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Broadly based piano education for children aged 5–7: the PIPO project at the Royal Conservatory of The Hague

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This article discusses the first year of the Project for Introductory Piano Education (the PIPO project) at The Hague, a training programme for young pianists starting at age 5–6. The programme combines general music activities, aiming at the development of general musical skills, with piano lessons in small groups. Rather than working from notation, the project takes an auditory approach to piano playing. After having described the principal characteristics of the PIPO project, the article reports on the musical progress of the children, and concludes by discussing some major educational issues that emerged during the first year.

Introduction

In September 2000 the Royal Conservatory of The Hague started a remarkable educational project for very young pianists, the Project for Introductory Piano Education (PIPO). Children aged 5 and 6, for whom only a few opportunities for piano education exist in the Netherlands, were involved in an unprecedented training programme, combining the development of general musical abilities with piano lessons in small groups. On Saturday mornings the children engaged in varied musical activities: singing, rhythmical and expressive movement, improvisation, piano playing, etc. Though the programme was intensive, the character of the lessons was non-competitive. Instead of taking the ambitious approach associated with the training of talented young pianists, the teachers did their best to create a friendly and relaxed atmosphere. The principal aim was not to get the children to play complex pieces as fast as possible but to foster their love for music by making music together in a playful way. Each child was allowed to develop his or her musical abilities at his or her own pace, and the achievements of slower children were as much respected as those of the most advanced ones.

Although the PIPO project, conceived by Nico Smit, staff member of the Royal Conservatory, does not aim at the quickest possible development of pianism, it is guided by a specific view of efficient musical training. The central idea is that piano training should be grounded in general musical abilities. Piano education usually focuses exclusively on mastering the piano literature right from the beginning. Children acquire notation skills and piano technique so that they can manage increasingly difficult pieces. Although they may soon develop a considerable repertoire, such children's musicianship often remains restricted. Because they have learned only to produce music by interpreting notational symbols, they do not develop their sense of inner hearing. Lack of rhythmical

fluency is another well-known problem for children whose playing is mediated by scores. Furthermore, they are not encouraged to exercise their creative imagination, with the result that their improvisation skills remain undeveloped.

The hypothesis guiding the project is that educating genuinely musical pianists requires that children are first trained in basic skills, particularly *audiation* (the ability to hear tacitly inside either by remembering music that has actually sounded or by imagining it),[1] rhythmical skills, and moving to music. The idea is that, if children are to be completely developed musicians, they must first fully internalise music in their minds and bodies. The 'general music education' part of the lessons is designed to train these basic skills, on which the piano lessons then build. Instead of devoting themselves completely to notated music from the outset, the children learn to play by ear the songs they have acquired during the general music lessons, and they are also encouraged to improvise. Only gradually, when the children's skills in playing the piano without score have been established, do they increasingly concentrate on sheet music.[2]

The PIPO project was designed as a four-year programme, consisting of two phases of two years each. In the first phase, the children receive combined general music and piano lessons in a group setting (see below). In the second phase, the children with the best potential for further musical growth proceed with individual lessons, which then clearly focus on piano playing. The aims of the project are various: (1) to provide a high-quality training programme for very young children; (2) to test the success of piano education that builds on a broad basis of general musical abilities; (3) to gain knowledge about the musical development and musical learning of talented children of this age; (4) to gain expertise in teaching young children piano lessons in small groups. The PIPO project is an expanding project. In September 2001, when the first class entered its second year, a second group of children started their piano education. Moreover, at the same time a similar project for violinists, which also combines general music lessons with instrumental lessons in small groups, was launched.

Although it will take several more years before definitive evaluations of the PIPO project can be made, even now, after only one year, various notable results can be reported. The children have acquired a broad range of musical abilities, several of which have not been recorded so far in the literature on musical development. Also, a number of interesting educational issues emerged. This paper discusses the progress of the PIPO project as a whole during the first year. After having described the main characteristics of the project in section 1, I highlight the pupils' major musical achievements (sections 2 and 3). In section 4, I discuss three major educational issues.

