Connections between children's feelings of social inclusion and their musical backgrounds

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Abstract

Social inclusion is considered to be a key element in maintaining a balanced society (such as in preventing high rates of unemployment). Music and arts programmes in communities have been found to facilitate feelings of social inclusion in citizens, in particular amongst the youth. The exact influence of such activities on social inclusion is not known, however, nor are there any formal, empirically-tested comprehensive assessment instruments for the concept. The current study (see footnote 1) explored the connections between children's musical backgrounds and their feelings of social inclusion, as well as developed and tested an instrument for assessing social inclusion with children. Data were gathered with 110 8-11year-old children in the UK and Finland. Statistical analysis was carried out on the social inclusion instrument in order to assess its reliability, validity and effectiveness. Statistical analysis was also conducted on potential connections between the children's musical background factors and their feelings of social inclusion. The results indicated that the new instrument can be used in educational and clinical settings with children when assessing their feelings of social inclusion. In addition, children felt more socially included when they played a musical instrument or sang with their family or friends every few days.

Key words: migrant children; musical activities; assessment instrument

[1] The study forms a part of an EU-funded project on music technology and social inclusion specifically in relation to migrant children and children with special educational needs (www.umsic.org

Introduction

The Concept of Social Inclusion

Social inclusion is a relatively new concept, yet it has received growing interest in the policy arena, as well as in social and educational work (Dennis and Guio, 2003; Gestrich and Raphael, 2008; Leary, 2008; Molden et al., 2009; Tisdall et al., 2006). Increased importance has been placed on the concept as it is regarded a pillar for addressing a number of social problems (such as unemployment and a high rate of crime) (European Commission, 2003; UNESCO, 2010). Furthermore, programmes and interventions have been designed for combatting social exclusion and for promoting inclusion (European Commission, op.cit.; Tisdall, op.cit.).

However, a great deal of the research conducted in the field has adopted specific foci, with much of the research having been concerned with children with special educational needs, migrant adults and ethnic minorities (Bhalla and Lapeyer, 1997; Dugan, 2007; Kronig et al., 2000; Molden et al., 2009; Murray and Lawson, 2007). As a result of a wide range of research on the topic, there are gaps in practice as to what is meant by social inclusion and how it is to be assessed (Molden et al., 2009). Moreover, variations in definitions, different approaches to practice and various assessment instruments arguably have complicated the process of monitoring social inclusion in communities and institutions (Gestrich and Raphael, 2008; MacDonald and Leary, 2005). In particular, assessing social inclusion with specific groups of individuals (such as migrants) has proved to be a real challenge (Atkinson et al., 2002; Odena, 2005).

In educational settings, social inclusion has been paid special attention to ever since the notion of 'all inclusive' education agenda was put in practice (Frederickson and Furnham, 2001; Kailer, 2006). According to this agenda, schools and education settings need to implement policies and practices that facilitate the process of all pupils being socially included in their school settings, as well as out of school (Roseberg et al., 2002; Frederickson and Furnham, op.cit.; Kailer, op.cit.). Yet, due to the lack of research in the field, schools face challenges in assessing the degree of their pupils' social inclusion when monitoring the effectiveness of their social inclusion agenda (Kailer, 2006; Strasser, 2006; UNESCO, 2010). In particular, assessing the degree of social inclusion of newly migrant children and children with special educational needs has been a constant dilemma for schools (Twenge et al., 2007; Vaughan, 2010).

Nevertheless, social inclusion in educational settings is regarded as of paramount importance (Crick and Ladd, 1993; Holt, 2004; Micklewright, 2002). Each pupil should feel included in educational activities, in the classroom and in the school playground in order to benefit fully from their education, build social skills and feel good about going to school (Holt, op.cit.; Micklewright, op.cit.). Recent studies have illustrated that children who feel included at school are happier, learn quicker and develop social skills more effectively than their peers who feel socially excluded at school (Liesen, 2009; Micklewright, op.cit.). Furthermore, schools have a strong influence on pupils' experiences of being members of a specific society, which reciprocally influences how they feel about themselves (Grunder and von Mandach, 2007; Herwatz-Emden and Küffner, 2006; Kailer, 2006). Thus, education can be regarded as being a key factor in preventing negative pathways leading to social exclusion (Kailer, op.cit.).

Connections between Musical Activities and Feelings of Social Inclusion

In early childhood, musical games and music-based rituals between caregivers and infants are a major source for building up supportive and healthy social attachment and for stimulating language and intellectual development (Dissanayake, 2008; Papousek, 1996; Slevc and Miayke, 2006; Trevarthen, 2008). In fact, a recent national study of approximately 2,000 young children in the UK showed that those who were relatively more skilled and developed in their musical understanding and performance were also statistically highly likely to report themselves as being more socially included (Welch et al., 2009).

