

Informing new string programmes: Lessons learned from an Australian experience

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Although there are many examples of notable string programmes there has been relatively little comparative analysis of these programmes. This paper examines three benchmark string programmes (The University of Illinois String Project, The Tower Hamlets String Teaching Project and Colourstrings) alongside Music4All, an innovative string programme run over three years in five primary schools in regional Australia. The paper discusses difficulties encountered in the Australian experience and gives recommendations for future programmes including allowing adequate time and resources for the planning phase and the importance of ongoing professional development for staff.

Introduction

What is the ideal string programme? There are many examples of high quality, innovative and influential programmes that have had considerable influence well beyond the boundaries of their own country. These programmes have developed the core curriculum, created innovative repertoire and introduced refinements in teacher training. They have also provided social benefit for local communities and have produced many fine professional musicians.

One programme that had innovative aims and acknowledged from the outset the need for evaluation was the 'Music4All' programme, which offered Kodály, violin, viola and cello tuition to students in five primary schools in the Castlemaine area of regional Australia for a period of three years (2004–2007). The string component of the Music4All programme offered students in years 3–6 (ages 8–12) weekly group string lessons as part of their school curriculum, with tuition and instrument costs covered by the individual schools and special government funding. While it is common practice in Australia for well-resourced schools to offer instrumental programmes, a large number of schools especially in regional areas cannot afford such programmes. Music4All was set up in a disadvantaged area (Bureau of Transport and Economics, 2007) and as the name indicated, was accessible to all students regardless of prior musical training and musical aptitude.

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The implementation of this programme has been described and evaluated in detail elsewhere (Grimmett *et al.*, 2010). The focus of the current article is to examine the effectiveness of the Music4All programme in relation to three significant benchmark string programmes developed since the 1960s: University of Illinois String Project (Illinois) (1967–1970) directed by Paul Rolland, The Tower Hamlets String Teaching Project (Tower Hamlets, London, UK) (1965–1990), run by the Inner London Education Authority and directed by Sheila Nelson from 1976 to 1990, and Colourstrings (Helsinki) (1971–present) directed by Geza and Csaba Szilvay. The Tower Hamlets and Colourstrings programmes evolved and changed substantially over these times. We will discuss the period of Tower Hamlets when it was directed by Nelson and the period of Colourstrings as represented by the East Helsinki Music Primary School (EHMPS) (1999–current). These three programmes were chosen for the Music4All evaluation since they were broadly comparable in their explicit and implicit aims, their interest in innovation including the use of technology and their use of current research.

There have been many other fine music programmes that were less similar and therefore not deemed suitable comparisons for Music4All. Music4All aimed to develop high levels of musical skill yet did not exclude children on grounds of musical aptitude or progress. On this basis we did not examine highly selective programmes whose goal is to produce elite professional track musicians such as the Beijing Central conservatory elementary and middle schools. Such programmes use an extensive series of examinations to select musically capable students from around the whole country (Central Conservatory of Music, 2008). At the other end of the spectrum, we also excluded programmes with a very broad set of aims such as Opus 118 Harlem School of Music whose goal is to ‘promote the love of music, improve academic performance, provide positive alternatives to drugs and violence, and build confidence and self-esteem’ (Opus 118 Harlem School of Music, n.d.). We did not examine music programmes which focus on the participation of specific ethnic or cultural groups such as The Sphinx Organisation whose mission is ‘to increase the participation of Blacks and Latinos in music schools, as professional musicians and as classical music audiences’ (Sphinx Music, 2007). Neither did we examine El Sistema Venezuela which while it continues to produce notable professional musicians, was primarily set up to alleviate social problems. It is interesting how El Sistema and Sphinx (and other programmes such as Leerorkest or In Harmony), link tuition in western art music with social inclusion. At Sistema Scotland ‘Classical orchestras are perceived as having high status’ (Scottish Government Social Research, 2011, p.53) and as Hollinger points out in her discussion of El Sistema Venezuela, ‘the use of western art music is a powerful choice. In Venezuela such music serves as a symbol of the elite’ (Hollinger, 2006, p. 2) It would be useful for string programmes worldwide if there were more formal evaluations of influential programmes such as El Sistema Venezuela (Hollinger, 2006) and it is timely that an evaluation of the Big Noise programme at Sistema Scotland has just been completed.

