

Direct instruction and music literacy: one approach to augmenting the diminishing?

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Abstract

One of the many challenges facing music educators is diminishing class time in lower secondary school in the face of the increasingly crowded curriculum and the advent of arts 'taster' courses. However, music educators are still expected to be able to produce musically literate students capable of completing high level music courses in upper secondary school. This article reports on an intervention study which set out to accelerate music literacy acquisition among Year 7 students through use of a Direct Instruction (DI) teaching approach. Although controversial, Direct Instruction was chosen because its advocates claim its effectiveness and time efficiency in teaching basic skills. The study involved the development of a carefully scripted 10 minute per lesson DI music literacy program which was then implemented in a control group research setting. Two classes of Year 7 students (40 students) were taught music literacy via the DI program, while two separate Year 7 classes (34 students) acted as the control group. The intervention was administered over a trimester of 20 lessons (13 weeks), with levels of student music literacy tested via Gordon's Iowa Tests for Music Literacy at both the pre and post-test stages. The results revealed significant increases in music literacy levels among the DI classes, especially on the measures of rhythmic literacy. Given these results, the researchers recommend further investigation of the potential of DI as an instructional method in music education for better utilising diminishing class teaching time and improving student music literacy levels among lower secondary school students.

Key words: direct instruction, music literacy, secondary school music education

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Introduction

Secondary school music teachers are facing the increasing problem of diminishing class time in an increasingly crowded curriculum (Burke, 2007). The creation of the Arts Learning Area has seen the teaching time available for class music reduced in many instances, as sequential class music makes way for short term 'arts taster' programs (Stevens, 2005; Walker, 2005). However, music teachers are still expected to produce

musically literate students potentially capable of undertaking post-compulsory music courses in upper secondary school. Accordingly, maximising diminishing class time is becoming increasingly important for music teachers, especially in the preparation of students potentially able to complete senior secondary music courses.

This study set out to examine the effectiveness of a music literacy intervention designed to accelerate literacy acquisition and recall among students in their first year of secondary school

(Year 7). The study employed the pedagogical approach of Direct Instruction (DI) as its theoretical basis. While somewhat at odds with mainstream educational thinking because of its teacher-centred nature, proponents of DI claim it is an efficient method for fast tracking basic skills acquisition. Using the DI approach, a series of carefully scripted 10 minute lesson interventions were constructed, and delivered at the start of each lesson over the course of 20 lessons (13 weeks) to half of a Year 7 student cohort in a major Victorian secondary school, while the other half of the cohort were taught using traditional student-centred approaches. Pre- and post-testing of the levels of students' musical literacy, using Gordon's IOWA Tonal and Rhythm Tests as a benchmark, was undertaken to determine whether the DI intervention resulted in any significant differences to Year 7 student music literacy levels over the period of the intervention.

The study was carried out in the knowledge that music educators are coming under increasing pressure with diminishing class time to adequately prepare students for higher level music studies. The DI teaching approach has been successfully used in lower secondary remedial English and mathematics in Australia. By testing the efficiency of DI as an approach for teaching basic music literacy, the researchers hope to find a way forward for music teachers to maximise their diminishing teaching time in lower secondary school, while significantly improving music literacy outcomes for students to enable them to successfully engage in applied music activities. Ultimately, it is hoped that such a program may help better prepare students to complete senior school music courses.

This article examines DI as a potential teaching approach for class music, and describes the DI program created for this study. It sets out in detail the steps involved in the intervention and presents the findings of the study before discussing their implications.

Background

The current state of music education in Australia makes it difficult for students to gain the skills and competencies required to successfully complete music at the post-compulsory level. A major problem is that of declining class music time, especially in lower secondary school. This has been brought about partly by the amalgamation of music into a generic Arts learning area. Stevens (2005) notes that music is 'One of the more highly specialised and therefore time-consuming areas of The Arts [Key Learning Area]' (p. 256). Yet music has had to make way for the other arts in an increasingly crowded curriculum, and this situation will continue with the introduction of the National Arts Curriculum (ACARA, 2011).