A number of projects that have used music as a tool to reduce prejudice and to promote inclusion have been recorded over the past decade. For example, in Spain, festivals with music students performing to the public have been used in promoting feelings of social inclusion and reducing the absenteeism of Roma children from school (Almau, 2003). Meanwhile, in Holland, music workshops have been used for promoting racial acceptance and inclusion in nurseries with high percentage of migrant children (Brenman, 2007). In Israel, folk songs have been used to bring Palestinian and Jewish pupils and their families together during periodical cross-community school visits (Lichman 2006; Lichman and Sullivan, 2000). Furthermore, a recent study in a deprived area of Cork, UK, explored the impact of a wide music education project on the feelings of social inclusion exhibited by local residents (Minguella and Buchanan, 2009). The project concluded that music can easily be used as a tool to tackle social exclusion and educational disadvantage. However, none of the studies have specifically looked at potential connections between participants' musical backgrounds from before the start of their programmes and their feelings of social inclusion.

Definitions of Social Inclusion

Due to the fact that various professional domains have been concerned with the concept of social inclusion, a large number of approaches and definitions for the concept exists (Micklewright, 2002; Molden et al., 2009; Secker et al., 2007). Nevertheless, all the definitions regard social inclusion as a multidimensional concept that is shaped by various inter-connected factors and domains, thus making it challenging for professionals to provide an agreed definition for it (Guerin et al., 2003; Holz, 2004; van Winden, 2001; MacDonald and Leary, 2005; Marshall, op.cit.; Micklewright, op.cit.; Odena, 2005).

One approach in defining the factors that constitute social inclusion has been to divide these into psychological and sociological factors that are inter-connected and influence one another (Dennis and Guio, 2003; Frederickson et al., 2001; MacDonald and Leary, op.cit.; Poggi, 2003). The psychological factors include: motivation; feelings of loneliness; self-efficacy; anxiety; self-esteem; self-regulation; identity; development; feelings of contentment; and feelings of belongingness (Baumeister et al., 2003; Beidel et al., 1995; Crick and Ladd, 1993; Frederickson et al., 2001; MacDonald and Leary, 2005; Schmidt and Sermat, 1983). The sociological factors include: social relationships and networks; group coherence and dynamics; marginalization; integration; interaction; social sharing; and enabling social relations (Baumeister et al., op.cit.; Crick and Ladd, op.cit.; Poggi, 2003; Schmidt and Serment, op.cit.). Figure 1 illustrates the different factors that are reported to constitute social inclusion.

Figure 1: Elements that constitute social inclusion

Since there is no standardised definition for social inclusion, the current study used the definition that had been adopted in a number of previous studies (Atkinson et al., 2002; Micklewright, 2002; Twenge et al., 2007). In these previous studies, the definition was formulated so that it was the opposite of social exclusion. The following definition was adapted: 'preventing social exclusion, meaning preventing the process of detaching individuals and groups from participating in the normal activities of the society, community or organisation that they belong to' (Atkinson et al., 2002; Micklewright, op.cit.; Twenge et al., 2007). In pedagogical settings, the definition indicated the following: 'pupils are included in most or all activities that their peers participate in and pupils feel part of the school community' (Baumeister et al., 2003).

Assessing Social Inclusion

Due to its complex nature, various ways for assessing social inclusion have been adapted to professional practice. The most common and reliable methods for assessing social inclusion have been regarded to be thorough: experiments; questionnaires; and observation (Barbu, 2003; Baumeisteret al.,2005; Castillo et al., 2007; Frederickson et al., 2009; Hinz, 2007; Koch, 2005; Twengeet al., 2007).

In pedagogical and clinical settings, questionnaires are reported to be the most effective method for such an assessment, given the time-constraints often involved in the assessment process (Hearberline et al., 2007). However, there is no formally-established questionnaire that has specifically been formulated to assess the whole concept of social inclusion. Rather, there are separate assessment instruments for the different elements that constitute social inclusion (Harberline et al., 2007). For example, the Asher Loneliness and Social Dissatisfaction Scale measures feelings of loneliness and social exclusion (Asher et al., 1984), whilst the Social Assurance Scale was developed to measure self-efficacy in social situations (Lee and Robbins, 1995).

Amongst professionals, it is common practice to use several of the pre-existing scales and to formulate a profile for the respondent child according to the results gathered from these (Leary et al., 2007). Such practice may lead to a loss of valuable information due to the fact that each protocol measures an aspect of social inclusion and a number of other factors are likely to be ignored whilst carrying out the assessment (Foundoulaki and Alexopoulos, 2004). This, in turn, may lead to a misdiagnosis, such as a child being believed to be socially integrated when, in fact, they are not (Foudoulaki and Alexopoulos, op.cit.). At the same time, such a process of having to rely on a number of assessment

instruments can make the assessment process lengthy and, thus, prevent professionals from engaging in such assessment regularly, potentially leading to social exclusion (Twenge et al., 2007).