The name Music4 All would appear to invite comparison with other broad-based programmes from the last decade such as Wider Opportunities in Britain and Jedem Kind ein instrument (JeKi) in the Nord Rhein Westphalin area of Germany. Indeed like Music4All these programmes were set up to attempt to connect all children with music, offering free or subsidised tuition and loans of instruments. However the curriculum, methodology and scope of both JeKi and Wider Opportunities made them substantially different from Music4All.

Music4All was essentially a local programme, running over five related campuses with a director working from a central school, while JeKi works over a larger region and Wider Opportunities over a whole county. Further, Music4All positioned itself largely in the western art music tradition offering Kodály aural training combined with violin, viola and cello tuition. In contrast the JeKi programme offers students tuition on any instrument including the violin, accordion, guitar, bouzouki and the baglama. Moreover students work not in a homogeneous string ensemble but in a 'kunterbunt' (literally jumbled up) ensemble which uses any instrument involved in the programme (Jedemkind, n.d.). Classes in the Wider Opportunities programme can also vary widely from a group of only violins to a class with all string instruments working with drums and guitar. Some classes may also include aural and rhythmic training. Wider Opportunities has been described as 'Whole Class Instrumental/Vocal Tuition ... intended to be a practical way of accessing musical learning through the 'tool' of the instrument/voice' (What is Wider Opportunities?, 2010) and like JeKi the programme can be primarily seen as an broad engagement with music rather than a beginning to a specific music tradition. Challenging teaching conditions and issues with curriculum in both programmes have attracted some negative commentary in teacher journals such as ARCO (the ESTA magazine in Britain) and the Ver.di blog in Germany (Tervoort, 2009). There has also been more formal evaluation of Wider Opportunities (Ofsted, 2004) and an evaluation of JeKi has been commissioned by the German Federal Ministry of Education and Research which will report in 2011 (BMBF Framework Programme for the Promotion of Empirical Educational Research, 2010).

Several other exclusions from this review are also worth noting. Suzuki string programmes were not reviewed as the focus on individual tuition and the expectations of parent involvement make Suzuki programmes fundamentally different to Music4All, Tower Hamlets and Illinois. Colourstrings appears to have more in common with these aspects of Suzuki programmes but at EHMPS in particular, these similarities are minimal. At EHMPS students receive at least four hours of small-group tuition compared to the 1 hour individual lesson and the attempt in Helsinki to 'involve parents is increasingly seen as not practical and rarely observed' (G.Szilvay, personal communication, 17 September 2008)

Programmes that focus largely on teacher training of university students with the primary aim of increasing the number of string teachers were also not included in this review. These include programmes such as The USA National String Project Consortium (NSPC) which runs in at least 36 universities and is modelled on the University of Texas (1948–current) and the University of South Carolina (1974–current) String Projects, which were founded in response to a national shortage of string teachers.

Benchmark programmes

Illinois, Tower Hamlets and Colourstrings (EHMPS) were considered appropriate programmes to compare with Music4All. All four programmes shared aims to develop and implement high levels of string teaching and while they were based in the western art music tradition they all included elements of improvisation and folk music. Group teaching and Kodály aural training were central to all four programmes although there were also minor differences here; Colourstrings (EHMPS) does offer individual lessons alongside 4 hours weekly small group tuition, and while there was a Kodály influence in the Illinois programme there were no formal pre-instrumental classes (Smith, 1973).

Illinois, Tower Hamlets and Colourstrings (EHMPS) all had a strong impact on string pedagogy. They were directed by significant pedagogues and were seen by the director of Music4All as useful models for her programme.

Illinois is notable as a model of a high-quality string programme designed to trial and evaluate research findings. Rolland looked to science, Alexander Technique and kinesiology in his drive to develop optimal playing movements. He spent many decades investigating different pedagogical approaches examining the work of colleagues such as Kato Havas and Shinichi Suzuki as well as spending time observing gypsy violinists (Rolland & Mutschler, 1971). He sought external scrutiny throughout the Illinois project and as late as 1970 as the project was nearing completion, he wrote to Frances Hellebrandt 'I was distressed to learn that our research may have overlooked an important scientific area' (as cited in Fanelli, 2001, p. 241).

