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**THE WOW FACTOR? A
COMPARATIVE STUDY OF THE
DEVELOPMENT OF STUDENT MUSIC
TEACHERS' TALENTS IN SCOTLAND
AND AUSTRALIA**

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Abstract

For some time there has been debate about differing perspectives on musical gift and musical intelligence. One view is that musical gift is innate: that it is present in certain individuals from birth and that the task of the teacher is to develop the potential which is there. A second view is that musical gift is a complex concept which includes responses from individuals to different environments and communities (Howe and Sloboda, 1997). This then raises the possibility that musical excellence can be taught. We have already explored this idea with practising musicians (Stollery and McPhee, 2002). Our research has now expanded to include music teachers in formation, and, in this paper, we look at the influences in their musical development which have either 'crystallised' or 'paralysed' the musical talent which they possess. Our research has a comparative dimension, being carried out in Scotland and in Australia. We conclude that there are several key influences in the musical development of the individual, including home and community support, school opportunities and teaching styles and that there may be education and culture -specific elements to these influences.

Introduction

There has been a considerable degree of debate in recent years about the nature of musical intelligence and what constitutes musical gift. In connection with this, a number of differing perspectives have emerged. The first of these may be described as the psychological perspective (e.g. Sloboda, 1985; Storr, 1992; Snyder, 2000) - although within this, there may be discerned a number of subdivisions. For example, one could view the issue from the point of neuropsychology (e.g. Gardner 1993,

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

Rauscher, 1995, Schlaug et al, 1995, etc): or from the viewpoint of perception

(Schiffman, 2000). Clearly, the emotional perspective would be another area within which music could be approached (Robertson, 2000). In terms of musical education, one might, for instance, look at the curriculum (eg Paynter, 1982), or at how musical ability develops over the programme of the educative experience (e.g. Moog, 1976; McDonald and Simons, 1989). Recent research has drawn contemporary psychological and educational perspectives together, and has shown that there are considerable links between the two areas. A metacognitive claim for music is finding increasing acceptance as a result of neurological and neuropsychological research, and it has been considered in a recent paper (Stollery and McPhee, 2002) involving two of the authors.

The concept of musical gift may also be seen to be rooted in a number of other debates. There is a general interest in the education of gifted pupils, and this interest is world-wide (Kirk et al, 2000) However, for our present purposes, we define musical gift as

A situation where receptive, creative, responsive and technical skills are at a highly developed level (Stollery and McPhee, 2002: 90)

Musical giftedness has been identified in a number of different ways. For example, a checklist-based approach has been advocated for some years and continues to be supported by some investigators (Hartounian, 2000). This approach is also one which has found favour amongst those investigating general high levels of ability amongst children (e.g. Passow, 1979). Nevertheless, there are others who advocate a more

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

developmental approach, in that rather than seeing children as *born* gifted - children can *become* gifted (Skinner, 1991). For the purposes of this paper, this is a very important distinction. And the logical concomitant of this position is that if giftedness in music is not simply the preserve of an elite few, then it is possible for it to be developed in many more, through teaching. In the context of this debate, Michael Howe believes that excellence may depend not only on inherited factors, but also on opportunities for learning and the way in which these are presented to individuals (Howe, 1990). It is the opinion of Davidson, Howe and Sloboda (1997) that while biological factors do have an undoubted role to play, we should not see the gifts and talents area in purely deterministic terms. Rather, we should also see it in terms of the environmental factors which influence development.

An important commentator in the area of musical excellence and the psychology of music is John Sloboda (1990). If musical excellence can in fact be developed by teaching, then Sloboda takes the view that there are a number of 'myths', which we need to explore. These 'myths' include the following:

- To be excellent in music, one has to be excellent to begin with;
- If one works hard, this will eventually lead to the attainment of excellence.

Further, if one is to attain excellence, then musical training from experienced musicians who have themselves displayed the appropriate qualities is essential. However, we are not looking at a situation where the idea that excellence can be developed through teaching, has replaced or supplanted the earlier model that

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

excellence is innate: there are still contemporary analysts such as Eastop (2001) who hold firmly to the older view.

We may therefore arrive at a position where it can be seen that there are really two positions amongst commentators in this area. The *first* of these is that musical gift is possessed by a few of the population, who may be seen as constituting an elite. These people require to have their inherent talents developed in a special way in order to maximise the potential which they represent. The *second* view is that musical gift is innate in all of us, and that the task of the educator is to ensure that this particular intelligence is drawn out and developed to the fullest extent.