Aims of the current study

Due to the fact that there is no formally-established, empirically-tested assessment protocol for measuring a more comprehensive conceptualisation of social inclusion, the current study aimed at developing such a measure and testing it empirically in order to investigate its validity and reliability.

The first aim of the study was to: develop a new measure on the basis of an extensive literature review; pilot the protocol with migrant children, children with special educational needs and their 'normally-developed' peers; revise the instrument; and perform final empirical testing of the instrument.

Since it is not known whether musical background factors are connected to children's feelings of social inclusion, the second aim was to gather data on the participant children's musical backgrounds and to investigate whether they appear to be statistically significantly connected to the children's feelings of social inclusion.

The current study aimed at: a) exploring connections between children's musical backgrounds and their feelings of social inclusion; and b) developing a new instrument for assessing social inclusion, in particular with marginalised groups, and testing the instrument empirically with migrant children, children with special educational needs and their 'normally'-developed peers.

Methods

Constructing an Instrument for Assessing Social Inclusion

The aim was to develop a simple instrument that would effectively measure social inclusion with primary school children aged 8-11. An extensive literature review was carried out in order to determine items that had been found to measure different aspects of social inclusion effectively and to use these items as a basis to formulate a new questionnaire. As a result of the literature review, a pilot instrument was drafted for combining and assessing different aspects (such as social adjustment and feelings of loneliness or belonging). Examples of the reviewed measures are: a Measure for Social Inclusion for Adults with Mental Health Issues (Secker et al., 2009); Tennessee Self-concept Scale (Foundoulaki and Alexopoulos, 2004); Walker-McConnel Scale for Social Competence and School Adjustment (Worthington and Harrison, 1990); and the Social Phobia and Anxiety Inventory for Children (Beidel et al., 1995).

The references and resources used for constructing such protocols were examined in detail and, on such basis, the questionnaire used for the current study was formulated. The instrument was constructed to include a balanced sample of items that measured the key elements that construct the concept of social inclusion. These included: integration (5 items for social inclusion and 4 for emotional inclusion); belongingness (3 items); loneliness (4 items); participation (5 items); contentment (2 items); and motivation (3 items) (Asher and Wheeler, 1985; Haerbelin et al., 1989; Leary et al, 2005; Odena, 2007; Secker et al., 2009). The wording of the items was adapted to educational settings in the piloting phase (such as 'I feel I belong to my neighbourhood.' was changed to 'I feel I belong to my class.'). Table 1 illustrates the instrument items and the attributes that they measure.

Table 1

Attribute	Items on instrument	Source
Social integration	'I have lots of friends in school.' 'I have lots of friends outside school.' 'Saying goodbye to friends is hard if I know I will not see them for a while.' 'I can be sure my friends will take my side if I have an argument.' 'I feel I belong in my class at school.'	Haerbelin et al., 1989
Emotional inclusion	'It is important for me to have friends.' 'It is important for me that other children like me.' 'I feel left out of things at school.' 'My friends always give me help if I need it.'	Haerbelin et al., 1989
Belongingness	'I feel I belong to my neighbourhood.' 'Other children are pleased for me to join their games.' 'I would feel sad if I had to leave my school.'	Leary et al., 2005

Attribute	Items on instrument	Source
Loneliness	'I am never lonely.' 'It is important to me to have friends I can turn to at any time.' 'I get asked to take part in activities out of school.' 'I get along well with children in my class.'	Asher and Wheeler, 1985
Participation	'I like spending time on my own.' 'Other children ask me to play with them.' 'I prefer to be on my own and not with other people.' 'I prefer doing schoolwork on my own, not in a group.' 'I like doing activities that involve lots of children.'	Odena, 2007
Contentment	'The children in my class are very friendly.' 'Other children like me just the way I am.'	Dollase and Koch, 2002; Foundoulaki and Alexopoulos,2004
Motivation	'I like going to school.' 'I like to see my school friends outside school.' 'It is more important to have a few close friends than trying to be friends with everybody.'	Baumeister et al., 2005; and Koch, 2002; Twenge et al., 2007

Table 1: The 26 items that constitute the new assessment instrument and the attributes that they assess

A 5-point Likert-style scale with smily faces, ranging from a sad face to a happy face with a neutral face in the middle, was adopted as the rating scale since this type of scale has been found to generate reliable information with child participants (Asher et al, 1991), particularly since migrant children and children with special educational needs are likely to be able to understand such a scale (Elfring and Grebner, 2010). The questionnaire was translated into Finnish, as the intention was to pilot it in Finland as well as in the UK. Figure 2 illustrates the smiley-face scale implemented in the instrument.

Figure 2: The smiley face-scale implemented in the social inclusion assessment instrument

The Musical Background Questionnaire

The questionnaire used for gathering information on the children's musical background factors was adapted from a previous study (Welch et al., 2006). The questionnaire had been been developed as part of the study by drawing on a wide range of literature (Odena, 2007; O'Neill et al., 2001; Welch et al., op.cit.). It was initially piloted with young musicians and found to be reliable in gathering valid information on young people's musical backgrounds (see Appendices for the full questionnaire) (Welch et al., 2006).