Tower Hamlets was notable as a model of a high-quality string programme whose professional development programme produced many fine teachers. It was run in a relatively disadvantaged area and many of the schools involved had a high proportion of children from recently arrived immigrant families often living in 'sub-standard accommodation with overcrowding' (Swanwick & Jarvis, 1990, p. 11). The programme incorporated group string tuition into the normal school curriculum and developed a student community by running camps and chamber music clubs.

The ongoing programme at EHMPS offers individual and group tuition time within the normal school curriculum with a notable emphasis on ensemble training. EHMPS is a smaller programme than Illinois or Tower Hamlets and the intense skill-based tuition allows for the development of future professional musicians (Colourstrings, personal observations, 15–19 September 2008).

Evaluations to date

To date there have been formal evaluations and reports on the Illinois and Tower Hamlets projects (Rolland & Mutschler, 1971; Swanwick & Jarvis, 1990) and peer-reviewed articles comparing Illinois and Tower Hamlets with pedagogical methods such as Suzuki, Applebaum or Havas (Fischbach, 1972; Ostrow, 1977; Liu, 1991; Perkins, 1993; Nelson, 1994; Mawer, 1999; Fanelli, 2001). Colourstrings has been analysed by Mitchell (1998) in *American String Teacher*, Wallace (1992) in *The Strad* and by Morgan (2003) in *Music Teacher* and has been reviewed either as part of larger-scale projects investigating various teaching methods (Bunting, 2006) or as personal observations of the method (Fister, 2006; McTier, 2006).

There have also been several reviews examining the effectiveness of implementing the various methodologies as instructional models within school string classes (Green, 1986; Lyne, 1991). However, there has been no comparison of successfully run, influential school-based string programmes such as the Illinois, Tower Hamlets and Colourstrings (EHMPS) projects.

Aims of the programmes

Music programmes often need to balance the needs of funding bodies, students, parents and teachers, all of whom may have very different notions of why the programme is to be set up

and what they hope to gain from it. Often funding bodies are seeking high-quality tuition for the whole student body yet they offer only limited resources. The students involved may be anticipating enjoying music classes and may have little conception of how much focused work is required. Parents may be seeking opportunities for their children that they themselves did not have or perhaps an improvement in their child's concentration. Teachers in a new programme may look forward to working in a well-supported programme but not be prepared or even interested in changing the way they teach. Moreover teachers from outside the programme may be concerned that their own work is threatened. It is no surprise therefore that the explicit and implicit aims often evolved during the life of each of the four programmes.

Of the four programmes the aims for the University of Illinois String Project were the most clearly stated and drew on Rolland's many decades of research and teaching. For instance, the central aim at Illinois was

to develop and test materials for a course of study which would systematically establish natural playing movements free from excessive tension and a firm foundation of basic technique and tone production for the string student (Rolland & Mutschler, 1971, p. 1).

The aim to develop and test materials related specifically to the University of Illinois String Project, however Rolland's interest in 'natural playing movements' extends back many decades to the 1930s when in unpublished works he spoke of the desire to apply '... the principles of kinesiology and biomechanics ... as a means of facilitating students' rates of learning and development of good technique, free of excessive tension' (as cited in Fanelli, 2001, p. 94).

The programme aims in Tower Hamlets developed over a long period and an examination of documentation from the first five years of the programme (1975–1980) found 'no definitive set of pre-specified aims' but rather an 'evolution of ideas; the formation of general aims gradually becoming more explicit' (Swanwick & Jarvis, 1990, p. 8). Nelson herself described Tower Hamlets as an 'educational and motivational project which could be shared by widely mixed nationalities (sic) and bring in parents for large-scale performances, besides involving parents in the Late Starters' Orchestra (S.Nelson, personal communication, 7 August 2008).

The Colourstrings method has evolved over time without publishing specific aims and there are no explicitly stated aims on the official website (<http://www.colourstrings.fi/>) or promotional materials to be sourced for the writing of this article. Outside observers however have described what they see as the central goals of the programme. For instance, Mitchell (1998, p. 74) discussed the emphasis on chamber music and how

The aim of *Colourstrings* is not to produce professional musicians, but to develop fine human beings with well-rounded personalities, an appreciation for order and discipline, and joy in making music.