Educating the musically gifted

It is possible to see reflected in the provision made for the education of musically gifted children the working out in practice of these two positions. To exemplify this, we shall use the situation in Scotland as a case study. There have been a number of studies undertaken in this field, both within the state sector and private institutions (McPhee, 2000). If we look first at the position that musical excellence is the preserve of a few, we can see, for example, the possibility of conservatoire-based provision through the Junior School of the Royal Scottish Academy of Music and Drama (RSAMD, 1998, 2001). Here, there are opportunities for young people who wish to develop their potential in music within the context of an internationally reputable institution. It is of interest that applicants for this particular provision are required to undertake entrance auditions and tests which serve to identify those within whom excellence, or the potential to be excellent, is thought to reside. Further, they are given tuition by practising, professional musicians in the various elements which they have

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

chosen to study. In this, the positions identified by Eastop, and by Sloboda in his 'myths', are seen to be operative. **The situation within the Faculty of Music at the University of Melbourne is similar.**

School Education of Musically Gifted Young People

A number of studies of the provision made within Scotland for the enhancement of musical excellence have been undertaken (eg McPhee, 2000; Stollery, 1997, etc.)

From these, we see that the two polarities are in fact represented: there are institutions which are designed to cater for an elite (eg RSAMD 1998, 2001) and to develop their musical ability to a very high level indeed - and there are others which strive to bring out musical excellence in all their pupils, where it may be seen to be ripe for development. It is interesting that the Cameron Report (Scottish Education Department, 1975) in which the interests of gifted young musicians and dancers in Scotland were considered, was of the opinion that the first model of elite provision was the more appropriate. However, since then a number of mainstream comprehensive schools have developed provision which indicates that the second model of the development of talent in large numbers of students is being successfully undertaken through the provision of ensemble opportunities and other means (McPhee, 2000). Likewise, in Australia, there exist opportunities at school level for the development of 'elite' musicians, and for the development of musical talent in mainstream schooling through similar ensemble provision and general instrumental and musical instruction.

The conditions in which excellence may develop.

If, as we **state**, it is possible that musical excellence or musical intelligence can be in fact developed through teaching, then it may be possible for us to identify those experiences in life which are more conducive **to** its development than others.

Similarly, it will be possible for us to identify those which act as barriers to it. We have, in our earlier work, chosen to call these *crystallising* and *paralysing* experiences, respectively. Thus, crystallising experiences will be those which have, in the musically educative and developmental history of the individual, served to enable growth in musical ability. Likewise, the paralysing experiences will be those which have served to stultify or to prevent it.

Our first research was carried out in 2001 at the conference of the Scottish Network for Able Pupils (Stollery and McPhee, 2002, op.cit). Here, we presented a paper on musical gift to an audience of professional educators, all of whom were practising musicians, and we used the opportunity to gather qualitative data on the crystallising and paralysing experiences which they had themselves experienced. We asked respondents if they could describe experiences **which had happened to them and which had had a significant positive or negative effect on their musical development.** The format used was that of a free text box. There was no questionnaire used, and at this particular session, there was no debriefing of the responses - although there was a very full and interesting discussion of the issues.

The responses to the crystallising experiences showed a distinct pattern, and the following appeared to be most significant to respondents:

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

- ◆ Parents affording opportunities, through instrumental provision and opportunities for exposure to music in various forms;
- ◆ Pupils given high self-esteem through reinforcement and praise;
- ◆ Motivation from a 'gifted' teacher;
- ◆ Motivation provided by other members of the family - siblings, etc - participating in musical activities;
- ◆ Motivation from a successful performance in front of an audience;
- ◆ Working with other musicians at the same and at different stages;
- ◆ Realising that one has the ability to respond to music

We identified from these responses that there was a general reference to the provision of opportunity, rather than attempts to shut potential down. Those who thought that they had achieved, had done so when they had been given the opportunity. We then turned to the paralysing factors, and here a number of key areas were suggested:

- ◆ Being embarrassed in front of a group by poor or inadequate performance;
- ◆ Ridicule from peers (e.g. for carrying an instrument to school or not conforming to the social norms of that particular group);
- ◆ Poor teaching/ boredom from tutors who operated a deficit model, with resultant destruction of confidence;
- ◆ Lack of opportunity to become involved in musical activity;
- ◆ Negative comments about playing;
- ◆ Negative effects about formal examinations in music and the processes leading to them;
- ◆ Costs of tuition in financial terms;

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

- ◆ Low importance attached to music by school or family;
- ◆ Time required for the practice thought necessary to be proficient;
- ◆ Pressure to perform to a high standard before confidence had matured;
- ◆ Inappropriate or boring repertoire;
- ◆ Ill informed personal comments by staff.