A problem readily identified with the move towards generic Arts education has been a resulting lack of continuity, as students in lower secondary school often take part in arts 'taster' courses which alternate between visual arts, drama, dance and media (Grattan, 2006; Stevens, 2005; Walker, 2005). Students may only engage in a music program in one term out of four. Declining class music time and lack of continuity makes it more and more difficult for students to achieve even basic music literacy standards, as identified by Burke (2007):

The reduction in time given to classroom music with the introduction of standards based education and integrated Arts...has made it difficult for students to gain enough skills and knowledge for them to be able to study music successfully in the senior secondary school. (p.6)

Yet Berkley (1999) notes that 'For students to become musicians, they need to be able to communicate in the language of music and be musically literate' (p. 27). Further, Smith and Southcott (2004) attest that the lack of time available to developing appropriate music knowledge and skills, including literacy, impacts students' competence beliefs, and therefore their

motivation to continue on to higher level music studies.

Further, secondary school class music teachers are increasingly faced with students from primary schools with widely different music experiences, resulting in students with widely divergent skills sets (Lowe, 2008). Some students come from primary schools with strong music programs, while others come from schools with no music programs at all. Inequities and quality control in primary school music education were issues identified in the National Review of School Music (DEST, 2005), and this problem may be exacerbated in the future by the call by key arts bodies such as the National Affiliation of Arts Educators (NAAE) for primary schools to choose between dance, drama and music as subject areas for specialisation. It is conceivable that more students will enter secondary school with no formal musical experiences at all.

The problem confronting class music teachers in lower secondary school is how to effectively and efficiently equip students with the appropriate music literacy skills needed to successfully complete senior school music, given the constraints of reduced teaching time, lack of continuity and divergent student entry skills and abilities.

Direct Instruction

Developed in the 1960s, Direct Instruction (DI) is a teacher-centred teaching approach that uses teacher explanation and modelling combined with student practice and feedback to teach concepts and procedural skills (Eggen & Kauchak, 2006). The teacher specifies learning objectives, explains and illustrates content and models skills for students. In effective DI lessons, students are active in responding to teacher questions, analysing examples and most importantly, practicing skills to the point where they can be used with little or no mental effort. While various authors describe different conceptualisations of

the DI process, Rosenshine and Stevens (1986) summarize six stages of instruction, as follows:

- Revision of previous work
- Presentation of new material in clear and logical steps
- Provision of guided practice
- Provision of feedback with correctives
- Provision of independent practice
- Revision to consolidate learning

The DI model is specifically designed to teach skills and concepts, and the emphasis is on explicit objectives, detailed instruction, and timely feedback and monitoring of student learning.

Proponents of Direct Instruction claim that it is superior to student-centred approaches which can lack structure and are reliant on students' personal constructions of knowledge (Farkota, 2003).

Rosenshine (1979) notes its effectiveness when employed by efficient and experienced teachers, because it relies on clear language, modelling and effective feedback, while the modelling component of DI is central to Bandura's Social Cognitive Theory (Bandura, 1997), which states that 'people (tend) to imitate behaviours they observe in others' (p. 293).

Importantly in the context of this study, advocates claim Direct Instruction is efficient in its use of available teaching time. Hattie (2009) puts it simply, stating 'teach more in less clock time' (p. 206). Further, Farkota (2003) argues that DI programs can improve student motivation by impacting their competence beliefs. She states that the need for competence is innate. The guided nature of DI helps students meet this need by practicing basic skills under close teacher supervision. As competence is acquired, the teacher backs off, and the resulting increases in student competence beliefs build motivation to learn.

In Australia, Direct Instruction programs have been employed in mathematics, notably by Farkota in her 'Elementary Maths Mastery' (Farkota, 2003), and in corrective reading (Carnine, Engelman, Johnson & Meyer, 1999). As many of

the aural and theoretical aspects of music literacy are skills based, strongly logical and mathematical in nature, well suited to teacher modelling and reliant on practice to develop proficiency, it stands to reason that a DI teaching approach may be effective in the increasingly time-poor music classroom.