Mitchell's (1998) observations relate however to the programme before the development of the East Helsinki Music Primary School (EHMPS) in 1999. At EHMPS, Szilvay's aim 'is to allow the student to become [a] professional [musician] if desired' (G. Szilvay, personal communication, 17 September 2008), and this aim is supported by the structured

Table 1 *Comparison of aims and new repertoire by string program*

String program	Aims			
	High quality string training	Teacher training	Social benefits	New repertoire
Tower Hamlets	Yes	Yes	Yes	Yes
Illinois	Yes	Yes	No	Yes
Colourstrings	Yes	Yes	No	Yes
Music4all	Yes	Yes	Yes	No

development of bow technique, rhythm and ensemble skills coupled with regular orchestral training at a high level (Colourstrings, personal observations, 15–19 September 2008). The expectation that almost every tertiary music graduate will be able to win an orchestral position due to the unusually large number of orchestras per head of population in Finland also provides a framework for such training (L. Karhumäki, personal communication, 18 September 2008).

In their successful funding submission to the Victorian government, Music4All provided only one explicit aim which was to implement a high-quality music programme. Such a high-quality programme was defined as containing: a quality classroom music programme (30 minute sessions, 3 times per week); an instrumental programme; and a high-quality ensemble programme. The submission also acknowledged that cost is an inhibiting factor to participation in instrumental learning at the primary level and that ‘a key aspect of this proposal is to make tuition and the availability of instruments, either free, or at a greatly reduced cost to families, particularly those on low incomes’ (M. Keogh, personal communication, 31 July 2008). Drawing on the Tower Hamlets experience, the Music4All submission stated the ‘belief that students who participate in a high quality music programme will enjoy learning outcomes that are much broader than a capacity to play an instrument’. The overarching aim at Music4All was

the desire to provide all children in the secondary school’s feeder primary schools with access to a consistent, sequential programme of music education based on development of aural awareness and musical understanding (M. Keogh, personal communication, 31 July 2008).

Music4All also had innovative aims of adding juggling training to the first year of string tuition and string pedagogy CD-ROMS for use in the lesson room and for home practice.

Table 1 summarises the various aims of each programme. All programmes aimed to provide high-quality string technique even if they declared their emphasis on personal development and social skills, and all programmes recognised in principle the importance of professional development if the goals and teaching methods of the programme were to be consistent across many sites of instruction.

Each programme had as an explicit or implicit aim to make the learning engaging for the student. This involved use of group tuition with the implied benefit of social interaction for the student (all programmes), using child-friendly layout and age-appropriate characters

in the repertoire developed for the programme (Tower Hamlets and Colourstrings) and the use of game play (Illinois and Tower Hamlets).

Programme methodologies

Method of selecting students

The Colourstrings at EHPMS programme is available to children from all over Helsinki although in reality most students come from the East Helsinki area. While instrumental proficiency is not required for entry into the programme, there is an element of selection through interviews of parents and students to gauge the potential level of commitment and through aptitude tests to decide physical prerequisites for a certain instrument (M. Launonen, personal communication, 19 September 2008).

The other three programmes (Illinois, Tower Hamlets and Music4All) offered their programmes to all students from participating schools, although there were differing levels of participation in Tower Hamlets and Music4All due to funding issues and the availability of music teaching resources in some schools. In the Tower Hamlets programme some individual school principals' philosophies meant that the programme was only made available to select classes or students rather than as part of the general curriculum for the whole school. This was partly dependent upon school size and available resources (Swanwick & Jarvis, 1990).

Group teaching

In Illinois, Tower Hamlets and Music4All group teaching was the primary method of instruction and at Colourstrings the individual lesson is coupled with many hours of group practice sessions. These arrangements were not just made for financial reasons, but because it was acknowledged that group learning also offered social, motivational and educational benefits for the students (Nelson, 1976). Illinois and Tower Hamlets programmes made use of both large and small group teaching. Large group teaching focused on introducing new repertoire, ensemble development and musical awareness, while the smaller groups allowed teachers to provide technical help. The Music4All programme consisted almost entirely of large group teaching (aside from a brief period in the initial stages of the programme where small group tuition was used). Alongside an extensive orchestral programme, Colourstrings offers small group tuition consisting of 4–5 hours of practice in small groups of up to 8 students (with the same teacher as for their individual lesson). Tower Hamlets and Colourstrings also offered chamber music. Details of how lessons in each programme were typically organised have been summarised in Table 2.