There was a range of features from the analysis of this admittedly small and unrepresentative sample which we thought important. Firstly, the number of comments relating to the paralysing or negative aspects were roughly in the proportion of two to one against those which were crystallising or positive in tone. Secondly, it was clear that there was great importance attached to the provision of opportunity for musical development. Thirdly - and for the purposes of this paper, perhaps most importantly - it was clear that the quality of teaching and tuition was of great relevance in deciding whether an individual's development was affected either in a positive or in a negative way.

If, as we have seen, teachers and teaching can play a critical role in musical development and thence into the attainment of musical excellence, it is therefore important to look at the development of music teachers themselves. Modelling is of great importance in looking at the ways in which people develop (Papalia et al, 2001): music teachers themselves are not immune from this process. Thus, it is also interesting to look at developing teachers of music and to see to what extent, their own development had been affected by the factors which our earlier study had identified. The authors of this paper are centrally engaged in the education of music teachers in Scotland and in Australia, - in terms of both music studies and education

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

studies - and the opportunity was present to look at our own students to see the extent to which crystallising and paralysing processes had influenced their own progress and development. (In fact, the institutions in which two of the authors of this paper are employed - the Universities of Aberdeen and Glasgow - are two of only three in Scotland involved in the undergraduate education of potential teachers of music). It was thought that such research, besides shedding some light on these processes as they affect our own students - and therefore a substantial number of the music teachers about to go into careers in Scotland, and in Australia - would allow further illumination of the crystallisation and paralysing processes in general.

Methodology

The methodology chosen was as follows, and was based upon the findings of the first study (the SNAP conference). Students in Scotland were gathered together in their year groups and the purposes of the study were outlined to them. They were then asked to undertake a similar process to that which had taken place at the conference – that is, they were given free text boxes and asked to list those factors which had been significant in terms of their development in either a positive (crystallising) or a negative (paralysing) way. All responses, in line with the original study, were anonymous. This was to allow students to make comments free from fear that in some way they could be identified and feedback given to tutors or other interested parties. They were provided with additional guidance as and when necessary by the researchers. The research data was then collated and the results were entered on spreadsheet grids listing each response and the frequency with which it occurred. The grids allowed analysis by comment and by institution. From these spreadsheet grids, two questionnaires were developed, listing the factors which had crystallised or

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

paralysed the experience of the Scottish students. These questionnaires were then given under guidance to student teachers of music at the University of Melbourne in Australia, in order to determine the extent to which experiences were similar in the two countries **and** cultures. Students were invited to tick as many factors as they thought applied to them: thus, it was possible for students to identify a spectrum of factors from all to none as applicable. In all, responses were received from 86 students in Scotland and from 46 students in Australia.

Results

In contrast to the pilot study, the number of crystallising responses from student teachers was much greater than the number of paralysing responses. In total 218 crystallising responses were received from the 86 Scottish students and 390 from the 46 Australian students. Similarly, 156 paralysing responses were received from Scotland and, **coincidentally**, 156 from Melbourne. Responses were also rank ordered in terms of the frequency of each response: this was the case for data both from Scotland and from Australia. Results are tabulated as follows:

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

Table 1

Crystallising responses

Factor	Scotland Ranking (response frequency)	Australia Ranking (response frequency)
Inspiring / Encouraging music teacher	1 (38)	6 (31)
Family influence and encouragement	2 (30)	5 (34)
Good school Music Department	3 (24)	8 (30)
Performing opportunities / ensemble contexts	4 (21)	1 (41)
Musical environment at home	5 (20)	10 (19)
Availability of / affinity with instrument	6 (16)	4 (33)
Performing opportunities incl solo opportunities	7 (15)	6 (31)
Hearing / watching others perform	7 (15)	3 (38)
Positive feedback on performance / exam success	9 (10)	9 (29)
Personal reasons – eg financial	10 (9)	11 (17)
Positive peer influence	11 (7)	14 (15)
Opportunities for travel abroad	12 (6)	15 (14)
Opportunities for composing / inventing	13 (4)	11 (17)
Feel good factor	14 (4)	2 (39)
Starting early	15 (1)	11 (17)

