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CHARACTERISTICS OF MUSIC TEACHERS AND THE PROGRESS OF YOUNG INSTRUMENTALISTS

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Running head : Music teacher characteristics and learner progress

ABSTRACT

This study investigated the role of some key characteristics of teachers in the development of musical ability. Interviewing 257 children who differed in the extent of their instrumental mastery, it was discovered that the most successful learners regarded their teachers differently to those children who ceased music tuition. The more successful learners rated their first teacher higher than other learners on personal dimensions such as friendliness, and rated their current teacher higher than other learners on task-oriented professional dimensions such as pushiness. Additionally, the highly successful learners studied, on average, with more teachers than the other learners. These learners also generally received more individual instruction than the children who eventually ceased lessons. These findings confirm the importance of matching teacher characteristics to the changing requirements of learners in enabling the development of high levels of musical expertise.

INTRODUCTION

Research on the acquisition of skills during childhood (cf. Chase and Simon, 1973; Monsaas, 1985; and Davidson and Scripp, 1988) shows that the particular kinds of support adults provide can have a major influence upon the nature and form of a child's accomplishments (Baumrind, 1989). The two groups of adults who have the greatest influence on children's learning are parents and teachers (Marsh and Craven, 1991).

The significant role of parents in learning a musical instrument has been demonstrated in a number of studies (Sosniak, 1985; Sloboda and Howe 1991; Howe and Sloboda, 1991 a&b; and Davidson, Howe, Moore and Sloboda, 1996). In all cases, successful young musicians reported that they would not have maintained a routine of regular and frequent practice were it not for the fact that their parents strongly encouraged this, and at times insisted on it, in the early years of learning. Indeed, many parents reported attending lessons with their child.

The role of teachers in the development of skills has also been studied with emphasis being placed on the effect of teachers' expectations on learner achievement - with low achievement and low teacher expectation being highly correlated (Rosenthal and Jacobson, 1968; and Blatchford, Burke, Farquhar, Plewis and Tizard, 1989). In music education research most of the investigations have focused on teachers delivering a curriculum in classroom contexts, where a single teacher works alone with a large group of children (Cassidy, 1990; Duke and Madsen, 1991; Hendel, 1995; Madsen and Alley, 1979; Madsen and Geringer, 1989; Yarborough and Price, 1989). These findings have demonstrated that the teacher's personal intensity (Madsen and Geringer, 1989), use of sequential patterns of instruction (Yarborough and Price, 1989), and high approval and reinforcement techniques (Madsen and Alley, 1979) all positively influence student learning. In learning a musical instrument, however, the teaching context is quite different with the teacher most often working with a single student or in a group of six or less children. This suggests that the personal relationship between teacher and child when learning music may be particularly important in music instrument learning in comparison to other skills. Therefore children's perceptions of the characteristics of their teachers may provide an important indication of their likelihood of maintaining an interest in music.

The central concern of the current paper is to examine the relationship between perceived characteristics of children's instrumental teachers and their level of

achievement. This current investigation is based on data collected in England, and is motivated by a number of considerations. Firstly, the previous research in the area has a number of shortcomings (e.g. Sloboda and Howe, 1992). It has been largely qualitative and unsystematic; it has studied rather small numbers of individuals; and most studies have not compared high achievers with suitably comparable low-achievers. Secondly, the recent decline in state funding of instrumental tuition in England has led to a new situation for many learners and their families. More children are now learning musical instruments than ever before, and parents have to decide whether to pay directly for private individual instrumental tuition, or to rely on classroom provision which is increasingly provided in groups, if at all. In this context, these choices, together with choices about how much importance to place on the various personal and professional qualities of the teacher, and how often to change teacher, are increasingly ones which parents require clear guidance on. This study aims to provide firmer scientific foundations for such guidance.

The scant previous literature on individual music tuition has tended to focus on the role of the initial teacher. These reports (for instance, Howe and Sloboda, 1991b) indicate that the first teachers were regarded by the young music learners as significant influences on their musical skill acquisition, with many young musicians attributing their increasing interest in a particular instrument to having established a good personal relationship with the teacher.