The questionnaire was considered appropriate for the current study due to the fact that it generated a comprehensive set of information for each participant's prior and current musical engagement, as well as their attitudes and perceptions on musical engagement. The questionnaire consisted of two sections. The first section inquired the participants on their current musical activities and engagement (Odena, 2007; O'Neill et al., 2001). It included questions such as: 'How often do you play a musical instrument?' and 'How often do you share music with your friends?'. The second section included questions on how often the participants engaged in musical activities with other people (Odena, op.ci.t; O'Neill et al., op.cit.). Examples of such questions are: 'How often do you play a musical instrument with your family?' and 'How often do you sing with your friends?'. A 5-point scale was adapted to the questionnaire, with the scale ranging from 'Never' to 'Every day'. The children needed to tick the appropriate box on the scale to indicate their response.

Participants

Data were collected at two schools in the UK (one in West London and one in Luton) and two schools in Finland (one in the south in Helsinki and one in the north in Oulu). All four schools were primary schools.

In total, 110 children participated in the study. 50 of the participating children were from the UK (45%) and 60 from the school in Finland (55%). 60 of the participants were male (55%) and 50 female (45%). The mean age for the participants was 9.85, ranging from 8 to 11 years.

Nineteen percent of the participants were considered immigrants (i.e. they had lived in the country for less than five years) (UNESCO, 2010). In the UK, migrant children had come from the following countries: Afganistan; Bangladesh; Denmark; Iraq; Kazakstan; Kurdistan; Libya; Malaysia; Nigeria; Pakistan; Poland; Somalia; Sudan; and Zambia. In Finland, both of the migrant children had come from Iraq.

20 percent of the children exhibited special educational needs that had been statemented by their schools. The most common types of learning difficulties were: English as an additional language; dyslexia; and ADHD.

Ethics

The headteachers of the schools were approached initially in order to obtain permission for conducting the research at their schools. Once the headteacher had provided informed consent on the basis of the research focus being explained in detail by the researcher, a form was sent home to the parents of the children in order to obtain their approval for their child to participate in the study. Finally, the children who had parental permission to participate were asked whether they wanted to take part in the study.

It was made clear that any resultant data emerging from their feedback on the instrument would be anonymised and neither the school, nor the participants would be identified at any point. The children also had a right to withdraw from the study at any time for any or no reason. They were informed that data were to be kept safely on a secure server and password protected. The researcher had full Criminal Records Bureau clearance from the UK Government for working with children.

Procedure

An action research methodology was adopted for the fieldwork. A draft social inclusion assessment instrument was designed and initially evaluated with secondary school children in London in order to gather feedback from them on the formulated items. Their responses fed into a modified version of the instrument.

Subsequent to being modified according to the feedback received from the older students, the questionnaire was piloted with a class of 10-11-year-old children in a West London primary school. They were mainly drawn from non-European backgrounds (such as Syria and Somalia). The children were asked to act in the role of co-researchers in an action research design. They were invited to participate, all had the opportunity to refuse and also it was explained that they could decline to continue participation at any time that they felt uncomfortable. In total, 23 children participated in this phase of the study.

The instrument was revised according to feedback received from the pre-pilot study. Items that the participants had found difficult to understand were re-worded and clarified. Items that were regarded as generating unnecessary data were deleted. The format of the instrument was revised in order for it to be more child-friendly.

The revised questionnaire was translated into Finnish by an academic at the University of Oulu who specialises in linguistics and teaches Finnish language in higher education institutions in Finland. The translation was checked by the researcher (the first author). The questionnaire was subsequently piloted at a school in southern Finland (Helsinki) and a school in northern Finland (Oulu). In total, 58 children were able to participate in the study in Finland. 56 of the pupils were Finnish and two were from Iraq. The children were aged 8-11.

The children were asked to fill out the instrument and to write down or tell the researcher whether there were any questions that they found hard to understand. The pupils and the teachers were assured that all data would be kept confidential and used for the current research study only, as well as that the school would be informed of the

outcomes of the study. The data gathered indicated that the instrument worked well and filled its proposed purpose in the fieldwork phase.

The final version of the revised instrument was piloted further at a primary school in Luton (north of London). There were two newly migrant children in the class who received assistance from their teacher for completing the instrument. Children with special educational needs were able to fill in the questionnaire by themselves. The children were asked to identify any questions that they found hard to understand. All of the children stated that they had found the questionnaire easy to fill in. The findings indicated that there was no further need to revise the questionnaire.

The musical background questionnaire was administered to all the primary school children who participated in the study (including in the piloting phase). The children filled out the questionnaire prior to completing the social inclusion instrument. Instructions as to how to fill the questionnaire in were given by the researcher. The children were encouraged to ask any questions if they did not understand the items on the instrument. On average, the children filled in the questionnaire in four minutes.