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

Table 2

Paralysing responses

Factor	Scotland ranking (Response frequency)	Australia ranking (Response frequency)
An over-critical music teacher or one who demanded too much from you	1 (27)	8 (10)
A poor music teacher	2 (24)	3 (17)
Not having money available to buy instruments and/or get tuition	3 (14)	8 (10)
Pressure to do well and to achieve high standards/ practise hard	4 (13)	1 (19)
Personal reasons - eg illness, lack of motivation	5 (12)	10 (8)
Lack of encouragement and interest from your family	6 (11)	12 (4)
Negative influence from other young people at school	7 (10)	12 (4)
Lack of support in the school	8 (8)	5 (11)
Lack of opportunities to play with other young people	8 (8)	4 (14)
The school discouraged me from doing music in favour of other subjects	8 (8)	12 (4)
Pressure from music exams	11 (6)	5 (11)
You were held back by classmates who were not as good at music as you	12 (5)	11 (7)
Being made to perform in front of others	13 (4)	12 (4)
Low self esteem	14 (3)	5 (11)
Having to take part in competitions or not doing well in them	15 (2)	15
Being nervous about performing	16 (1)	2 (18)

Discussion.

Perhaps the most immediate result likely to engender debate is the substantial number of responses delivered by the students in Australia compared to the number delivered by students in Scotland. This is *pro rata* true of both crystallising and paralysing factors. There may be two possible explanations for this phenomenon. The first of these is that the methodology, which set out to align the responses from the Australian students with those of the Scottish ones, might have pre-disposed the Australian students along the paths which had been laid out by their Scottish counterparts. In other words, the fact that particular crystallising factors had been *suggested* might have encouraged the Australian students to identify factors other than those which they might have thought of if presented with a free text box. But that in itself does not explain the bulk of the responses received from Australia. There were instances of 2 students, for example, who found it possible to identify all the crystallising factors as relevant to their own situations. Several others identified a majority of the factors as relevant, and there were only a few who checked off a very small number of factors. It is therefore possible to posit the view that the Australian students may well have undergone formative experiences which were *in general* more weighted towards crystallisation than those of the students from Scotland. The data does not lend itself completely to either explanation: it is possible to surmise that either or both of the reasons outlined above may be operative.

When the crystallising factors are examined, by response frequency and rank order, it becomes clear that there are significant differences between the students in Scotland and their counterparts in Australia. Whereas Scottish students ranked the importance of an inspiring teacher as first, those in Australia chose the provision or availability of

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

ensemble contexts for their performance skills (ranked fourth by the Scottish students). Similarly, the Australian students placed a lower emphasis on the importance of family interest and encouragement (5th) than the Scottish students, who ranked this in second place. This encouragement was more important to both groups than the existence of an overtly musical environment at home. Although there were some instances where both sets of students aligned their preferences – for example in the provision of performing opportunities for solo work or for opportunities for travel or the availability of an instrument – there were also instances of major discrepancy. Perhaps no instance illustrates this better than the ‘feel good factor’. Whereas the Australian students ranked this as second, the Scottish students relegated it to fourteenth place. Likewise, Scottish students seem to be much more influenced by **their peers** than **were** their Australian colleagues.

Finance seems to be of equal importance in the lives of both groups, but it is perhaps heartening to observe that neither group places this factor at the head of its priorities. **Listening to** - or watching - performance by others is more important to the Australian students, who ranked this factor as third in importance, than it is to their Scottish counterparts. Other factors such as opportunities for travel and starting early seemed to rank comparatively low in the estimation of both groups.

School or education-related aspects were ranked higher by the Scottish students than by the Australians. The primacy of the importance of an inspiring or encouraging teacher amongst the Scottish cohort has already been remarked upon. Likewise, Scottish students placed importance on the school music department as a crystallising element in their development. It is fairly clear from the data that the Scottish students

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

tend to emphasise home and school factors , whereas Australian students rank music-specific ones higher. This is interesting, as it may reflect the greater importance to the students in Scotland of the social circumstances under which they approach their musical education and training. On the other hand, it may equally reflect on a greater independence on the part of the Australian students which enables them to see beyond these social factors and into their own feelings and perceptions.