Personal warmth is most typically found in relationships characterised by affection and intimacy, as between spouses or parents and children (McDonald, 1992). It appears, therefore, that the children in Howe and Sloboda's (1991b) study may have established familial-type relationships with the initial teachers. Such a hypothesis would fit with results showing that the parents of highly skilled young musicians tended to attend lessons and therefore interact with the child's teacher. This close parent-teacher contact may have on occasion resulted in the teacher being adopted by the child as a parental figure.

Because most of the previous research in music learning has focused on the initial teacher, it has not taken into account the fact that older children (13-16 years in particular) behave quite differently towards adults than children under the age of 12 years (Youniss and Smollar, 1985). Csikszentmihalyi, Rathunde and Whalen (1993, p184) have suggested that teenagers become: "singularly uninspired by the lives of most adults they know". Csikszentmihalyi and McCormack (1986) showed that school teachers who presented challenges to teenage students by, for instance,

demonstrating personal talents and commitment to their own subject area, were perceived to be the most effective and admired instructors. The teachers were regarded as role models for their specialist skills, and not admired for characteristics such as personal warmth. Thus, it may be that professional and personal qualities of teachers have significant, yet quite different effects on musical instrument learning depending on the young learner's own individual stage of development and her/his perception of different teacher qualities.

There is evidence to suggest that gender may also have a role in how young learners respond to different teacher characteristics. For instance, it has been shown that females tend to display and respond best to nurturance, caring and emotional support and agreeableness (McDonald, 1988). Additionally, girls tend to engage more readily in intimate, confiding relationships than boys (Douvan and Adelson, 1966; Buhrmester and Furman, 1987), and girls also tend to place a greater emphasis on personal commitment in relationships with others (Miller and Simon, 1980; and Norman and Harris, 1981). Boys are generally treated differently by their parents and teachers (Rutter, 1987), with far more emphasis in their training being placed on success and achievement than in the training of girls. From this evidence, it is possible to hypothesise that females may respond more readily to teachers who they perceive to possess personal warmth characteristics than boys, but boys may be more geared for an achievement-oriented teaching programme.

Studies of college students showed significant differences in the training of those who succeeded and those who failed to achieve skills in mathematics (Stanley and Benbow, 1983). The current body of research into musical achievement has not examined the characteristics of the teacher in cases where the child has ceased music study, and the current study is designed to address this gap in the literature.

Given that instrumental teachers may have such an important effect on learner's progress, it is important to address the issue of change of teacher. Bamberger (1986) has shown that as skill increases during the years of training to become a musical performer, a series of transitions to increasingly expert teachers and learning environments is common. The young pianists who she studied typically moved from their first to second teacher after two or three years of study in order to receive more expert instruction appropriate to their high skill level. Results obtained by Sloboda and Howe (1991, 1992) in studies of high-achieving young musicians largely support Bamberger's finding that transitions between teachers occur between two and three years of study, although it appeared that a substantial proportion of the changes were

for non-musical reasons such as the family moving to a different part of the country. They also showed that where the change from the first teacher was precipitated by dissatisfaction with that teacher children were less likely to attain the very highest level of achievement on that instrument. Despite the considerable complexity of the earlier findings, it is reasonable to expect that, overall, successful learners will change teacher more often than less successful learners, reflecting their changing skills and needs.

Since in musical instrument learning contexts in Britain both group (around six, usually playing the same instrument) and one-to-one tuition occurs, it is anticipated that children in one-to-one tuition may progress more than those in small group settings. Indeed, Kosta (1984) showed that in one-to-one music teaching contexts, large amounts of student re-inforcement occurred. Clearly, when six pupils are sharing the same time with a teacher such strong re-inforcement cannot occur, as Barnes (1976) observed, the quality of the relationship between a child and teacher is diluted in a group situation.

The present study examines children who have successfully acquired musical skills and have continued to high levels of achievement in musical performance, and compares these to children who have stopped receiving lessons. In particular, investigation was made into four specific areas of concern arising from the literature review:

- i) how children assess individual personal and professional characteristics of teachers. The rating scales used (e.g. friendly / unfriendly, good player / bad player) were derived from the results of a previous study (Sloboda and Howe, 1991) in which over 40 young musicians had been interviewed in a semi-structured format. The adjectives defining the poles of these scales were spontaneously offered in participants' reminiscences of their teachers. The present study is the first to compare the responses of a large number of young instrumentalists using such standardised ratings based on dimensions supplied by the students themselves;
- ii) the effect of the learner's gender on his/her perception of the teacher's characteristics;
- iii) the frequency of and reasons for changes of teacher;
- iv) the proportions of lessons taught in either small group or one-to-one settings.