1. The project

Activities

On 30 Saturdays the children engaged in an intensive music programme with two major components: general musical activities in a larger group and piano lessons in small groups. The general music activities consisted of singing, rhythmical exercises, and expressive movement to music. Singing was the core activity. In the course of the first year the children acquired a repertoire of about 25 songs. They practised singing in tune,

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performing in various tempi and dynamics, careful phrasing, and changing the mode (see section 2). The rhythms of the songs provided the main materials for rhythmical activities. These comprised walking, clapping, and playing on percussion instruments (cymbals, claves, drums, woodblock, triangles, etc.). The children represented the subject of the songs with expressive movement.

The children started their piano education by discovering the layout of the keyboard. Performing several exercises of Runze's *Two Hands – Twelve Notes*, book 1, they got acquainted with the pattern of white and black keys and had their first experiences with going through the whole range of keys. After these preliminaries, the focus during the first year was on playing songs acquired during the general music activities. First, the children had to sort out the tones of the melodies by ear. In the beginning, practice was restricted to single phrases of the songs, but soon a majority of the children were able to render complete songs. Whereas gaining fluency with playing songs monophonically remained the major occupation of about 50 per cent of the children, the other children practised simple left-hand accompaniments to the songs in the second half of the year. Playing together constituted a pillar of the piano lessons. As we will see, all children successfully developed this skill. Finally, improvisation was also included in the piano lessons.

In addition to practising songs and improvisation by ear, in the second half of the year a minority of the children also worked with *Alfred's Basic Piano Library*, vol. 1a (Palmer *et al.*, 1991). This method starts from traditional notation and works up to typical piano pieces. But also with this book the teachers took the aural approach, teaching their pupils the pieces mainly by ear (see section 4).

Group divisions and structure of the lessons

In lessons 1–13, all of the 20 children started with 30 minutes of general music activities and then split into five groups for separate piano lessons of 55 minutes. After a short break the session was concluded with joint activities lasting about 25 minutes. Besides repeating songs, the children engaged in two kinds of activities. The first consisted in listening to performances by young musicians aged 12 to 18 who were preparing themselves for conservatoire education. The children were asked about the pieces they had listened to and they were allowed, in turn, to put questions to the musicians. More often, the children themselves performed songs and pieces they had practised just before, during the piano lessons, for a public of peers, teachers, parents, and other family members.

After lesson 13, the educational team decided that the groups of piano lessons should be rearranged and reduced from four to two. The reasons for these changes were that performance levels had grown too far apart and that it was believed that efficiency would increase in the new setting (see section 4). In order to accomplish the reduction of the groups, the class had to be split into a group of younger children and a group of older ones. After all children had had a short warm-up with general music activities (15 minutes), the younger children received piano lessons in twos (30 minutes), while the older pupils carried on with general music. After a break of 10 minutes, the roles were reversed: the younger pupils now engaged in general music, while the older ones had their piano lessons. The joint conclusion, with performances either by the children themselves or by invited musicians, was retained.

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Participants

Twenty children were admitted to the project after a test comprising singing, rhythmical movement (clapping, walking, rocking), rhythmical improvisation, playing fragments of a well-known song on the piano, and imitating short tone sequences. The children with the best potential for musical growth were selected. Most of them came from families in which music played an important part. Registration forms filled out by parents of 19 children indicated that, before entering the music class, 10 children had regularly engaged themselves in playing one or several instruments, and 7 of them had tried the piano or a keyboard. At the start of the course, one girl had already received piano lessons for six months and another girl had had violin lessons for more than a year. By performing pieces that were not included in the curriculum during the year, two more children gave evidence of having received piano education outside the PIPO lessons. Of the children who had not yet played any instrument, 8 had been regularly engaged in singing or rhythmical movement and 3 had followed special courses introducing very young children to music.

Sixteen of the children had one or more family members who played an instrument at home, while 4 of the children had parents who were professional musicians – either performers or educators. Parents of 10 children indicated that music was listened to frequently at home. With other children, the frequency of musical listening was characterised as 'regular', 'average', 'sometimes', or 'varying'. Only one parent wrote that music was 'not so often' listened to at home. Most children heard a variety of musical styles including classical music, pop music, and children's songs.