Results

The results were analyzed statistically using SPSS version 14.00.

The Cronbach's alpha for the instrument was high (0.871). The results indicated that the internal consistency of the questionnaire was excellent. Cronbach's alpha was also high for separate data sets from the four schools (School One in the UK: 0.726; School Two in the UK: 0.842; School One in Finland: 0.789; School Two in Finland: 0.821). Table Two below summarises the findings.

School	Cronbach's alpha
The whole sample (i.e. all the four schools)	0.871
UK school 1 (London)	0.726
UK school 2 (Luton)	0.842
Finland school 1 (Oulu)	0.789
Finland school 2 (Helsinki)	0.821

Table 2: Cronbach's alpha for all the participating schools as a composite and for the four participant schools separately

Correlational analyses were used for analysing each of the seven attributes within the questionnaire. Pearson Correlations were calculated separately for each attribute. The results are reported below:

The correlations between the five items for social inclusion were statistically significant ($p<0.05$). A correlation was run with pairs of items (e.g. 'I have lots of friends in school.' and 'I feel I belong in my class at school.'). Each correlation was statistically significant.

The most significant correlation was recorded between the items 'I have lots of friends in school.' and 'I have lots of friends outside school.' ($p<0.05$; 0.026).

1. The correlations between each pair of the four items for emotional inclusion were statistically significant ($p<0.05$). The most significant correlation was recorded between the items 'It is important for me to have friends.' and 'It is important for me to have friends I can turn to at any time.' ($p<0.05$; 0.004).

2. The correlations between each pair of the three items for belongingness were statistically significant ($p<0.05$). The correlations for these items were the strongest out of the different groups of items being compared ($p<0.05$; 0.000).

3. The correlations between each pair of the four items for loneliness were significant ($p<0.05$). The correlations were amongst the strongest out of the different groups of items ($p<0.05$; 0.000). The most significant correlation was recorded between the items 'I get asked to participate in activities out of school.' and 'I get along well with children in my class.' ($p<0.05$; 0.000).

4. The correlations between each pair of the four items for participation were significant ($p<0.05$). The most significant correlation was recorded between the items 'I prefer being on my own, not with other people.' and 'I prefer doing school work on my own to working in a group.' ($p<0.05$; 0.00).

5. The correlation between the two items for contentment was significant ($p<0.05$; 0.005).

The correlations between the pairs of the three items for motivation were significant ($p<0.05$). The most significant correlation was recorded between the items 'I like to see my school friends outside school.' and 'It is more important to have a few close friends than trying to be friends with everybody.' ($p<0.05$; 0.000).

Table 3 below illustrates the pairs of items that generated statistically the most significant correlations.

Items	Correlation
I feel I belong to my neighbourhood.' 'Other children are pleased for me to join their games.'	0.0001
'Other children are pleased for me to join their games.' 'I would feel sad if I had to leave my school.'	0.0001
'I get asked to participate in activities out of school.' 'I get along well with children in my class.'	0.0002

Table 3: Pairs of items that statistically generated the most significant relationships

The data gathered with the new assessment instrument was analysed in order to explore whether newly immigrant children or children with special educational needs felt as socially included as their peers. Statistical analyses were used.

Firstly, the social inclusion scores for each child were meaned. The meaned ratings clustered around the middle (3.00) of the scale, indicating that the distribution was normal and that there were no obvious outliers. The histogram below illustrates the distribution of the meaned scores.