Pre- and co-training in aural development

All of these programmes were influenced by Kodály methodology and apart from Illinois, there were formal Kodály classes alongside the string training or before the string training began. In these three programmes the emphasis on aural development continued into the string tuition classes, characterised by the inclusion of singing solfa, clapping rhythms,

Table 2 *Summary of lesson organisation*

Program		Teacher : student ratio	Lesson frequency	Lesson duration	Supplemented by
Illinois	Large group	1 : 14–18	1 per week	30 min	<ul style="list-style-type: none"> • Recordings for home practice • Films used in lessons
Tower Hamlets	Small group	1 : 3–5	1–2 per week	20 min	<ul style="list-style-type: none"> • Musicianship and pre-instrumental classes (incorporated Kodály) • Music clubs and holiday courses • Opportunities provided for ensemble playing
	Large group	5 : 25 Teaching staff included: 4 string players (inc. 1 cellist,), 1 pianist	1 per week	45–60 min	
Colour Strings (East Helsinki Music Primary School)	Small group	1 : 3–6	1 per week	30 min	<ul style="list-style-type: none"> • Kindergarten pre-instrumental classes • 2 hours per week group Kodály classes in school hours
	Individual	1 : 1	1 per week	45–60 min	
Music4All	Small group	1 : 3–8	4–5 per week	60 min	<ul style="list-style-type: none"> • 60–90 min per week pre-instrumental group Kodály class in school hours • Percussion ensemble • Vocal class • Juggling (limited to three schools only)
	Large group String (grades 3–6)	String and symphony orchestra conducted by teaching staff from the School 2 : 10–24 Teaching staff included: 2 string players	1 per week	2–3 hours 60 min	

moving, listening, improvising and rote-playing alongside the introduction of formal notation. Students in Colourstrings have 2 hours per week of Kodály training and several schools in the Tower Hamlets project implemented at least two terms of Kodály-based musicianship training for students in the year before they commenced string training (Swanwick & Jarvis, 1990). An important component of the Music4All programme was the introduction of Kodály classes for the junior primary classes in order to develop aural awareness and music literacy prior to the commencement of string tuition in Grade 3. These classes were well received by the junior primary students, however the Music4All programme ceased operation before these cohorts of students reached Grade 3 and commenced string tuition. In Illinois, there was no pre-instrumental aural training although Rolland acknowledged that the rhythmic training used in his teaching was based on the Kodály method (Smith, 1973).

The influence of Paul Rolland in the structured development of fluid string technique

Rolland credits his interest in the use of body movements, balance, relaxation and mental imagery to the influence of his teachers Rados, Waldbauer and Weiner and the writings of Steinhausen, Flesch, Hodgson, Polnaur and Alexander (Fanelli, 2001). In turn, Rolland proved to be a considerable influence on the directors of Tower Hamlets and Music4All. Like Rolland, Nelson was interested in the writings of Percival Hodgson and Alexander and having met him through the European String Teachers Association, she used a Churchill Fellowship to travel to the USA to study the outcomes of the Illinois String Project (S. Nelson, personal communication, 8 August 2008). In turn, Keogh (The Music4All programme director) saw Rolland's principles as well as Nelson's repertoire as central to her programme (M. Keogh, personal communication, 31 August 2008).

Szilvay also took courses with Rolland and acknowledges that many of Rolland's technical exercises such as left-hand pizzicato, the Shuttle game and flying pizzicato are used in the Colourstrings programme (Mitchell, 1998; Fanelli, 2001). Rolland's use of harmonics in Cradle song, Persian song and the Octave game have been extensively developed by Szilvay, especially in the new series of books 'Colourstrings violin books E and F' (Szilvay, 2009).

String pedagogy

Developmentally appropriate pedagogy

A common feature of the benchmark string programmes is that they specifically developed pedagogical structures appropriate for teaching young children. These developmentally appropriate practices are typical of early childhood and primary-school teaching, which are based largely on the theories of Froebel, Dewey, Montessori, Piaget and Vygotsky (Walker, 2007). In such teaching, playful, active experiences and interactions with the physical and social environment are intended not only to allow children to develop knowledge and skills but also to provide motivation and a positive disposition towards lifelong participation in learning (Novick, 1996).