At the start of the project the children's ages varied from 5.0 to 6.4 years. In June 2001, at the end of the year, 3 children were already 7 years old, while 5 had not yet reached their 6th birthday. The group of older pupils formed after lesson 13 was called 'the six-year-olds' by their teachers, while the younger group was referred to as 'the five-year-olds'. Although I adopt this terminology for the sake of convenience, the distribution of the children's ages was much more even than this distinction suggests. Fifteen of the 20 children were female. The dominance of the girls, in combination with the quiet character of four of the five boys, was probably an important factor in the success of the general music lessons. By comparison, the first lessons of the new group, which started in September 2001, had a majority of more extrovert boys, who were much less orderly.

The role of parents

The PIPO project assigns a prominent position to parents. Their presence during the Saturday mornings provides the children with a sense of safety. This is particularly important during the first lessons, when the children find themselves in an entirely new situation with teachers and peers they do not yet know. At least one parent of each child was expected to attend the general music lessons. With regard to the piano lessons, the attitude of the teachers was more ambivalent. On the one hand, they found it vital that the parents knew precisely what their children learned during the lessons, so that they could optimally assist them when they performed at home. On the other hand, the teachers saw two potential disadvantages: in the more intimate setting of the piano lessons the children's attention might more easily be diverted by their parents' presence, and parents might

interfere with the course of the lessons. During the first 13 lessons, the parents were admitted to the piano lessons only if their child was having a hard day. Instead of following the lessons, they received a short instruction of about five minutes after the lessons in which they were informed about what their children should do at home during the next week. Because the level was still low, parents themselves could quickly master the exercises their children had just performed. Later on, the piano teachers felt that their reservations had been too strong. With the exception of parents whose presence distracted the children too much, parents were now expected to attend the piano lessons as well.

Character of the investigations

The progress of the entire first year of the PIPO project was studied by myself and a research assistant.[3] In our qualitative investigations, we combined open observation with the collection of structured data. After three lessons, we arrived at an observation form with 16 categories, the most fruitful of which are discussed in the next sections. After each session the researchers wrote a report, which complemented the notes entered into the observation forms during the lessons. While the item-based notes aimed to categorise all events, the reports allowed for more elaborate description and interpretation of the particularly salient situations. Furthermore, the written-out reports summarised the main developments during the lessons and tried to relate the particular lesson to the sequence of lessons as a whole. Besides observing the music lessons of the children, we also attended and recorded the discussion and evaluation sessions by the educational team following every lesson. These sessions provided us with valuable information about the teachers' experiences during the lessons, their assessment of the children's musical development, the development of the curriculum, and their opinions about methodological issues.

Because of the particular design of the lessons and the changes made during the year, the number of children we were able to follow varied. For the first 13 lessons we observed all 20 children during the general music part but only 4 children during the piano lessons. From lesson 14, as a result of the organisational changes described above, the number of children we could observe constantly was halved. We then observed the 10 oldest children (aged 6–7) during the general music lessons and 2 talented boys, Harry and Mark, during their piano lessons.[4] The progress of the other children was monitored through their public performances at the end of the morning sessions and the verbal reports their teachers provided during the evaluation sessions.

2. Musical development I: the general musical activities

The general music lessons, led by an excellent teacher, accounted for much of the children's musical growth. Although both groups did well, the six-year-olds made much more progress than the five-year-olds. Not only did the younger children start with less advanced musical skills but, more importantly, their general learning skills were poorer: they were less focused and their concentration span was considerably shorter. As a result of this, the achievement levels of the five-year-olds and the six-year-olds grew apart much faster than one might have expected. This applies to both the general musical activities and the piano lessons.

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Rhythm and motor skills

A large part of the children's musical progress related to the dimension of rhythm. A primary skill consists of rendering the precise *rhythm* of the children's songs. When they were halfway through the first year, the children no longer had difficulty with singing, clapping, or tapping the rhythms of the songs they had learned, as long as their tempo was moderate and very short or very long notes were absent. Another basic rhythmical skill is realising a *steady pulse*. During the first months, not all the children could accompany a song with a stable pulse. In the course of the latter half of the year, the six-year-olds all completely mastered presenting a steady pulse in minims, crotchets and quavers. Clapping or walking by semibreves remained difficult for about five of the six-year-olds. By marking the virtual quavers in between (e.g. by simulating clapping movements without actually making noise) many eventually succeeded in realising the semibreves. Whereas these are similar to the findings of previous research into rhythmical development (cf. Hargreaves, 1986: 80–2; Zimmerman, 1993: 9–11), the following, more complex, achievements do not feature in surveys of developmental research.