Critics of Direct Instruction have been vociferous in their condemnation of it. Duffrin (1996) describes it as mere rote learning and memorisation. Duffrin claims that it does not motivate students and is authoritarian, and it fails to address individual student differences. Sawyer (2004) takes issue with its prescriptive nature which denies the creativity of teachers. McVittie (2008) claims that it is one of the least effective teaching methods because of its reliance on old learning theories and inability to take students prior knowledge into account. In a more general condemnation in relation to the theories of Piaget and Bruner, Burns, Hart, Charlesworth and Kirk (cited in Vukmir, 2002) state that 'teacher-centred programs may hinder children's development of interpersonal understanding and their broader social-cognitive and moral development' (p. 42). Many of the criticisms directed against DI appear to be largely philosophical. Assessments of its actual impact upon student achievement vary. In a wide-ranging assessment of its effectiveness measured against other teaching approaches, Hattie (2009) found just over a 50% improvement in student achievement in language literacy, mathematics and special education settings over student-centred learning approaches. While these findings are encouraging, details of the nature of the programmes analysed by Hattie need careful examination, including the percentage of time occupied by DI within each lesson. It would appear that DI as a teaching approach has largely polarised educators. In particular, those who favour the constructivist student-centred teaching approaches see it as out of step with modern educational thinking, while advocates praise its time efficiency and supposedly motivational values.

Direct Instruction does not appear to have been widely used in class music settings. Various authors report on its use in other music contexts, namely music pre-service teacher training, and tertiary instrumental ensemble development (Price, 1992; Wolfe & Jellison, 1990). They report mixed success in these contexts, but detail is lacking on the context of its use, or the results of instruction. However, music educators who have examined DI have generally called for further study to evaluate its effectiveness (Bowers, 1990; Yarborough & Price, 1989).

Further, the choice of Direct Instruction as the teaching approach in this study was contingent upon a working definition of the term 'music literacy'. For the purposes of this study, the researchers did not take a narrow definition of literacy as simply the ability to read and write music, but a broader definition encompassing the ability to hear and comprehend in music. Thus, music literacy for this study included the acts of listening, differentiating and internalising musical concepts, and understanding its basic conventions. This broader definition loosely aligns with Gordon's (2003) description of the process of audiation. He describes music literacy as a series of skills based around the acts of hearing, performing, reading, notating, transcribing, interpreting, composing and improvising. Like language acquisition, students need to be immersed in and become fluent in the language of music, but music literacy skills, like language literacy skills, need to be formalised and consolidated at some stage in a students' musical journey if they are to progress to deeper levels of understanding. For this study, Gordon's Iowa Tests of Music Literacy were used as the benchmarks against which literacy levels were assessed.

Given the reported value of Direct Instruction in teaching basic skills, the researchers decided to test it as an instructional method in the music classroom. The researchers noted the potential of some of its processes, namely the emphasis placed upon teacher modelling, the logical sequencing of activities, the opportunities for

guided practice, the immediacy of feedback and the opportunity for independent practice and consolidation. Further, given new research into the roles of repetition and memorisation in the development of neural pathways in music skills acquisition described in Levitin (2006), DI may be an appropriate teaching strategy for developing music literacy skills in the lower secondary classroom.

Method

The Direct Instruction program was developed and implemented in a large co-educational K-12 non-government school of 1182 students in central Victoria. The school was selected because one of the researchers has strong links to the school, and it was noted that the class music program suffered from many of the constraints identified earlier in this article. At the research school, music is a compulsory class subject in Years 7 / 8, is elective from Year 9, and the school offers a range of VCE music units in Years 11 and 12. While the school operates K-12, a significant number of students enter the school in Year 7 and thus present with a range of musical skills. Its arts curriculum is typical of many schools: students are offered trimester long arts taster programs in Years 7 and 8, with a typical trimester running for 13 weeks.