All four programmes recognised the importance of making children's early musical experiences enjoyable and cognitively satisfying if they were to lay a foundation for students' continued participation in music activities throughout their lives. The Illinois and Tower Hamlets programmes were notable for the use of improvisation, movement and enjoyment through game play (Statue of Liberty, the Case Walk, Cowboy Chorus) while in the Colourstrings programme, rhythmic variations and visual imagery are used to actively engage young children in the learning process. The director of Music4All intended to incorporate improvisation and game play into the string programme (M. Keogh, personal communication, 31 August 2008) although the lack of structured professional development made these aspects difficult to introduce.

Even though professional track string training was usually not an articulated aim, many graduates of the benchmark string programmes became professional musicians. Moreover the extensive professional development in such programmes has meant that many teachers who worked there have gone on to become leading string teachers in other institutions. At EHMPs, the only programme that continues today, there is a strong emphasis on skill development and this aim is supported by the strong orchestral programme, with weekly rehearsals of graded ensembles and including a substantial touring programme for the flagship Helsinki strings (Colourstrings, personal observations, 15–19 September 2008).

The introduction of new repertoire

Differing degrees of interest in and adherence to the philosophy and methodology of Kodály were illustrated in the choice of programme repertoire. Kodály (1929) stated in his article 'Children's Choruses', that 'Hungarian folk music is to become the [Hungarian's] child's musical mother-tongue. Only after acquiring it, should he turn to foreign musical material' (as cited in Szonyi, 1990, p. 12). All four programmes drew at least some material from their local culture using traditional folk-song and nursery rhyme and apart from Music4All, each programme developed new repertoire written especially to meet their specific pedagogical aims.

In Illinois, a substantial body of new string teaching repertoire in contemporary idioms was commissioned by the Contemporary Repertoire Project, organised by Margaret Farish. Stanley Fletcher also worked in conjunction with Rolland to compose 68 solo and ensemble pieces in 'modern' idioms based on the specific playing actions of the project. This was generally seen to be a successful part of the Illinois project as one teacher for the Illinois programme said 'I love the Fletcher tunes, because by and large they are written in today's idiom. The children love them and there's a lot of rhythmic variation and a lot of melodic variation' (Rolland & Mutschler, 1971, p. 308). The Fletcher pieces were later published by Boosey and Hawkes in two volumes of *New Tunes for Strings* (1971–1972) and are still in print.

The repertoire for Tower Hamlets also set out to be lively and rhythmically interesting, often in a popular style, so that it would be appealing even to students who would not normally have chosen to play an instrument (Swanwick & Jarvis, 1990). Nelson wrote her repertoire with specific pedagogical goals in mind as shown in her description of how *Cowboy Chorus* developed improvisation skills, engaged children via game play and developed the use of marching as a way of inhibiting the immobilising of joints (Nelson,

1985). Nelson's material is published by Boosey and Hawkes and is widely used today by string teachers especially in English-speaking countries.

The series of Colourstrings instrumental books are published by Fennica Gehrman and include the new three volume Yellow pages. Common instructive repertoire was a central goal for Szilvay in developing the programme and the repertoire is highly structured. Each teaching point is introduced in the form of an etude which is then followed by a folk song, an excerpt from the standard literature and an original composition.

There was no aim to create new repertoire at Music4All and the intention was for individual teachers to bring their own selection of repertoire to their classes. It is clear that developing and using core repertoire is useful in creating unified technical and musical goals for teachers and that this lack of core repertoire was an issue for Music4All. A qualitative evaluation which involved a collation of anonymous questionnaire feedback from students, parents and both general and specialist teachers was conducted at the conclusion of the Music4All programme. The evaluation indicated that the music was 'too simple and repetitive' and the students would have preferred more 'current (popular) music' (Grimmett *et al.*, 2010).

New technology

'Technological' aids such as fingerboard markers have been used to accelerate or consolidate learning from the 18th century onwards (Bergonzi, 1997) and such aids became particularly relevant to group tuition in instrumental programmes. These technological aids can help solve some of the perennial issues of how to teach fluid technique with good body use and how to help the child practice effectively when away from their teacher.

Tower Hamlets used overhead projectors to project music notation onto screens in class aiming to free pupils from 'the tyranny of the music stand' and make them look ahead (Dorner, 1983, p. 535) and well before the development of the EHMPs, Colourstrings produced 56 *Minnifiddlers in Musicland* films which were shown and repeated three times on Finnish television in the 1970s. These programmes were intended for children of kindergarten age but proved highly popular among people of all ages and led to a rapid increase in the number of children learning violin (Homfrey, 2006).