By lesson 22 (of 30), the six-year-olds could perform *two rhythmical motifs* in two separate groups. Initially, most children had difficulty maintaining their rhythm 'against' the rhythm of the other group, but they mastered the problems within a short time. One level higher is the ability simultaneously to sing the rhythm and to realise the pulse by clapping or walking. Whereas in lesson 15 only the most advanced pupils could do this, in lesson 22, after going through a series of increasingly difficult tasks, almost all of the six-year-olds succeeded in singing a rhythmically complex song (including dotted rhythms and triplets) while at the same time clapping and walking by steady crotchets at the same time. Combinations of different pulse types – for example, walking by minims and clapping by semibreves (and *vice versa*), or clapping by minims and walking by crotchets – were successfully performed in lessons 24 and 25.

The children also developed a remarkably fine sense of *upbeats*. To render the upbeat of a song precisely within a grid of metrical pulses is much more difficult than beginning a song with a downbeat because one starts at an unaccented moment. Nonetheless, after having rehearsed this a couple of times, most children succeeded in doing this in lesson 21. By lesson 28 the children had advanced so far that they could determine whether songs of the repertoire they had acquired by that time started with an upbeat or a downbeat. The teacher had taught the pupils that they could establish this by determining whether they were inclined to clap on the first tone (downbeat) or just after it (upbeat).

Furthermore, the six-year-olds learned to feel the difference between *common and triple measures*. 'Feeling' is the right word here because children acquired this skill by executing the movement of the song, rather than by counting the number of beats. The teacher introduced the distinction between the two types of measure as the difference between a 'walking song' (common time) and a 'rocking song' (triple time). Most of the six-year-olds perfectly noticed which kind of movement a familiar song embodied. This achievement was extended even further in lesson 28: the children came to sense the changes of measure from triple time to common time and vice versa. One child explicitly stated that the song at hand, which continuously alternated between common and triple

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time, was 'both a walking and a rocking song'. Four children out of 10 could perfectly render the change of measure by changing from rocking to walking at the right moment.

It should be noted, however, that the children's rhythmical skills were not merely based on their aural sense. With difficult exercises (e.g. combining the rhythm of a song with a steady pulse), the children needed to *see* exactly what the teacher or a classmate was doing before they could join in.

Pitch, melody, tonality

Most children could sing songs *in tune* provided they were concentrating sufficiently and the song was presented at a suitable pitch. With singing at a moderate volume this was the case right from the beginning, but when songs were sung at a high volume they were shouting rather than singing. This changed during the last lessons, when they managed to sing both loudly and in tune. In spite of the good results of the group as a whole, it should also be noted that a small number of children (about four) did not sing adequately with the group. Within the group as a whole they were inaudible and when working in small groups they produced something halfway between singing and speaking. However, these 'non-singers' were by no means the pupils with the fewest musical talents: three of the best pianists were among them. Their poor performance with singing may be ascribed partly to shyness and partly to a lack of affinity with vocal performance.

Most children also came to discover the difference between *the major and the minor modes*. Surprisingly, the younger group was better at telling the mode of a familiar song than the group of six-year-olds. The children easily recognised changes of modes in familiar songs when a teacher playing these suddenly shifted from major to minor and *vice versa*. This contrasts with outcomes of developmental research which indicate that only at 7 or 8 years can children recognise sudden changes in key (cf. Imberty, 1996; Zimmerman, 1993: 14). Apparently, such recognition depends strongly on how familiar the children are with the music they are presented with. In the last quarter of the year, the children practised transforming familiar songs from major to minor. Surprisingly, pitch acuity did not suffer heavily from such changes of mode.

Polyphony

Very little developmental research has been done on children's perception of polyphony (Zenatti, 1969: Ch. 2; Serafine, 1988: 138ff.). It suggests that children, even those between the ages of 8 and 10, have difficulty discerning the various parts of a contrapuntal texture. Singing and performing polyphonically is a different case, however. When singing one part of a *canon*, children have to hold one part within a texture of two or more parts. They should be aware of the rival parts but should not let themselves be swept away by them. This is very difficult for children who are used to giving their full attention to a single melody standing out alone. Even so, the PIPO children achieved remarkable results with canon singing from lesson 10 on. After the first year, the children could collectively complete a full two-part cycle of the canon 'Are you sleeping, brother John?', provided that the best singers were divided between the two parts. However, continuously repeating the canon was still too difficult for most of the children.