Participants

A total of 74 Year 7 students, aged 11-13, comprising four different music classes took part in the study. As the music classes are not streamed, they comprised mixed ability groups with some students already relatively musically literate while others lacked any formal music training. For this study, both DI and non DI classes were taught by two qualified music teachers at the school not formally involved in the design or development of the research program. Both teachers were invited to participate in the study by the researchers, and one had six years of

music teaching experience at Year 7 level while the other had five years teaching experience at this level. Both teachers were fully briefed as to the nature of the study, and while not part of the research team, were involved in feedback during the piloting of the program.

Piloting

In developing the Direct Instruction program, the researchers used the instructional model set out by Farkota (2003). Rather than use DI exclusively throughout each lesson, Farkota argues that DI is most effective when used in short 10 minute bursts at the commencement of regular lessons. The DI approach is used to introduce and reinforce basic skills which can then be applied in other contexts in the body of the lesson. Accordingly, a series of 10 minute DI scripts were developed, based around five music literacy 'strands': namely duration, notation, scales, intervals and chords, and musical elements (including dynamics, texture, articulation and timbre). These were in turn arranged into eight levels of increasing complexity. Each lesson was scripted to keep teacher participants on track and minimise in-class time wastage.

Through careful piloting over a three month development period involving participant teacher feedback, student feedback, evaluation of delivery time and evaluation of student results, the program was condensed into two strands, namely rhythm and pitch while the number of levels was increased to ten. The reduction in strands was largely due to the amount of time beyond the 10 minutes required to deliver all 5 strands, and an evaluation of the relative importance to overall basic music literacy of each strand at Year 7 level.

The final version of the course comprised 20 lessons covering the core content strands of rhythm and pitch with ten levels in each strand. In addition to teacher scripts, student worksheets were created for each lesson and students also received a record sheet for recording their progress on each question in each lesson so they

could keep track of their improvement. The final program was then piloted for one trimester on two Year 7 classes not involved in the study. The development, piloting and refining of the program took place over a 12 month period.

Procedure and data analysis

The final version of the DI intervention was delivered over 10 minutes at the start of every lesson to two classes over one trimester, as per Farkota's model. The rest of each lesson was given over to each teacher's regular program. A total of 40 students received the DI intervention, while 34 students in the two non DI classes received instruction exclusively via each teacher's regular program, which involved teaching music literacy through an approach loosely based upon the Kodály method but personal to each teacher-participant. Each teacher's regular program included composing, singing, performing, analysing, improvising and writing music.

Data on student music literacy levels was gathered at the start of the trimester using the Iowa Tests of music literacy (rhythm and tonal), and again at the end of the trimester (20 lessons over 13 weeks). The Iowa Tests were used as the benchmark because they are widely used in Australian and overseas, and were deemed by the researchers to offer independent and reliable measures of music literacy levels, albeit assessed against Gordon's audiation scales (Clark, 2003; Schleuter, 1974). Testing was conducted using Iowa Test level 1 which aligned with the music literacy concepts used in the DI program

developed for this study. Level 1 aligned with the key skills and knowledge expected at Year 7 level in Victoria. However, while the content of the DI program aligned with the Iowa Test level 1, the DI program was not designed around the Iowa Test procedures. Thus DI students were not advantaged in this way over their non DI counterparts. The Iowa Tests comprised six subtests divided into two strands – tonal concepts and rhythmic concepts. Three subtests within each strand comprised listening, reading and writing.

Data was collected at the start and end of the trimester, and thus comprised four sets of pre and post stage data (one for each class). Data was then loaded onto SPSS version 17 and subjected to six different paired *t*-tests to establish whether there was any statistically significant difference between pre and post-test scores, based upon the Iowa Test results.

Results

Table 1 presents the mean, and the mean differences from pre to post-test on each test for each of the four Year 7 classes.