METHOD

Structured interviews in line with those described by Robson (1993) were administered to five groups of children and their parents. In determining particular issues to be examined and formulating the specific questions to be posed, note was taken of the responses given by the child and parent participants in earlier biographical interview studies of young musicians (Sloboda and Howe, 1991). Questions were asked about many aspects of the child's musical life including formal and informal practice on each instrument learned, and about the child's perception of the role of music in her/his life. The current study focuses on the participants' responses to those questions which investigated the influence exerted by teachers during the time the child was involved in playing musical instruments.

Participants

The participants in this study were 257 young people aged between 8-18 years who had received tuition on at least one musical instrument. Five populations were sampled, to produce five groups selected to reflect different levels of musical achievement. The groups were comparable in terms of the proportion of male and female participants, and in the kinds of main instrument played, socio-economic backgrounds, and the range of the participants' ages.

Group One: Highly successful and serious musicians

Group One consisted of 119 young musicians who attended a highly regarded selective specialist music school in England. Entrance to this school is determined solely by competitive musical auditions. Accordingly, the individuals in this group were regarded as representative of the highest level of musical achievement possible among young British instrumentalists.

Group Two: Competent serious musicians

Group Two comprised 30 children from a wide range of UK locations who had applied for but failed to gain a place at the specialist music school.

Group Three: Competent young musicians

This group was made up of 23 young people, again from various locations in Britain. These were individuals who were sufficiently serious about a musical career for their parents to have made enquiries about applying to the music school, but they did not follow up their enquires.

Group Four: Amateur young musicians

Group Four comprised 27 children who all learned musical instruments, but attended a non-specialist state school of a similar social composition to the school attended by participants in Group One. None of these children regarded music as a potential career.

Group Five: Young 'Ex-musicians'

Finally, Group Five included 58 children who had started playing an instrument but had ceased doing so at least one year prior to the present study. These children attended the same school as the children in Group Four.

The hypothesised differences in musical competence between all five groups of children were confirmed by objective data from the results of participants' practical musical examination achievements (Associated Board of the Royal Schools of Music, Trinity College Examination Board, and The Guildhall School of Music Examinations). It was discovered that Group One had achieved the highest level of success in these examinations, and Group Five demonstrated the lowest level of achievement, with the other groups falling at intermediate points between these extremes (cf. Sloboda, Davidson, Howe, and Moore, 1996).

Procedure

Each child was interviewed alone by one of the authors, either face-to-face (75% of the interviewees) or by telephone (25% of the interviewees). In addition, at least one parent of each child was interviewed in a similar manner (75% by telephone, and 25% in person). Target questions were used to establish the reliability of the children's responses. From a total of 514 interviews, there was only one instance where there was disagreement between the child and his/her parents' accounts of events.

Children were asked about various facets of the teaching they had received. In all cases, respondents were asked to describe events relevant to the questions and situate them in terms of other important events in their lives in order to provide responses as closely based in fact as possible. Responses given were allocated to pre-determined categories. These response categories were derived from ones used by Sloboda and Howe (1991) in coding their interview data according to techniques described by Oppenheim (1992). Of particular interest were the ratings given to the first instrument played and on their main instrument. The main instrument was the instrument that

individuals considered to be their best instrument, and the one on which they concentrated their attentions.