Musical concepts

The children acquired a number of basic musical concepts. Translating the general oppositions of *loud–soft* and *fast–slow* to music was easy for them, but the concepts of *high* and *low* posed more problems. The PIPO children did not use these terms spontaneously; instead they came up with alternative oppositions like 'light–heavy'. Nevertheless, because 'high' and 'low' were used consistently by the teachers, the children soon adopted these standard terms. During the second half of the year there were no more misunderstandings. It was remarkable how soon they became familiar with the conceptual distinction between the *major* and the *minor* modes (see above).

Although *upbeat* is a rather abstract concept, the children acquired this after they had learned to perceive the difference between songs with and without one. The children also came to appreciate the difference between *common time* and *triple time*, though the teacher did not use these abstract terms. Instead, the children learned to make a distinction between a 'walking song' and a 'rocking song'. *Crescendo* and *diminuendo* are other examples of names that are often more difficult than the principles they stand for. Although children soon became familiar with getting louder and getting softer, they did not succeed in remembering these Italian words.

3. Musical development II: piano lessons and public performance

Rhythm, motor skills, technique

Drawing on the rhythmical abilities the children had acquired during the general music sessions, the piano lessons did not feature any new rhythmical skills. Problems arising over playing certain kinds of rhythm accurately – particularly faster tone sequences – were due to a lack of motor skill rather than to a lack of rhythmic feeling. Large differences could be observed with respect to motor development. Some children, who had clearly tried out the piano before, were able to produce a clear tone with all their fingers. They played fluently right from the start and could produce considerable dynamic variations. There were also children, mostly the younger ones, who had difficulty employing their third and fourth fingers; only by stretching these could they press down the keys. Although they made significant progress, at the end of the year they still performed below the level of the most advanced starters. Playing fluently was not yet possible and their dynamic range was still fairly small.

Quick development of piano technique is not among the primary aims of the PIPO project, one reason being that the children's musculature is as yet underdeveloped. The prime principle adopted by the teachers was that the child should play as easily as possible. As long as the pupils did not handicap themselves (e.g. by tensing their muscles too much), they could very much go their own way. A few norms were established, though: the children should sit upright and, if possible, hold their fingers bent, and play with a small, curved hand. The most important articulation techniques practised during the first year were legato and staccato, as well as passing the thumb under and passing the first and the second fingers over.

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Pitch

The children made considerable progress in *figuring out by ear* the correct pitch sequence of songs. After the first year, almost all pupils were able to reconstruct simple melodies on the piano. But there were large differences. Some children could not hear whether there was a repetition or a pitch change or whether the melody went up or down. Consequently, it took them a long time to sort out rather simple songs. By contrast, the more talented pupils were able to sort out more elaborate melodies with a wider range of intervals and made only few mistakes in doing so. Harry and Mark, the two children we followed most closely during the year, both belonged to this latter group. But Mark's ambitions went further: in lesson 24 he spontaneously presented to his teacher the elaborate obligato from Bach's chorale arrangement 'Jesu, joy of man's desiring', which he had apparently picked up at home (Figure 1).[5]

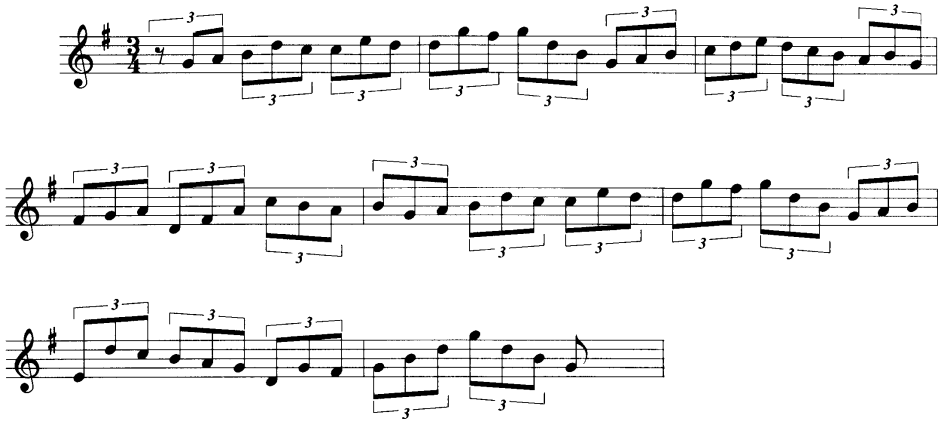

Fig. 1. Obbligato from Bach's chorale arrangement 'Jesu, joy of man's desiring'.