From the data, there were considerable mean score differences both within and between the DI and control groups at the pre-test stage for the tonal test, but fewer differences in the rhythm tests. However, the means produced a more uniform difference in post-test results, with both DI classes indicating major improvements in post-test rhythm results, and one DI class indicating a major improvement in post-test tonal results. Surprisingly, one non DI class indicated a slight

Table 1: Individual class means and mean differences from pre to post-test.

| N = 74 diff | Pre-test tonal | Post-test tonal | diff | Pre-test rhythm | Post-test rhythm | diff | Total mean |
|-------------|----------------|-----------------|-------|-----------------|------------------|-------|------------|
| Non DI 1 | 93 | 95 | 2.4 | 104 | 106 | 2.28 | 4.67 |
| Non DI 2 | 100 | 106 | 5.18 | 105 | 100 | -5.01 | 0.17 |
| DI 1 | 85 | 104 | 18.51 | 97 | 114 | 16.1 | 34.64 |
| DI 2 | 103 | 109 | 5.74 | 102 | 116 | 13.7 | 19.92 |

decline in post-test rhythm test results. Data was then subjected to paired *t*-tests, and combined results for both tests, including mean, mean difference and significance, are provided in table 2.

The *t*-tests indicated that the improvement observed in the DI class results was statistically significant, with a mean difference improvement of 26 points from pre to post-test on both tests, and a lower standard deviation than the non DI classes. Results for each individual test were then subjected to paired *t*-tests, and the overall results, including mean, mean difference and significance, for the tonal test results are presented in table 3.

Again, the *t*-tests indicated a statistically significant improvement in test results for the DI

classes, and a smaller standard deviation. While not indicated on this table, table 1 indicated the major improvement in tonal test results for one of the DI classes which presented the lowest pre-test score. The second DI class exhibited a much smaller improvement, but it must be noted that the pre-test scores for this class were already the highest for the four classes at the pre-test stage.

The rhythm tests were then subjected to paired *t*-tests and the results, including mean, mean difference and significance, are presented in table 4.

Again, the *t*-tests indicated a statistically significant improvement in the DI class results, while the post-test results for the non DI classes actually declined slightly. Given the small sample

Table 2: Overall mean, mean difference and significance for tonal and rhythm tests, pre and post-test.

| N = 74 | Pre-test | | Post-test | | Mean difference | Significance |
|-----------------|----------|-------|-----------|-------|-----------------|--------------|
| | Mean | SD | Mean | SD | | |
| Combined non DI | 201.03 | 28.62 | 200.19 | 34.39 | -0.84 | .505 |
| Combined DI | 193.53 | 16.44 | 220.21 | 21.59 | 26.68 | .000* |

For combined non-DI, t = .675, df = 29, p = .505
For combined DI, t = -10.97, df = 33, p < .000

Table 3: Overall mean, mean difference and significance for tonal test results, pre and post-test.

| N = 74 | Pre-test | | Post-test | | Mean difference | Significance |
|-----------------|----------|-------|-----------|-------|-----------------|--------------|
| | Mean | SD | Mean | SD | | |
| Combined non DI | 96.79 | 17.40 | 100.47 | 18.86 | 3.68 | .217 |
| Combined DI | 93.53 | 16.44 | 106.00 | 10.14 | 12.47 | .000* |

For combined non-DI, t = -1.26, df = 28, p = .217
For combined DI, t = -5.53, df = 34, p < .000

Table 4: Overall mean, mean difference and significance for rhythm test results, pre and post-test.

| N = 74 | Pre-test | | Post-test | | Mean difference | Significance |
|-----------------|----------|-------|-----------|-------|-----------------|--------------|
| | Mean | SD | Mean | SD | | |
| Combined non DI | 104.44 | 14.20 | 102.97 | 13.78 | -1.47 | .228 |
| Combined DI | 99.03 | 14.23 | 114.44 | 13.67 | 15.41 | .000* |

For combined non-DI, t = 1.23, df = 30, p = .228
For combined DI, t = -7.06, df = 35, p < .000

size and the exploratory nature of the study, no further data manipulation was undertaken at this stage.

Based upon these early findings, it would appear that the 10 minute DI intervention presented at the start of each lesson did have a measurably significant impact upon levels of student music literacy, based upon the Iowa Test results, at least for the students involved in this study.