Areas of questioning:

In the interviews the respondents were asked the following:

- i) to rate the characteristics of first and last teachers on each instrument studied according to seven bipolar scales: friendly - unfriendly, relaxed - stiff (tense), chatty - quiet, encouraged me to work - did not encourage me to work, pushed me - did not push me, good teacher - bad teacher, good player - poor player. Children indicated which point on a seven-point ordinal scale (whose end points were the bi-polar adjectives) best represented their judgement of the teacher. As these were subjective views, parents were not asked to confirm these data.
- ii) to give the dates when they changed teachers on each instrument. Both parents and children were asked simply to state the amount of time (in months) that the child had studied with each teacher on each instrument learned. This information was recorded relative to the child's age during the period when study occurred. For example, one child studied for eighteen months between the ages of 6 and 7.5 years with the initial teacher on the main instrument.
- iii) to give reasons why they changed each teacher. Children and parents were asked to indicate why there were changes of teacher. Responses were coded into four categories: 1) sought a better teacher; 2) child or teacher moved house; 3) child encountered personality problems with the teacher; 4) other reasons.
- iv) to say, for each teacher, whether lessons were given in individual or group sessions.

All responses were coded at the time of interview (according to methods described by Oppenheim, 1992), and interviews were tape recorded so that the reliability of the original codings given by the interviewer could be checked. Taking a random sample of 10 interviewees, an inter-rater concordance between two independent raters of 95% was obtained.

RESULTS

Ratings of teacher characteristics

The first analysis examined children's ratings of the characteristics of the first and last teachers of their main instruments according to achievement group and gender. A series of repeated measures analysis of variance were undertaken (see Hertzog & Rovine, 1985, for a selective review of this approach) with first/last teacher as a

within-subjects factor and with gender and achievement group as between-subject factors.

Gender effects

The analyses revealed there to be no overall differences between boys and girls in their ratings of any of the seven teacher characteristics. There was, however, an interaction of gender by first/last teacher on the variable labelled pushiness [$F(1,173) = 7.58, p < .01$]. The source of the interaction was that the boys' last teachers were rated as being more significantly pushy than the last teachers of the girls [Boys, 2.3; Girls, 3.0]. A significant gender difference was not found for first teachers [Boys, 3.6; Girls, 4.0].

[Table 1 about here]

Effects of achievement group and first/last teacher

The mean group ratings of the characteristics of first and last teachers on the children's main instruments are shown in Table 1. Note that for simplicity the ratings of boys and girls are not shown separately in the table. There were significant main effects of achievement group in ratings of the friendliness of teachers [$F(4,173)=5.63, p<.001$], of how relaxed teachers were [$F(4,173)=5.64, p<.001$], in ratings of how chatty teachers were [$F(4,173)=3.92, p<.005$], and in ratings of how encouraging their teachers were [$F(4,173)=4.57, p<.005$]. In all cases, Group Five gave the least positive ratings.

There were significant main effects of teacher, with participants rating their last teachers as being more friendly, more relaxed, more chatty, more encouraging and more pushy than their first teachers [Friendly, $F(4,173)=7.80, p<.01$; Relaxed, $F(1,173)=7.48, p<.01$; Chatty, $F(1,173)=5.79, p<.05$; Encouraging, $F(1,173)=12.03, p<.005$; Pushy, $F(1,173)=40.67, p<.001$]. Children also rated their last teachers as being better overall teachers and better players than the first teacher [Good-teacher, $F(4,173)= 37.95, p < .001$; Players, $F(1,173) = 26.76, p<.001$]. However, on these latter two variables there were significant interactions between the group and teacher factors [Good-teacher $F(4,173) = 2.91, p<.05$; Good-Player $F(4,173) = 6.58, p<.001$]. The source of both these interactions appeared to lie with Group Five. Whereas, Groups One to Four rated their last teacher as being 1-2 points better as an instructor than their first, there was, on average, only a small difference in ratings given by Group Five to their first and last teachers. Also, in the case of instrumental expertise,

Group Four children did not regard their last teacher as being particularly different from their first. There were no other significant interactions.

Achievement group differences in ratings of the last and first teachers.

When making comparisons between individual groups within an analysis of variance design it is common to use a bonferroni adjustment whereby probability values are adjusted according to the number of possible comparisons to be made. In this case, on any one scale, a total of ten between-group comparisons could be made at each level of the within subject factor (first/last teacher), and the probability level was corrected accordingly (alpha set at .005). The significant between-group differences are marked in Table 1. The only significant differences between achievement groups in ratings of their first teachers were on ratings of the friendliness and playing ability. The corrected t-tests revealed that Group Five rated their first teacher as significantly less friendly than Group One, and that Group One rated their first teachers as significantly worse players than Groups Four or Five did. Turning to last teachers, Group Five differed significantly from Groups Two and Three in their ratings of how relaxed their teacher was, with Groups Two and Three rating their last teachers as significantly more relaxed. Group Five also rated last teachers as significantly lower in encouragement than did the children in all other groups. Group Five rated last teachers as significantly worse teachers than did any other group. Group Five also differed significantly from Group Two in their ratings of their last teacher's playing ability.