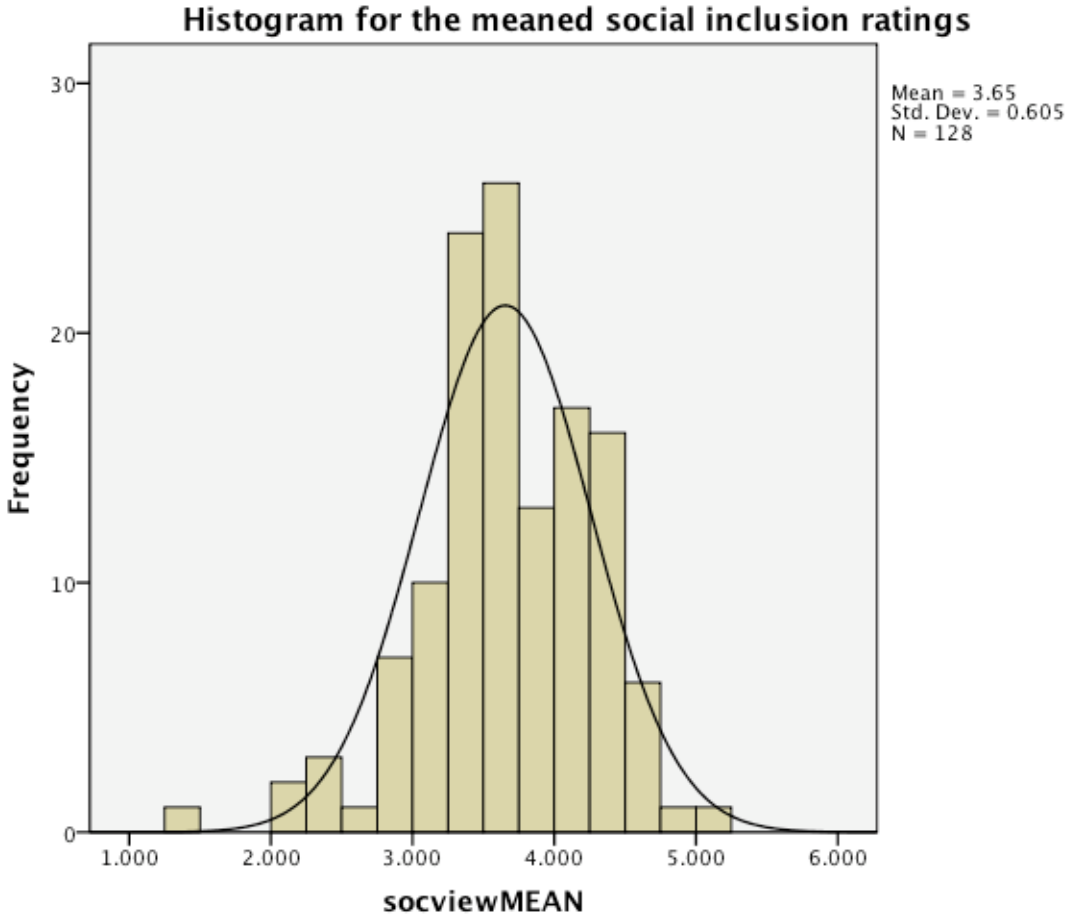

Figure 3: Histogram for the meaned social inclusion scores

When the meaned scores were rank-ordered, two newly migrant children in the UK (i.e. having been resident in the UK for less than a year) ranked the lowest (i.e. 1.364 and 2.00). On average, the Finnish children ranked lower (i.e. below 3.50) than the children in the UK (i.e. above 3.50).

Pearson correlations were calculated between the responses received for the music questions and the meaned social inclusion ratings. Four statistically significant findings

were recorded: a) the higher the number of days per week that the children played a musical instrument with their families, the more socially included the children felt ($p<0.05$; 0.003); b) the higher the number of days per week that the children played a musical instrument with their friends, the more socially included the children felt ($p<0.05$; 0.001); c) the higher the number of days per week that the children sang at school, the more socially included they felt ($p<0.05$, 0.001); and d) the higher the number of days per week that the children sang with their friends, the more socially included the children felt ($p<0.05$; 0.045). *Table 4* illustrates the statistically significant correlations.

Musical engagement question	Correlation with the meaned social inclusion rating
'How often do you play an instrument with your family?'	0.003
'How often do you play an instrument with your friends?'	0.001
'How often do you sing in school lessons?'	0.001
'How often do you sing with your friends?'	0.045

Table 4: Statistically significant correlations between responses received for musical engagement and the meaned social inclusion ratings

In addition to statistical analyses, participant children were interviewed informally on their views of the social inclusion instrument. Children were asked to identify any items that they found hard to understand and to explain reasons for this. They were asked to write their answers down on the front page after completing the instrument.

Generally, the children found the items easy to understand and they enjoyed filling in the instrument. A small number of children stated that they found some of the items hard to understand but that this had made them reflect and think about the questions more deeply. It took most of the children approximately 10 minutes to complete the instrument. Immigrant children found the items easily understandable and were able to fill out the instrument within 15 minutes. Children with special educational needs were also able to answer all the questions in approximately 20 minutes and reported that they found the instrument easy to complete. A couple of children with more severe learning difficulties received help from their teachers or a teaching assistant when answering the questions.

Below are example quotes from the children:

'I found it very easy.' (11-year-old boy)

'It was very easy. I thought about some questions a lot.' (10-year-old girl)

'I found the questionnaire quite easy, because I have friends.' (10 -year-old boy)

'It was easy to understand but quite hard to answer.' (9-year-old girl)

'Really good and easy.' (8-year-old boy)

Discussion

The concept of social inclusion has received a considerable amount of attention over recent years due to the importance that is placed on it as to preventing exclusion from society, improving levels of education and employment, as well as enhancing the general well-being of citizens in the society (Gestrich and Raphael, 2008; MacDonald and Leary, 2005; Tisdall et al., 2006). In educational settings, socially including all pupils in school is of crucial importance in order for pupils to gain full benefit from their education, to enhance the school atmosphere and to provide equal educational opportunities for all (Roseberg et al.,, 2002; Frederickson and Furnham, 2001; Kailer, 2006).