Discussion

The study set out to examine the potential of Direct Instruction as an instructional method for formalising and building Year 7 student basic music literacy. It was born out of recognition of a growing frustration felt by many music teachers that class music in lower secondary school is coming under increasing pressure from diminishing teaching time, the prevalent generic arts taster approach now adopted in many schools, the problem of widely divergent Year 7 student skill sets, and the need to properly prepare students for senior secondary music courses. The aim of this study was to evaluate the effectiveness of a DI program in addressing some of these problems, and the initial results were encouraging. The results would appear to support Hattie's (2009) assertion that DI promotes teaching more in less clock time.

The Iowa Tests are comprehensive. In line with Gordon's definition of audiation, the tests encompass listening, reading and writing music. They are well suited to assessments of student's ability to hear and comprehend in music, all part of a wider definition of music literacy. Using these measures, the results of the study were positive. By devoting only 10 minutes of each music class over the trimester to the DI intervention, students in the DI program exhibited considerable improvements in their abilities to hear, read and notate music while the non DI students test results indicated marginal or no change. It is impossible to negate all the variables in a live study setting. However, both teacher-participants taught DI

and non DI classes involved in this study, and this would appear to largely eliminate them as potential variables. The content each teacher delivered was essentially the same for both their DI and non DI classes; all that differed was the 10 minute intervention at the start of each DI class. While the study sample was relatively small, there was a high degree of uniformity across both DI and non DI class test results.

The bigger issue at the core of this research is that music as a subject remains the square peg in a round hole. For students to achieve their potential in music, they require long-term sequential programs which allow the development, formalisation and refinement of specific aural and physical skills. These skills can only fully evolve through sustained time and practice. The arts taster approach is simply ineffective for long term music skills development. However, given the reality of the constraints music teachers now find themselves faced with (which will be on-going with the advent of the National Curriculum for the Arts), DI may offer a pedagogical strategy for developing some of these skills. Of interest to the researchers will be the degree to which skills developed during the DI intervention are retained when students re-engage with class music from Year 8.

It must be noted that the researchers do not present Direct Instruction as a 'cure-all' for music teachers. The DI intervention was created to build basic music literacy skills, and the researchers do not advocate it as a teaching method for applied music activities such as composition or performance. The DI program presented in this study represents a means to an end – a formalised approach to the development of basic music skills through modelling, repetition and constant feedback in a planned, incremental and achievable way. This may be where some of the confusion exists among proponents and antagonists of the DI approach – DI is not recommended as a total teaching approach, but rather a pedagogical approach suited to the development of particular

skills, and specific needs of the curriculum. A DI approach can be used to develop basic literacy skill sets, leading to the introduction of more applied student-centred learning activities later in the lesson. Indeed, by building basic literacy skills in music, a DI program may allow more meaningful interaction to occur in applied music activities, such as composing and performing, because students are better equipped technically to achieve and succeed. In this sense, DI can happily coexist alongside student-centred teaching approaches as part of a balanced teaching approach. DI represents another potential element in the teacher's pedagogical toolkit – one that is time efficient in the teaching and development of basic skills, and potentially effective in achieving results, if the initial results of this study are accepted.

Further, the widely held criticism that DI does not allow for student input is also untrue. Here, confusion exists between DI and didactic teaching approaches. An effective DI program consciously seeks student feedback, both in terms of revision and assessment whereas a didactic approach assumes learning will occur, but does not actively seek student interaction or value ongoing feedback. While DI is teacher-centred in terms of

delivery, it is student-centred in terms of feedback and outcomes. Used in conjunction with other teaching approaches, DI can provide a scaffold for all class activities, as ongoing activities flow from the basic skills emphasised in the DI component of each lesson. To this end, the researchers present a model for planning class music lessons in lower secondary school, designed to maximising the effectiveness of DI and utilise and reinforce the resulting skills. The model is presented as a seven step set of lesson planning principles in table 5.

Based upon a generic teaching model created by Hattie (2009), this set of principles incorporates standard lesson planning components such as the introduction and lesson 'hook', and a lesson summary. It also includes room for activities in which skills covered by the DI component at the start of the lesson can be developed through more applied student-centred activities. While the model includes suggested timings, these would vary between schools depending upon the length of the lesson in each school. However, the 10 minute DI allotment at the start of each lesson is central to the effectiveness of the lesson. Further, apart from the scripted DI component, the lesson plan does allow for a high level of teacher input and creativity in lesson planning.

