynamic level, intensity of accents and the overall mood which I think the composer is suggesting

Question 2

To what extent are you able to relate and apply what you have learnt in these units to your school music studies?

Student feedback here indicated clear linkages being made between their learning in the programme and their school music studies. Many comments indicated its value in terms of assistance, both as a preparation and form of reinforcement. A stronger sense of integration was much more evident in the comments of students at higher rather than lower levels, an explanation for the latter being due to the fact that many students undertaking music in Years 8 to 10 commented that music at school was of a more elementary level than that which was occurring in the Conservatorium musicianship classes. Those students at the higher levels did perceive a much stronger link, and consequently indicated that they were experiencing a high degree of benefit in terms of their training assisting them with their school music studies.

The drawing of parallels and perception of the integration of music learning experiences in relation to their music education at school was achieved most successfully by the more advanced students. Many students at this level had no difficulty in linking the knowledge learnt and skills gained in both instructional contexts. The following comments are representative of many similar responses.

> (17F) Not only does it help in practical exams, and written ones, it also helps a great deal in the school classroom situation. I found that after taking musicianship last year at the Young Con, my aural and written tests at school greatly improved. Musicianship also broadened my scope and knowledge of general musical concepts.

> (16F) I consider musicianship an important part of the Young Con, and any musical training. A good ear is the basis on which musical talent is developed so it is important that it is well-trained. I find that the musicianship we do greatly parallels school classroom music. Therefore, the two of them go hand in hand, and complement each other.

Question 3

How will what you learnt help you in the future?

Students' abilities to not only identify the long-term benefits of the skills and information they were acquiring, but also apply it to their future, was also mixed. Many students, regardless of their age, referred to future benefits in terms of their school music studies, practical study, and A.M.E.B theory exams. An interesting trend revealed lower level responses identifying mostly short-term or limited benefits; middle levels adopting a slightly broader perspective; and higher levels referring to much longer-term benefits, including intended music tertiary study, career paths, and professional ambitions.

Some students perceive the musicianship training they receive as an alternative to school music, while others - often having the specific intention of pursuing music at the tertiary level - view the programme as a supplement to their existing musical training. Several students' comments also indicated their recognition of the educational value of reinforcement in learning; firstly, in terms of additional skills practice; and secondly, the

integration with their school work. The following comment reflects many students' awareness of the value of their learning experiences within the programme.

> (17M) It aids me substantially in my immediate musical development by way of supplementing my school music studies and by impacting on my aural awareness/perception. I feel that I will reap benefits in the long term by involvement in this subject through the establishment of a strong knowledge base of musical styles that will aid me in interpreting, identifying and performing music in the generic sense.

Numerous other comments, while sometimes expressing a sense of competitiveness with other peers, also reflected a personal desire to succeed and strive for excellence, and were particularly characteristic of older and more advanced students. Many students also commented that their school work had improved significantly due to their involvement in the programme. The following remarks were typical:

> (17F) I believe it is a good subject to do outside school as it helps with music skills they do not teach and I can learn to a higher ability than my peers at school at the Con...

> (17F) Not only does it help in practical exams, and written ones, it also helps a great deal in the school classroom situation. I found that after taking musicianship last year at the Young Con, my aural and written tests at school greatly improved.

> (16F) I am able to relate all of what I learnt in this class to my school music studies. It has been very helpful and I am finding that class music at school is becoming easier.

Question 4

How would you rate your progress throughout the past term?

The tendency for students to be able to monitor their personal progress effectively and display evidence of critical thought processes was more evident in the comments of advanced students.

> (16F) The activity we did this lesson made me stop and think where I'm at musically, rather than madly practising in order to get better. Stopping to think where I am, how far I've come and how far I have got to go is something I don't often do but I feel that it can be quite helpful in the way that it puts a clear picture in my mind of areas I am weak on, areas that I am confident in and therefore areas I need to concentrate on in my practice. (This) also helped me to see clearly what knowledge I can gain from my various musical activities and how these can work together and supplement each other.

> (17M) My musical awareness and understanding of specific contextual features within musical settings has been extended and I've found that this has increased my thirst for musical self-discovery. I am now able to interpret and understand my own instrumental performance repertoire with a more substantial knowledge and careful consideration to stylistic features inherent to certain works. I have gained a more comprehensive understanding of musical construction which has subsequently impacted on my ability to analyse both aurally and visually. New concepts and musical terminology have been learnt that have provided me with a stronger knowledge base and I feel that I have gained a greater understanding of music as a whole.

Interestingly, independent of students' abilities and achievements over the semester was a strong sense of positive feedback regarding the learning environment. Particularly noticeable was the extent to which students were expressing a high level of satisfaction and increasing sense of confidence in their musical skills. The following comments not only demonstrate such evidence, but also indicate the high level of student interest and enjoyment arising from what they perceive to be a genuine and positive learning environment.

> (17F) I was surprised to realize how well I did in the melodic dictation which gave me confidence in my talents and abilities...I learnt that I can be more capable at aural than I think and I want to continue to use this thought to help me with my confidence in aural.

> (16F) Lessons were very entertaining between teacher and students. Very enjoyable and interesting.

The next stage of this research will focus on the aspect of the classroom environment and investigate the extent to which this impacts on the attitudes and achievements of these students.

Conclusion

This paper has described aspects of research relating to aspects of students' learning in a specialised pre-tertiary music environment and presented some initial findings relating to aspects of students' learning; in particular, their music skills, attitudes, and progress.

Students in the programme generally possess above-average musical abilities, represent diverse backgrounds and music listening preferences. The extent to which students are able to successfully evaluate their progress in the programme appears to rest on factors of musical maturity rather than age, as does the ability for them to apply their learning within the programme to other outside musical experiences.

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