Principal components analysis

To examine the subjects' ratings of teachers further, we performed two principal components analyses, one on the ratings of the first teacher, and one on the ratings of the last teacher. Principal components analysis is a means of extracting constructs that may underlie ratings on a larger number of scales. Although the principal components extracted from this analysis are necessarily composed of linear combinations of just the seven variables, they may help to suggest the fundamental constructs children use when characterising their teachers.

In the analysis of first teacher ratings, examination of the Eigen values led to a two-factor solution as the most parsimonious [Factor 1, eigenvalue = 3.02; Factor 2, eigenvalue = 1.47]. This suggests that there are two fundamental constructs that account for the differences in group ratings of teachers. These two factors together accounted for 64% of the variance within the seven subscales [Factor 1 = 43.1%; Factor 2 = 21.0%]. Figure 1 shows a plot of the seven variables against these two

factors. The plot helps us in attempting to attach a label to the underlying constructs (Note that Varimax rotations were applied to the factor loadings and these are plotted here. Rotated factor scores are also used on subsequent analyses).

[Figure 1 about here]

The plot suggests that the main factor by which children may be characterising teachers appears to be a dimension representing the personal qualities of the teacher as an individual (although other labels may be appropriate), with the variables labelled friendliness, relaxed, and chatty loading highly on this factor, [Factor 1 loadings: Friendly, 0.84; Relaxed, 0.81; Chatty, 0.75; Encouraging, 0.4; Pushy -0.21; Good Teacher, 0.35; Good Player, 0.15]. The second factor seems to represent characteristics of the teachers relating more to professional task-oriented behaviours, with the variables labelled encouragement, pushiness, good/bad teacher and good/bad player loading more highly [Factor 2 loadings: Friendly, 0.16; Relaxed, 0.13; Chatty, 0.06; Encouraging, 0.65; Pushy, 0.75; Good Teacher, 0.81; Good Player, 0.71]. Thus it would appear that students used two underlying constructs (tentatively labelled "personal" and "professional") which young people might be applying when judging their teachers.

A principal components analysis on the seven ratings of the last teachers' characteristics suggested that two similar factors also underlie the judgements made here [Factor 1, eigenvalue = 3.27; Factor 2, eigenvalue = 1.21]. These two factors accounted for 64% of the variance [Factor 1 = 46.8%; Factor 2 = 17.4%] and appear to be almost identical in their meaning to those extracted for the ratings of the first teacher. Figure 2 shows a plot of the seven variables against the first two factors.

[Figure 2 about here]

On the first factor the variables labelled friendliness, relaxed and chatty once again loaded highly [Factor 1 loadings: Friendly, 0.79; Relaxed, 0.83; Chatty, 0.79; Encouraging, 0.31; Pushy, -0.2; Good Teacher, 0.46; Good Player, 0.42]. This could similarly be labelled a "personal" factor. On the second factor the variables labelled encouragement, pushiness, good/bad teacher and good/bad player again loaded more highly than the other scales [Factor 2 loadings: Friendly, 0.32; Relaxed, 0.11; Chatty, 0.04; Encouraging, 0.79; Pushy, 0.74; Good Teacher, 0.68; Good Player, 0.52] suggesting that this again represents a "professional" factor.

The factor scores of the professional characteristics and personal qualities were computed for each individual for the first and the last teachers. One-way analyses of variance were then performed to see whether groups differed in these scores.

For the first teacher, on the first factor, "personal qualities", there were significant differences between the groups [$F(4,250)=3.53, p<.01$]. Post-hoc Tukey tests revealed there to be a significant difference between Groups One and Five in their factor scores, with Group One's teachers rated as having significantly higher personal scores for personal qualities than the teachers of Group Five. On the second factor, "professional characteristics", there was no significant difference between the groups in factor scores. This suggests that the groups did not differ in their ratings of the professional abilities of their first teacher.