When the paralysing factors are considered, it is obvious that there are other divergences. Consideration of the paralysing factors can be useful, as it can act as a check on whether the perceptions of crystallising aspects is borne out: in other words, whether the negative influences in a student's formation are the obverse of the positive ones. In that respect it is clear that the influence of the teacher on students in Scotland is just as important in terms of paralysing their musical formation as it is in crystallising it. Scottish students place more emphasis again on standards of teaching and on quality of inspiration and encouragement than Australian students do. The perception that internal factors personal to the student are perhaps more important in general terms to the Australian sample that the social/interactional ones are to the Scots is borne out by the fact that the Australian students find pressure to achieve, the greatest factor in paralysis: likewise, they attach a high rank of importance to anxiety in performance and find the negative pressure to perform in examinations difficult. Perhaps most interesting of all in this context is the intimation by the Australian students that low self esteem is a paralysing factor. This does not seem to affect the perceptions of the students in Scotland to the same extent: indeed, very few of them identified this factor as significant in their experience. Australian students, on the other hand, seem to be less affected by an over critical music teacher than their

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

Scottish colleagues. Scots again commented on situational aspects such as family support as being important to their musical development. While Australians also developed this response, they did not do so to the same extent. Scots were more likely, too, to be affected by negative comments and pressures at school that the Australians were.

Lack of opportunities for ensemble playing was more serious for Australian students than for the Scottish group. This may reflect the situation in the schools: schools in Scotland have moved over recent years to establish ensemble groups in a number of contexts, both classical and popular. Some reinforcement for the view that Scottish students are better supported in schools is given by the fact that there were more Australian responses citing **lack of** school support as a paralysing factor than Scottish ones.

One interesting finding is that the factor ranked third in terms of the Scottish responses was the lack of available finance for resourcing a musical career. While availability of finance did not figure largely in the crystallising responses – in other words, the fact that money was available for instrument purchase and for tuition did not in itself **predict substantial** musical development – it does seem to figure as a paralysing agent. Moreover, the issue of availability of resources is more important to the Scots than to the Australians. Fortunately, neither group of students feels held back by the slower progress of classmates – thus perhaps pointing to an awareness of musical talent and how to cope with it amongst the teaching forces of both nations.

Commentary

While our sample in the present study is a larger one than that which was used in our previous work on this topic, it is nevertheless one which has to be treated with some care when conclusions are being drawn. Although the students involved in the research are studying music in higher education and although many of those involved in the Scottish cohort are students at the national conservatoire and those in Australia are receiving a conservatoire education in the Faculty of Music, all of the students are being educated to become teachers of music rather than professional performers. Thus, although they are very competent and excellent in terms of their performance skills - necessary for admission to all programmes in the Faculty - they may in some quarters not be seen as the pinnacle of musical giftedness in Scotland. Such students might well have had a highly specialised musical education, perhaps in a dedicated institution, rather than the broader curriculum more generally offered in that country. This, in turn, will to a certain degree affect the responses which the students have given us. Secondly, the sample, being education students, might well be expected to be more aware of pedagogical issues than another sample composed of music students receiving no education input. It would be an interesting exercise to see how such students would respond. Thirdly, the students are bound to be affected by institutional factors in terms of the programmes which they are currently pursuing and the personalities which they encounter on these programmes - and there is, particularly in the responses indicating the importance of composition to some students, evidence that this is happening. However, the sample may also be seen as fairly homogeneous in that these are young - and occasionally more mature - people who are pursuing a common aim in their musical studies and for whom there will be a certain similarity in the learning outcomes of the programmes. In this sense, then, we feel that it is valid

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

to attempt some generalisation from the evidence which we have obtained in this research.

The results would seem to indicate three main findings: firstly, that student music teachers in Scotland identify social and contextual factors as important in their musical development; secondly, that their colleagues in Australia place greater importance on internal personal factors; **thirdly**, that both groups identify areas over which the schools that they attended have influence, as critical in their development. The task of this section of the paper is to examine these findings and to look at reasons for them.

In terms of the indication that social factors are important in the development of the Scottish students, one can speculate on a number of possible reasons. Students of music in Scotland tend to come from mixed backgrounds, but there is a preponderance of students from middle class backgrounds in training for music teaching, and this fact is recognised by the national conservatoire in its development of access programmes to ensure a more even social mix (**RSAMD, 2001**). Therefore, it might appear to be reasonable to assume that solid family backing and in some cases a solid family musical environment would be of assistance in crystallising music development. Against this, it could well be argued that the same factors would apply in the case of the students from Australia, where arrangements for the financing of studies are perhaps harsher.