Despite the fact that social inclusion is regarded a valuable and significant element in the society (including its different institutions), there is a lack of comprehensive, formally-established and empirically-tested protocols for assessing the concept (Levy, 2008; MacDonald and Leary, 2005). There is no protocol that would specifically aim at assessing the whole concept of social inclusion, covering the range of psychological and sociological factors that construct it (such as emotional inclusion and participation), rather different instruments have focused on assessing different aspects of social inclusion in isolation (Dennis and Guio, 2003; Grunder and von Mandach, 2007; Levy, op.cit.).

In order for education professionals to be able to assess their pupils' degree of social inclusion effectively, a comprehensive assessment protocol is needed. Therefore, the current study formulated and tested such an instrument. The instrument was formulated on the basis of existing formally-established and empirically tested instruments (Asher and Wheeler, 1985; Haerbelin et al., 1989; Leary et al, 2005; Odena, 2007; Secker et al., 2009). A pool of items was selected from the existing protocols in order for the new instrument to include a comprehensive set of elements that constitute social inclusion (Frederickson et al., 2009). The new protocol consisted of 26 items that assessed different aspects of social inclusion (such as motivation and belongingness) (Leary et al, op.cit.; Odena, op.cit.). Since the protocol was developed for measuring social inclusion with children aged 8-11, the length of the questionnaire was needed to be kept relatively short. Hence, it was not possible to include items from the pre-existing protocols.

The new protocol was empirically tested with 110 primary school children and it was found to function well. Its reliability and internal validity were found to be high. The protocol generated comprehensive data for each child, based on which a profile of social inclusion could be formulated for each participant. In addition, the participants found the instrument easy to fill in. Even migrant children were able to understand all the items and respond to the questions well. Special needs children were also able to fill in the protocol, either on their own or with assistance from a teaching assistant or a teacher.

Since the protocol was found child-friendly and easy to use by children, it could be used in educational and clinical settings with children. In order to assess the degree of social inclusion for individual children, professionals can use the protocol in formulating profile for each child. They can use it in gathering baseline data and then collect comparative data at a later stage again with the children. Furthermore, since migrant children and children with special education needs were able to fill in the instrument, it can also be used in special educational and clinical settings.

Limited evidence exists on connections between musical engagement and feelings of social inclusion (Dissanayake, 2008; Papousek, 1996; Slevc and Miayke, 2006; Trevarthen, 2008). Such studies have primarily concerned school and community projects that aim at integrating pupils and citizens in their place of residence, study and work (Almau, 2003; Brenman, 2007; Welch et al., 2009). In particular, music has been used as a tool to reduce prejudice and to promote social acceptance and inclusion (Almau, op.cit.;

Brenman, op.cit.; (Lichman 2006; Lichman and Sullivan, 2000; Minguella and Buchanan, 2009). However, none of the studies have specifically looked at potential connections between their participants' musical backgrounds from before the start of their programmes and their feelings of social inclusion.

In the current study, statistically significant connections were found between the regularity of group music-making and singing activities and the participants' feelings of social inclusion. The more frequent the engagement in social music activities was (i.e. playing a musical instrument or singing with one's family or friends), the more socially included the children felt. The findings imply, therefore, that musical activities in groups can facilitate feelings of social inclusion in children. Whether the enhanced feelings of social inclusion are results of the musical or the social aspects of the activities (or both) is not clear from the current study. It may be that it is the social nature of the activities that facilitates such feelings rather than the musical nature of the activities. Alternatively, it may be that musical group activities facilitate such feelings. A further study is needed for clarifying this.

Furthermore, there were no significant connections recorded between musical engagement and background per se and feelings of social inclusion. The findings, thus, indicate that musical engagement and background in musical activities may not facilitate feelings of social inclusion per se. Rather, group music activities appear to be of more importance in this regard.

Nevertheless, the questionnaire used for gathering background information on the participants' previous and current musical engagement and education proved to be an effective method. The participants found the questionnaire easy to fill in and it generated a comprehensive set of data for each child.

In order to investigate the potential connections between group music activities and enhanced feelings of social inclusion, a further study is needed. In such a study, the effect of group music activities could be compared to other group activities (such as sport or painting activities) in order to investigate whether it appears to be the musical aspects or the social aspects of such activities that facilitate enhanced feelings of social inclusion.

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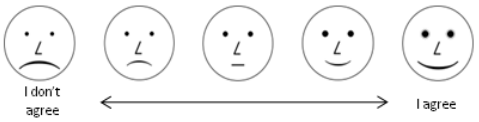
Appendices

Some questions about your school and your friends

We would like to know whether you agree or disagree with each of the following sentences. For each sentence, **please tick or put a circle around the face** that best matches how you feel about it.

The children in my class at school are very friendly.



I like going to school.

It is important to me to have friends.

I feel I belong in my neighbourhood.