The groups also differed significantly in their last teachers' personal quality scores [$F(4,178) =2.67, p<.05$]. Post hoc Tukey tests revealed that on this factor Group Five differed significantly from Group Two but not from Group One.

For the last teacher on the second factor (professional qualities) the Groups differed significantly in their teachers' factor scores [$F(4,178)=4.47, p<.005$]. Post-hoc Tukey tests revealed that the last teachers of Group Five had significantly different factor scores than Groups One, Two and Three. The more successful music learners rated their last teachers as possessing high levels of professional qualities. These scores were much higher than those given by the children who gave up lessons.

In summary, when examining factor scores derived from the bi-polar ratings it appears that the initial teachers of Group One differ from Group Five in their scores on the personal factor, but do not differ in their scores on the factor representing their professional characteristics. In contrast, later in learning, the professional rather than the personal qualities of teachers appear to differentiate the groups more clearly, with the teachers of Groups One, Two, and Three having significantly different professional factor scores from those of Group Five. Of course, it is important to note that a difference in ratings given by groups does not necessarily mean that the teachers themselves so differed. We only have access to student perceptions of such differences.

Number of teachers on each instrument

On the first instrument played, Group One and Two had, on average, around 2.5 teachers during the period of playing, compared with around 1.5 teachers in Groups Three, Four, and Five (See Table 2).

[Table 2 about here]

Of course the group differences in the number of teachers may be a consequence of the number of years which individuals played these instruments, Table 2 shows that Groups One and Two appear to have played their first instrument for a longer period than the other groups. However, an analysis of covariance revealed that, even when controlling for the length of time individuals played their first instrument, there were significant differences in the average number of teachers that individuals had over the period of playing their first instrument [ANCOVA: $F(4,251)=3.26, p<.05$].

A similar pattern emerged when examining the number of teachers that individuals had on their main instrument - the instrument that individuals considered to be their specialist instrument. Table 2 shows the mean number of teachers individuals had on their main instrument. The table also shows the groups split into those students where the main instrument was also their first instrument, and those where their main instrument was not their first instrument, and this shows that the same pattern emerges regardless of whether or not the main instrument was the first instrument.

Groups One, Two and Four had more teachers during playing their main instrument (around 2.5), than Groups Three and Five (around 1.5). Analysis of covariance revealed that overall there was a significant difference between groups in the number of teachers for the main instrument even when controlling for the number of years of playing [ANCOVA: $F(4,249)=2.89, p<.05$].

Reasons for changing teachers

The major reason given for change from the first to second teacher was that either the teacher or child moved house or school. This reason was given in around 30% of all groups across all instruments. In Groups One and Four around 14% of children said the reason for change was in order to find a better teacher, and this was also given as a reason by 30% of those in Group Two. In contrast, only around 5% of individuals in Groups Three and Five said that this was the reason for the change. Other reasons for changing included reasons such as cost of lessons, parental belief that a regular change of teacher was a good idea, and teacher illness. There were no statistically

significant group differences in these proportions of reasons for change of teacher. Personality problems between teachers and students were rarely cited by any group.

Group versus individual tuition.

The data were examined to discover what proportions of individuals in each group had received group, individual, or both group and individual tuition on their first and main instrument. For the first teacher on the first instrument there was a greater proportion of individuals in Groups One to Four who had received individual tuition (55%, 60%, 42% and 48% respectively) than in Group Five (27%). In fact, only 30% of individuals in Group One received group tuition, with a further 16% receiving both group and individual tuition. This compared with 40%, 52%, 48% and 69% of individuals in Groups Two to Five who received group tuition. Very few children in these groups (4%) received both forms of tuition. These differences in distribution of type of tuition proved to be statistically significant (chi-square = 30.87, df=8, $p < .0005$).

One hundred and forty five of the 257 participants had a second teacher on their first instrument, and with this second teacher the same pattern emerged, with there being a significant tendency for individuals in Group Five (69%) to have had more group teaching than those in Groups One, Two, and Four (17%, 27% & 27% respectively). Sixty-seven percent of individuals in Group Three, appear, however, to have had group tuition with their second teacher which corresponds to the proportion of individuals in Group Five. Thus, in some respects Group Three appear to have had similar types of tuition to Group Five.