Secondly, the indication by the Australian students that they valued music – personal specific factors more highly in terms of their development is interesting. This may

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

point to a greater independence – but against this is the fact that the Australians were more likely to suffer from poor self-esteem and nerves in performance. What is clear, however, is that in terms of both the groups of students there are cultural factors – for example, related to expectations and social contexts - at work in terms of their musical development; and this may in itself be the most important result from this research.

Thirdly, the importance of school-specific factors to both groups of students is important and interesting. It is clear that both groups are affected by inspiring music teachers in terms of the crystallisation of their development and equally affected by poor ones in terms of the paralysing of their development. To a large extent, this is a predictable finding. However, a caveat has to be added in that it must be recognised that teaching – particularly instrumental teaching – may well occur outside the school environment. The finding that the role of the teacher and the school is of critical importance in the development of musical excellence is one which is supported by other research (Sloboda, 1985 op cit; Swanwick, 1988, etc.) Our study has reinforced this, and, given the fact that our sample is composed of aspiring teachers of music, perhaps gives it an extra edge. The commentary by many of our students on the importance of teaching style gives focus to the importance of pedagogy in framing conditions and an ethos within which the crystallisation of musical ability can occur. This, likewise, has been commented upon by others (e.g. Swanwick, 1988, 1994.) It is therefore important that firstly, our students keep in mind the extent to which their own development was either hastened or hindered by appropriate or inappropriate pedagogy, and that they rehearse the correct skills in their own teaching. It is also

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

clearly important that institutions of teacher education should impress upon students the creation of a suitable teaching style and a fertile classroom ethos (Farmer, 1979).

It is very interesting to observe that the importance of ensemble opportunities is very high for the Australian cohort, but perhaps more taken for granted by their Scottish colleagues, who placed emphasis on the importance of a good music department – again a social, contextual feature rather than a personal specific one. Nevertheless, it is clear that such opportunities are of critical importance in the formation of musical talent in a generic sense, and there are implications for school pedagogy and management here.

Conclusion.

This paper commenced with the idea – part of contemporary debate - that even if musical ability is not necessarily innate, then it is possible for it to be developed in an individual through teaching, to a high degree. This idea was further expanded to investigate the factors which may either work positively (crystallise) or negatively (paralyse) towards that musical development. The investigation was carried out within two distinct systems of musical education, the Scottish and the Australian, to introduce a comparative element and to identify which factors might be culture specific and which more generic and universal.

The findings indicate that there is indeed a range of factors which are universal in musical development. These include the importance of good teaching and opportunities for development with other young musicians. These aspects of social learning are perceived as of much greater importance to those who participated in our

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

study than solo opportunities. Secondly, there are factors which are culture-specific and which relate to the social and contextual environments in which musical learning takes place. Such factors include family encouragement; the encouragement of peers and the opportunities for musical development provided by schools.

This paper has merely scratched at the surface of a much larger debate, about the nature of activities which are undertaken in order to foster and develop musical talent. Consideration of where, and how, that development should start and take place – needs to be taken forward. Further research is also needed in terms of the aetiology of musical development and it would be an interesting exercise to establish which of the crystallising and paralysing factors are most important at different stages in this process. This should constitute a further stage in the contemporary research agenda.

References and Bibliography

BENTLEY, A. (1966) *Musical Ability in Children and its Measurement*. (London, Harrap).

DAVIDSON, J, HOWE, M.J.A. & SLOBODA, J.A. (1997) 'Environmental factors in the development of musical performance skill over the life span', in:

HARGREAVES, D and NORTH, A (Eds), *The Social Psychology of Music*, pp. 188 – 206. (Oxford, Oxford University Press).

EASTOP, P. (2001) 'Teaching Self-teaching, in: PAECHTER, C; PREEDY, M , SCOTT, J and SOLER, J (Eds), *Knowledge, Power and Learning*. (London, Paul Chapman Publishing).

FARMER, PAUL (1979) *Music in the Comprehensive School*: (London and New York, Oxford University Press):

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

GARDNER, H. (1993) *Frames of Mind: The Theory of Multiple Intelligence*.

(London, Fontana).

HARGREAVES, D. J. & NORTH, A. C. (1997) *The Social Psychology of Music*.

(Oxford, Oxford University Press).