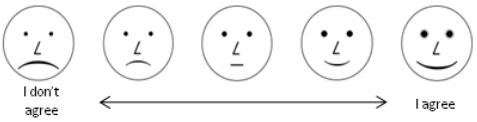
I am never lonely.

It is important that other children like me.

I have lots of friends in school.

I have lots of friends outside school.

Other children are pleased for me to join their games.



I like spending time on my own.

I like to see my school friends outside school.

Other children ask me to play with them.

I feel left out of things at school.

Other children like me just the way I am.

I would be sad if I had to leave my school.

I prefer to be on my own and not with other people.

I prefer doing schoolwork on my own, not in a group.

Saying goodbye to friends is hard if I know I will not see them for a while.

My friends always give me help if I need it.

It is more important to have a few really close friends than trying to be friends with everybody.

I can be sure my friends will take my side if I have an argument.

I feel I belong in my class at school.

It is important to me to have friends I can turn to at any time.

I like doing activities that involve lots of other children.

I get along well with children in my class.

I get asked to take part in activities out of school.

Some questions about your musical activities

Please tick the box that best describes how long you spend doing each of the following activities.

	Never	Not very often	About once a week	Every few days	Every day
1. How often do you listen to music by yourself?	❑	❑	❑	❑	❑
1. How often do you listen to music with other people?	❑	❑	❑	❑	❑
1. How often do you dance to music by yourself? 2. (O'Neill et al., 2001)	❑	❑	❑	❑	❑
1. How often do you dance to music with other people?	❑	❑	❑	❑	❑
1. How often do you watch music videos on your own?	❑	❑	❑	❑	❑
1. How often do you watch music videos with other people?	❑	❑	❑	❑	❑
1. How often do you use a computer to make up your own music?	❑	❑	❑	❑	❑
1. How often do you use a computer to make up music with other people?	❑	❑	❑	❑	❑
1. How often do you talk about music with your friends?	❑	❑	❑	❑	❑
1. How often do you swap or share music with friends?	❑	❑	❑	❑	❑
1. How often do you use the Internet to find out about music?	❑	❑	❑	❑	❑

Some questions about the singing you do and the musical instruments you play

Singing

We would like you to tell us about the singing that you do. Please tick the boxes that best describe how long you spend doing different types of singing activities. Please also tell us if anyone helps you with your singing.

	Never	Not very often	About once a week	Every few days	Every day
1. How often do you sing **by yourself?**	❑	❑	❑	❑	❑
1. How often do you sing with **your family?**	❑	❑	❑	❑	❑
1. How often do you sing with **your friends?**	❑	❑	❑	❑	❑
1. How often do you sing **in school lessons?**	❑	❑	❑	❑	❑

Musical instruments

If you play an instrument, please tick the boxes that best describe how long you spend playing a musical instrument. Please also tell us if anyone helps you with your instrument.

	Never	Not very often	About once a week	Every few days	Every day
1. How often do you play an instrument **by yourself?**	❑	❑	❑	❑	❑
1. How often do you play an instrument **with your family?**	❑	❑	❑	❑	❑
1. How often do you play an instrument with **your friends?**	❑	❑	❑	❑	❑
1. How often do you play an instrument **in school lessons?**	❑	❑	❑	❑	❑

Biographical notes:

Doctor Tiija Rinta is an educationist, researcher and development worker based in London, UK. She is based at the Institute of Education (University of London), working for research projects concerned with music, social science and education. Tiija has worked for several international NGOs, Government Agencies and universities in the above roles. Her recent work has included developing teaching and learning materials for UNICEF, Save the Children and Relief International, as well as carrying out research for the European Union and the UK Government. The products of these projects are publications in international professional journals, articles in magazines and book chapters.

Ross Purves studied music at City University before completing a master of music education at the Institute of Education, University of London and a postgraduate certificate of education. He is Joint Course Manager for Music at Luton Sixth Form College and a research officer at the Institute of Education, where he has worked on a range of funded research projects. Publications regarding music teacher education have appeared in the British Journal of Educational Research, the British Journal of Educational Psychology and elsewhere. His chapter 'music technology and the educator' features in the forthcoming OUP International Handbook of Music Education.

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Doctor Stefanie Stadler Elmer is a Lecturer of Psychology at the University of Zurich and at the University of Teacher Education, Lucerne, Switzerland. Her interests concern the development of music and language, singing, and methods for fostering early development in these domains. She is involved in several research projects at national and international levels, e.g., as a collaborator in the AIRS (Advancing Interdisciplinary

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Raffaela Bissig is a student at the University of Zurich. She will finish her degree in Psychology in autumn 2011. During her academic studies she collected several practical experiences in several institutions, e.g. working with mentally retarded children as well as with an autistic boy, and in a residential home for mentally ill persons. At least she was working for more than one year as an assistant at the University of Zurich in the UMSIC Project and was concentrated on the literature of social inclusion.