We also examined the types of tuition received on the main instrument played. In this respect Groups One, Two and Three differed from Groups Four and Five in that around 15% of individuals in Groups One to Three had group tuition with their first teacher, compared with 33% in Group Four, and 45% in Group Five. This difference in the distribution of types of tuition within each group was of statistical significance (chi-square=32.64, df=8, $p < .0001$). The same pattern also emerged when looking at the second teacher on individuals' main instrument (159 of the 257 participants had a second teacher on their main instrument). Here, the proportion of individuals who received group tuition was 28% for Group Four and 45% for Group Five. This compared with 6%, 5%, and 11% in Groups One to Three respectively. Again this finding was statistically significant (chi-square=29.15, df=8, $p < .0005$).

Thus, overall, the highest achieving children tended to receive the most individual (as opposed to group) tuition, whereas those ceasing music study (Group Five) received considerably more group tuition, with almost half of Group Five having received group lessons on their main instrument.

DISCUSSION

The present findings suggest that children who successfully acquire musical skills are likely to have regarded their initial teacher as a friendly, chatty, relaxed and encouraging person, and they are likely to rate their teachers higher on these characteristics than children who are less musically able. In addition, the successful learner's current teacher was also perceived as more friendly, chatty and relaxed than the first. These findings confirm the earlier results obtained by Sosniak (1985) and Sloboda and Howe (1991; Howe and Sloboda, 1991b) which showed that successful music learners had initial teachers who were regarded as warm and friendly individuals, but show in addition that the current teacher is also perceived to display characteristics such as friendliness.

A principal components analysis found that the bipolar scales assessing friendliness, chattiness and a relaxed attitude loaded highly on a factor which may be regarded as the teacher's 'personal' characteristics, and other scales - whether the teacher was a good or bad teacher or player, and whether the teacher was encouraging or pushy - loaded highly on a second factor which may be regarded as the teacher's 'professional' characteristics. Examination of factor scores demonstrated that the first teachers of the children who were musically able had significantly better 'personal quality' factor scores than the first teachers of children who ceased music tuition. There were no differences between groups in the first teachers' scores on the factor representing their 'professional' characteristics. In comparison, the factor scores of 'professional qualities' for the current or most recent teacher were significantly higher for the teachers of the most successful music learners than the children who gave up, whilst there was no differences between these teachers in their scores on the factor representing the teacher's personal qualities. This finding supports the hypothesis that whereas in the early stages of learning the personal characteristics of teachers are important to promote musical development, in the later stages it becomes more important that teachers should be perceived to have good performance and professional skills.

It appears, therefore, that the high music achievers in this study perceived their teachers in different ways to the children who give up music lessons. Whilst it is impossible to know whether the teachers of all the groups of children studied were truly different in their characteristics (since there was no objective measure, only the subjective student reports), the finding that there were perceived differences in characteristics supports the initial hypothesis that those children who gave up music may not have received teacher support appropriate to their development as musicians.

The contrast in Group One's perceptions of the first and current teachers is perhaps best highlighted by citing commentaries made during the interviews. Take, for instance, the differing perceptions of the following fourteen year old girl:

first teacher

I loved Mrs X, my first teacher, because I used to go to her house on Saturday afternoons, and she'd always have a little treat for me - you know, a strawberry tart or sometimes she'd even play me a piece of music. She was really very kind, and I think that's why I got on so well.

most recent /current teacher

Mrs Y is fab, in fact, I wish I could play half as well as her. Every time I pick up my oboe I say: try to make the sound Mrs Y makes. I've not managed to match her tone, but as a player and teacher, Mrs Y is an inspiration.

The implications of these findings for teacher behaviour are considerable. Teachers at early stages may need to place a high priority on establishing a relaxed and friendly relationship with their students. At later stages, while personal rapport is not unimportant, it becomes increasingly important to gain students' respect for their teachers as performing musicians by, for example, giving students opportunities to hear their best playing.