Table 5: Seven step music lesson planning principles.

| Step | Content | Suggested timing |
|------|---|------------------|
| 1 | Engage students and focus their attention on the subject and the learning with the use of a 'hook'. | 4 mins |
| 2 | Clearly state the learning intentions of the lesson, which has been written up on the board for students. | 2 mins |
| 3 | Explain how students will know they have achieved the learning intention. | 2 mins |
| 4 | Present the 10 minute Direct Instruction program as scripted, including modelling and checking for understanding. | 10 mins |
| 5 | Review and clarify the key knowledge and skills of the 10 minute Direct Instruction part of the lesson with reference to upcoming activities. | 5 mins |
| 6 | Activities for further contextualisation of the key knowledge and skills to ensure they are practiced and applied in different contexts from which they were learned. | 35 mins |
| 7 | Students reflect on their progress towards the learning intention, against the stated learning intention written down at the start of the lesson. | 2 mins |

**Based upon a 60 minute lesson*

The biggest consideration for the researchers in the development of the Direct Instruction program used in this study was the amount of time required for the development and piloting of the program itself. The development of the 20 carefully sequential lessons, including the teacher scripts and student worksheets, took many hours of deliberation and preparation, and this may act as a deterrent to some teachers. However, it must be noted that creation of the program, like any new curriculum development, will take time in the initial stages. Greater proficiency in developing the scripts will come with practice and familiarity, and programs do not need to be continually rewritten once they are in place, but rather 'tinkered' and refined to meet the needs of each student and each class over ensuing years.

Putting the results of this study into perspective, the researchers acknowledge that this was a small scale study undertaken in a substantive setting. There is a danger in extrapolating results to a wider context, but the results were encouraging enough for the researchers to advocate further exploration of Direct Instruction's potential in class music. In particular, the researchers are keen to explore the extent to which literacy skills developed in the Year 7 DI program are retained into Year 8 and beyond, and whether similar DI programs in Year 8 / 9 would impact student literacy levels, as measured on Gordon's lowa level 2 tests. In addition, the researchers would like to examine Fakota's (2003) claim of the motivational potential of DI programs, and their resultant impact upon student self-efficacy.

Conclusion

The problem of declining teaching time for class music is a problem not likely to diminish with the advent of the National Curriculum for the Arts, and may be worsened if the call for arts specialisation in primary school by the NAAE is adopted. The issue of maximising the efficient use of teaching time becomes even more important for music teachers in lower secondary school.

Accordingly, there is a need to investigate and consider all teaching methodologies and ideologies, especially those with a documented positive effective on students (Hattie, 2009), no matter how unfashionable they may be. The strength of this project is the finding that a small change in teaching approach can yield potentially substantial results.

The aim of music education is not just to prepare students for post-compulsory music courses. The real aim of music education is to develop musically literate students equipped with the skills and knowledge to experience the satisfaction, fulfilment and enrichment that a deeper level of musical engagement can bring to their lives. Yet music teachers are being asked to develop these essential skills and knowledge in an increasingly difficult environment of diminishing teaching time resulting from the prevailing 'arts taster' mentality. Students cannot engage at a deeper meaningful level if they lack the tools to do so. A Direct Instruction teaching approach, as outlined in this article, would appear to help fast-track the development of student music literacy and make up some of the ground lost in terms of diminishing teaching time. The Direct Instruction program described here is not a panacea but may become a powerful weapon in the music teachers' pedagogical armoury.

References

- Australian Curriculum, Assessment and Reporting Authority. (2011). *Shape of the Australian curriculum: The Arts*. Sydney, Australia: Australian Curriculum, Assessment and Reporting Authority, Australian Government.
- Bandura, A. (1997). *Self-Efficacy: The exercise of control*. New York: Freeman.
- Berkley, R. (1999). Classroom 4: Ways into notation and literacy. *Music Teacher*, 78(7), 27-30.
- Bowers, J. (1997). Sequential Patterns and the Music Teaching Effectiveness of Elementary Education Majors. *Journal of Research in Music Education*, 45(3), 428-443.
- Burke, H. (2005). Conflicts and misconceptions in the development of creative music education in Victorian State Secondary Schools. *Proceedings of the XV ASME National Conference* (pp. 35-40). Melbourne: University of Melbourne.