HARTOUNIAN, J (2000) Perspectives of Musical Talent: a study of identification criteria and procedures. *High Ability Studies*, 11, No 2, pp 137-160

HOWE, MJA (1990) *Sense and Nonsense about Hothouse Children; A Practical Guide for Parents and Teachers*. (Leicester, BPS Books - The British Psychological Society).

JOHNSTON, D (2002) Scottish Local Government Reform and Instrumental Music Instruction. *Scottish Educational Review*, 33, No 2, 133-141

KIRK, S; GALLAGHER, J & ANASTASIOW, N (2000) *Educating Exceptional Children*. (New York, Houghton Mifflin)

McDONALD, D & SIMONS, G (1989) *Musical Growth and Development*. (New York, Schirmer Books)

MCPHEE, A. D. (2000) *The identification of children gifted in music and ways in which their needs are met: an example from Scotland*. Paper presented at the Scottish Association for Music Education 4th Scottish Conference on Music Education; Dundee, 8th September 2000

MOOG, H (1976) The development of musical experience in children of pre-school age. *Psychology of Music*, 4 No 2, pp 38-45

MILLS, J. (1985) Gifted Instrumentalists: How can we recognise them? *British Journal of Music Education*, 2, No 1, pp. 39 – 49.

PAPALIA, D; OLDS, S & FELDMAN, R (2001) *Human Development*. (New York, McGraw Hill)

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

PASSOW, A. H. (1979) *The Gifted and the Talented, their Education and Development: by the yearbook committee and associated contributors*. (Chicago: NSSE, distributed by the University of Chicago Press).

PAYNTER, J. (1982) *Music in the secondary school curriculum: trends and developments in class music teaching*. (Cambridge New York: Cambridge University Press, for the Schools Council).

RAUSCHER, F, SHAW, G. & KY, K. (1995) Listening to Mozart enhances spatial-temporal reasoning: Towards a neurophysical basis. *Neuroscience Letters*, 185, No 1, pp 44-47.

ROBERTSON, P. (2000) Why does music affect people as it does? *RSA Journal*, 3 No 4, pp 66-74

THE ROYAL SCOTTISH ACADEMY OF MUSIC AND DRAMA (RSAMD) (1998) *Junior School Prospectus*. Editions 1998 – 2001 (Glasgow, RSAMD).

THE ROYAL SCOTTISH ACADEMY OF MUSIC AND DRAMA (RSAMD) (2001) *Outreach Development of Junior Academy*. (Glasgow, RSAMD).

SCOTTISH EDUCATION DEPARTMENT (SED) (1975) *Gifted Young Musicians and Dancers: Report of a Working Group set up to consider their general and specialised education* (The Cameron Report) (Edinburgh, Her Majesty's Stationery Office)

SCHIFFMAN, H R (2000): *Sensation and Perception* (New York, John Wiley)

SCHLAUG, G, LUTZ, J, HUANG, Y & STEINMETZ, H (1995) *In vivo* evidence of structural brain asymmetry in musicians. *Science*, 1995, 267, pp 699- 701.

SCHWARTZ, L.L. (1975): *The Exceptional Child: A Primer* (Belmont, California, Wadsworth).

SKINNER, D. (1991) 'Mozarts in our Midst?' *Times Educational Supplement* (06/xii/91)

The Wow Factor? Development of Student Music Teachers' Talents in Scotland and Australia

SLOBODA, J. (1990) Musical Excellence - How does it develop? in: HOWE, MJA (Ed) *Encouraging the Development of Exceptional Skills and Talents*. (London, BPS Books for the British Psychological Society).

SLOBODA, J (1985) *The Musical Mind: the cognitive psychology of music* (Oxford, The Oxford University Press).

SNYDER, B. (2000): *Music and Memory* (Cambridge, MIT Press).

STOLLERY, P & McPHEE, A (2002) Some perspectives on musical gift and musical intelligence. *British Journal of Musical Education*, 19, No 1, pp 89-102

STOLLERY, P (1997): *Scaling the Heights: Report on research findings for Scottish Network for Able Pupils project*. (Glasgow, St Andrew's College and SNAP).

STORR, A. (1992) *Music and the Mind* (London, Harper Collins).

SWANWICK, K. (1988) *Music, Mind and Education* (London, Routledge).

SWANWICK K. (1994) *Musical Knowledge, Intuition, Analysis and Music Education* (London, Routledge).