Examination of the data for gender differences revealed that 'pushiness' was the only characteristic differentiated between boys and girls, with boys rating both first and last teachers as being more pushy. Since Rutter (1987) argues that boys are generally trained more for high achievement, this result would seem to support the initial hypothesis that teachers may demand more and therefore be more pushy in their treatment of males than females. There was, however, no evidence of the hypothesised differences in the personal characteristics of the teachers of boys and

girls. That is, teachers were perceived to be equally 'warm' by both males and females. It would be interesting in a future study to collect data on teacher gender to explore possible effects of gender match or mismatch between teacher and student.

In line with the predictions made for the numbers of teachers on each instrument, the results showed that Groups One, Two and Four studied, on average, with more teachers than the other groups on their main instruments, and this figure of 2.5 teachers on the main instrument was consistent with the data collected by Bamberger (1986). One possible reading of these results is that more frequent changes of teachers may assist the child's musical development, since Groups One, Two and Four all persisted with their lessons. Indeed, next to the practical external reason of moving house, these three groups attributed the search for a better teacher as the most frequent reason for changing teachers. Certainly Groups One, Two and Four were more successful than Group Five who gave up music study, thus suggesting that musical success and having more than two teachers on an instrument may be related. However, Group Three had, on average, the same number of teachers as Group Five, yet comprised learners who were more successful than Group Four. Furthermore, like Group Five, changing for a better teacher accounted for only 5% of their reasons for change.

These results suggest that teachers and parents should be aware that it may not be in a student's interest to remain with any one teacher for too long. If a child does not establish a good personal relationship with the first teacher it may be particularly detrimental to long-term commitment to continue receiving lessons from that teacher.

One teacher characteristic which clearly differentiates Group Three from Group Five is that the children in Group Three generally receive individual instruction, whereas half of the children in Group Five receive group tuition. Group Three's result is shared with Groups One and Two, and Group Five's result is shared with Group Four. These findings appear to support the initial hypothesis that the more successful learners are more likely to have received individual tuition.

Several patterns have emerged from the current study to show that teachers clearly have a significant role to play in the development of musical expertise. In terms of group differences, there is little to distinguish between Groups One and Two. These similarities may reflect the rather similar musical achievements and aspirations of these two groups. Group Three has results which include aspects of all the other groups, and this appears to reflect this group's mid-range of musical achievement.

Group Four, again, shares characteristics in common with all other groups, but one characteristic it shares with Group Five, and not the others, is that proportionally there were less children in these two groups who received individual tuition. The fact that Group Four shares this particular feature with Group Five may account for the lesser achievements of Group Four as opposed to Group Three whose children were more likely to receive individual tuition. This final result may have some quite far-reaching implications. If a child wishes to achieve high levels of expertise, it seems that s/he is likely to benefit from the attention of a teacher on a one-to-one basis. Having said that, however, it is important to note that a combination of group and individual work may have some benefit. Most students in the current study received either group or individual lessons, with few receiving both types, but of those who did, the majority came from Group One. Therefore, it might be that there are benefits in having both types of instruction. For instance, it may be useful to receive the reinforcement and motivation that one-to-one tuition seems to provide, along with the dilution of teacher-pupil intensity that sharing a lesson may provide. Certainly in the shared lessons seeing other people's problems and assessing progress could be beneficial. Here, we can only speculate, though our speculations are certainly useful areas for further study.

In common with all previous research into the issues raised in this article, the present study has several limitations. It is likely, for instance, that there will be other teacher variables contributing towards learning which require examination. For example, teaching styles will undoubtedly contribute towards children's learning (Blatchford, Burke, Farquhar, Plewis and Tizard, 1989). An examination of how time is allocated during lessons may also provide further and more detailed information about why certain teachers are perceived to be more effective than others. Furthermore, questions relating to the suitability of environments for teaching and learning may also provide insights into the development of a child's interest. Clearly, lessons taking place in a store cupboard or a school cloakroom may be perceived differently to those which take place in a purpose-designed music room. Our purpose here, however, has been to determine whether the teacher characteristics examined could account for the broad differences between groups with different levels of musical achievement, and it is clear that perceived teacher characteristics are significantly different between groups of high and less achieving musicians.

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