Rolland was particularly engaged over many decades in trying to use technology to aid string teaching and playing. While still a student in Budapest, Rolland produced a new shoulder rest, in 1946 he experimented with teaching strings over the radio station WILL-AM and throughout the Illinois programme he developed mechanical aids such as rubber grips for the bow, different types of mutes and fingerboard extensions (Fanelli, 2001).

A fundamental element of the Illinois String Project was the series of 17 films produced to demonstrate the action studies devised by Rolland. The aim of the films was to portray the physical actions described in the teaching materials and for the students to play along with the films as they were shown repeatedly in class. However in practice, the teachers were only asked to show each of the films 2–3 times during the teaching period (Rolland & Mutschler, 1971). The project also provided students with exercise records (3 sets) of basic left- and right-hand technical drills used for listening and practicing at home. The aim here was for the student to listen and then play, rather than to play along with the recording (Rolland & Mutschler, 1971).

Music4All programme's innovative proposal to introduce string technique CD-ROMS for use in class and home practice can be seen as a logical extension of Rolland's aim to use new technology to engage students. Unfortunately, funding restrictions at Music4All prevented the CD-ROMS from being introduced and an evaluation of their effectiveness in such a string programme has not yet been possible.

Teacher training for programme staff

Effective teacher training both prior to and during teachers' employment is vital if a programme's unique approaches to technique, methodology and philosophy are going to be consistently implemented. In Illinois a three-day conference was held for participating teachers before the commencement of the first classes, specifically to 'acquaint teachers with the goals and principles of the Project and to advise them concerning the use and testing of the materials and organization of classes' (Rolland & Mutschler, 1971, p. 133). Additional conferences were held six months into the project and before the beginning of the second year. Teachers were encouraged to share their successes and concerns, problems were discussed and clarified, materials were reviewed and revised and orientation was provided for new staff. Despite these comprehensive training sessions, Rolland and Mutschler (1971, p. 186–187) report that there were inconsistencies in the implementation of the teaching programme due in part to 'the reluctance of some teachers to accept some of the new ideas in practice after they had accepted them in principle'.

The Tower Hamlets Project developed an extensive programme of teacher training. All teachers attended two, four-day in-service courses each year to reinforce the technical basis of the teaching programme and expose teachers to ideas from outside the project (Nelson, 1985). Weekly teacher meetings included training sessions and discussions to unify the teaching approach and adapt to changing circumstances. The leader-plus-assistants teaching structure also provided an ideal training ground for new teachers to work alongside experienced teachers and gradually take on more responsibility. At the height of the programme's development, potential teacher assistants attended a term of weekly skill training sessions or demonstration lessons led by experienced teachers. This was followed by a further two-year induction period of additional training sessions (Nelson, 1985; Swanwick & Jarvis, 1990).

Funding restrictions at Music4All meant that there was virtually no teacher training before the programme began and limited professional development once the programme was running. This lack led to individual teachers adopting their own approach with little reference to the stated programme goals which in turn caused some negative feedback from school principals and class teachers (Grimmett *et al.*, 2010). This feedback noted how at some schools students struggled to relate to the teachers and how the number of staff changes caused fluctuations in the quality of teaching.

The nature of the Colourstrings programme at EHMPs allows for less formal teacher training than in Illinois or Tower Hamlets. The programme is run on one site and the longevity of Colourstrings has allowed a refinement of teaching ideas. Each teacher teaches the same group of students for between 4 to 7 years which clearly can be a benefit if the initial training and ongoing professional development is effective. At EHMPs there are some differences in the students' instrumental set up, however there is a uniform approach to

linking singing and playing and the speed of technical development (Colourstrings, personal observations, 15–19 September 2008). Often the teachers are themselves graduates of a Colourstring programme which is accepted as teacher training and teachers who do not have experience as a Colourstrings student observe for at least 8 weeks before beginning.