- Carnine, L., Englemann, S., Johnson, G. & Meyer, L. (1999). *Corrective Reading*. Columbus: McGraw-Hill.
- Clark, S. (2003). *Instructional technology, motivation, attitudes and behaviours: An investigation of at-risk learners in the middle school general music classroom*. Nashville: Universal Publishing.
- Department of Education, Science and Training. (2005). *Augmenting the diminished – National Review of School Music Education*. Canberra, Australia: Department of Education, Science and Training, Australian Government.
- Druffin, E. (1996). Direct Instruction Making Waves. *Catalyst*, 8(1), 1-6.
- Eggen, P. & Kauchak, D. (2006). *Strategies and models for teachers: Teaching content and thinking skills*. (5th edition). Boston: Pearson.
- Farkota, R. (2003). *The Effects of a 15 minute Direct Instruction Intervention in the Regular Mathematic Class on Students' Mathematical Self-efficacy and Achievement*. Unpublished doctoral dissertation, Monash University, Melbourne, Victoria.
- Gordon, E. E. (1991). *Iowa Tests of Music Literacy*. Chicago: GIA Publications.
- Gordon, E. E. (2003). *Learning Sequences in Music*. Chicago: GIA Publications.
- Grattan, M. (2006). Minister Trumpets Musical Reforms. *The Age*, August 29, p. 3.
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London: Routledge.
- Levitin, D. (2006). *This is your brain on music: Understanding a human obsession*. London: Atlantic Books.
- Lowe, G. (2008). *A study into year 8 student motivation to continue class music in Perth, Western Australia*. Unpublished doctoral thesis, Edith Cowan University.
- McVittie, J. (2008). *Teaching methods: Direct instruction*. Retrieved on September 12, 2009 from <http://www.usask.ca/education/coursework/mcvittiej/methods/direct.html>
- Price, H. (1992). Sequential Patterns of Music Instruction and Learning to Use Them. *Journal of Research in Music Education*, 40(1), 14-29.
- Rosenshine, B. (1979). Content, time and direct instruction. In P. Peterson & H. Walberg (Eds.), *Research on teaching*. Berkeley, CA: McCutchan.
- Rosenshine, B. & Stevens, R. (1986). Teaching functions. In M. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 376-391). New York: Macmillan.
- Sawyer, K. (2004). Creative teaching: Collaborative discussion as disciplined improvisation. *Education Researcher*, 33(2), 12-20.
- Schleuter, S. (1974). Use of standardized tests of musical aptitude with university freshman music majors. *Journal of Research in Music Education*, 22(4), 258-269.
- Smith, R., & Southcott, J. (2004). The effect of policy change on the Australian music curriculum: Inclusivity or de-skilling? *The Puerto Papers*, pp. 157-170.
- Stevens, R. (2005). Taking Stock of School Music Education in Victoria: The Lessons of History in the present context of the National Review. *Proceedings of the XV ASME National Conference* (pp. 24-29). Melbourne: University of Melbourne.
- Vukmir, L. (2002). Direct instruction – a quiet revolution in Milwaukee public schools. *Wisconsin Interest*, Spring, 41-50.
- Walker, R. (2005). Music Education and multi-literacies. What can be done. *Proceedings of the XV ASME National Conference* (pp. 24-29). Melbourne: University of Melbourne.
- Wolfe, D., & Jellison, J. (1990). Music and Elementary Education Students' Evaluations of Music-Teaching Scripts. *Journal of Research in Music Education*, 38(4), 311-321.
- Yarbrough, C., & Price, H. (1989). Sequential Patterns of Instruction in Music. *Journal of Research in Music Education*, 37(3), 179-187.

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