Difficulties encountered in the Australian experience

The immediate legacy of the Music4All programme is a greater number of strings students at the primary and secondary school level (M. Keogh, personal communication, 31 August 2008) and a music performance centre for the local region. The innovation of offering juggling training as an adjunct to the string programme at Music4All was successfully introduced. By including another arts programme a formal evaluation of Music4All (see Rickard *et al.*, 2010) was able to establish that the non-musical benefits observed were directly related to the music component rather than simply to the introduction of a novel programme. Music4All acknowledged the difficulties it faced in setting up such a programme and from the outset sought outside evaluation. This was particularly important as there are few evaluations of existing string programmes in regional Australia. However, Music4All was set up in an area where previously there was little string music in the school system and with significant pressure to get the programme working as quickly as possible. Consequently the programme was not always successful in the three areas of tuition, methodology and repertoire.

Tuition

Students in the Music4All programme received only one 60-minute lesson per week in groups with an average of 25 students, which is significantly less tuition than in the benchmark programmes. Moreover, there was no time allowance for teachers to pre-tune instruments and observers frequently noted that almost half of the lesson time was spent tuning the instruments which compromised the already limited tuition time. This issue was also problematic in the Chicago section of Illinois but overcome in Tower Hamlets by pre-tuning the instruments before the start of the class. Clearly this is an issue that needs resolution in the planning stages for any new programme.

Originally it was intended that three staff would teach together in the group lessons, however lack of sufficient funding and difficulty attracting enough staff to a regional location meant that only two teachers were allocated to each class. This meant that unlike the Tower Hamlets programme there was no pianist to support the student's musical engagement, nor a third teacher to move through the class correcting set up and postural issues.

Methodology and new repertoire

The coordinator of Music4All was an advocate of Rolland's and Nelson's approach to sequential movement based string technique and used these approaches in teaching her own classes (M. Keogh, personal communication, 31 July 2008). However, once again due to difficulty in acquiring appropriately qualified teachers and the lack of appropriate professional development, many staff did not have adequate training to implement these

strategies especially to such a large group. It appears that each teacher used their own methodology and selection of repertoire with little reference to the programme goals. The problems associated with not using a structured unified repertoire were clearly felt by the students and parent body as shown in the qualitative evaluation of the programme. Feedback from students, parents and teachers showed considerable frustration with the fact that each teacher seemed to start again from the very beginning and often repeated the same repertoire (Grimmett *et al.*, 2010:13).

An important component of the Music4All programme was the introduction of Kodály classes for the Junior Primary classes of the cluster schools to develop aural awareness and music literacy prior to the commencement of string tuition in Grade 3. A sequential programme was established and was well received by the students. Unfortunately, the Music4All programme ceased operation before these cohorts of students reached Grade 3 and commenced string tuition.

Recommendations for future programmes

In reflecting on the problems encountered by the Music4All programme, the coordinator was able to articulate several key issues that need to be addressed by organising bodies of similar school-based string programmes. Obviously, while sufficient funding for staffing and resourcing the programme is crucial, sufficient time must also be made available during the set-up phase of the programme to enable recruitment of suitably qualified staff and comprehensive training in the particular philosophies and methodologies of the proposed programme. Unless there is a significant planning period as in Illinois, three years is clearly not a sufficient time to allow a programme to develop. Nelson (1985, p. 70) stated that 'the [first] 8 years of the project have been a period of continuous learning and development' and Colourstrings had been operating for 28 years before they obtained funding for the significant addition of weekly small group tuition.

It is also important to provide adequate information to the other stakeholders of the programme (principals, school staff, parents and students) so that everyone shares a common understanding of what is trying to be achieved and what is expected of their involvement. Whilst this may be relatively easy to achieve within one school, in a multi-site programme there are many conflicting agendas and issues which must be resolved if the programme is to have any chance of being accepted and succeeding on a long-term basis.

Once the programme is in operation, it is also vital that ongoing training and support is provided for teaching staff and efforts are made to constantly adapt the programme to changing circumstances. Stakeholders are more likely to develop a sense of ownership and ensure programme sustainability if they are empowered to contribute to the development and future directions of the programme (Fullan, 2007). Funding models must provide for attractive working conditions so that trained teachers are retained and staff turnover is reduced.

Despite the problems encountered by the Music4All programme, it was ultimately able to achieve the aim of providing an opportunity for all children to participate in an enhanced music education programme at no cost to their families. It has also raised community awareness of music education and it is hoped that this will continue to affect the schools' provision of music education in the future.

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