Harmony / accompaniment

Initially, all the children occupied themselves with the monophonic rendition of songs. But during the second half of the year most of them started to work with accompaniment. In its most simple form, this was a drone consisting of either the tonic or both the tonic and the dominant (C and G in the key of C). The next step was to alternate the primitive tonic function C–G with an equally primitive dominant function: B–G (again in C). This was a crucial step because, with each fragment of the song, the pupils now had to learn which proto-chord accorded best with it. Finally, the most talented, among whom were Mark and Harry, also had their first experiences with the subdominant, which was represented by the combination of C–A. Thus, while using simple two-tone intervals, which (in contrast to full triads) are relatively easy to realise physically, these children were able to accompany a song with all major tonal functions. The tonic and the dominant functions were not only practised in the key of C major but also in F major, G major, D major, F sharp major, A minor, D minor, and C minor. With both Mark and Harry, their feeling for the appropriate

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moment to change the accompanying chord developed considerably. During the last lessons they understood much faster than before when a chord change was due and they also seemed to appreciate that one chord yielded a better accompaniment than the other. This does not mean, however, that they already had a mature sense of tonal functions. There was no sign that Harry and Mark found accompaniments without conventional tonal progressions to be incorrect. In his spontaneous accompaniment, Mark stuck to figurations that represented only the tonic function, even after he had learned to play the same song with two or three chords. Clearly, for him functional progressions were not yet a must. This is in accordance with Imberty's finding that 6-year-old children have only a rudimentary feeling for tonality and that it is only at 8 years that they recognise tonal functions (Imberty, 1996). Even when adhering to the tonic function, Mark's accompaniments were remarkable for their variety. Whereas his teacher demonstrated to him only two-tone intervals sounding simultaneously, Mark spontaneously introduced 'horizontal' formulas like the pendulum G–C–G–C, descending triads and Alberti bass figures (Figure 2).

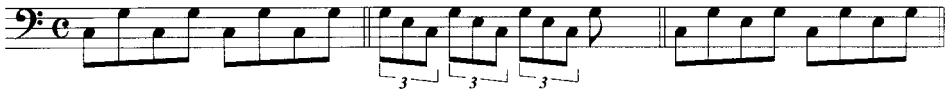

Fig. 2. Accompanying figures used spontaneously by a 6-year-old boy.

Ensemble playing

Perhaps the most important aspect of the PIPO project's first year is the development of ensemble playing, a dimension of musical development that has hardly been investigated. Playing together is considerably more difficult than playing solo. It requires not only that one can play the song or piece at hand, but also that one is able to coordinate one's playing with that of a partner in various ways: starting simultaneously, maintaining the same tempo, and reacting to the deviations of one's partner so that one retains balance.

In spite of these high demands on children, whose powers of concentration are relatively weak at this age, and in spite of the initial cacophonic results, ensemble playing began to crystallise after only a couple of lessons. A number of children then succeeded in jointly realising one or two phrases in unison. After this, the most gifted pupils soon managed to play a whole song with one or, sometimes, two or three partners. Whereas for a considerable minority this constituted the highest achievement attained during the first year, later on the quickest learners also practised homophony and polyphony. Mark and Harry mastered the form in which one of them plays a melody while the other accompanies with one or two chords. They also succeeded in playing both the melody in their right hands and an accompaniment in their left simultaneously. In doing so, Mark frequently improvised his own left-hand part while Harry stuck to the proto-chords suggested by the teacher. Their sense of coordination was excellent: when one boy played an introduction, the other had no problem in entering right on time; when they failed to start simultaneously, when tempo variations occurred, or when one of them sounded wrong notes, Harry and Mark succeeded in coming together again. This was particularly striking in the case of probably the most difficult skill they had to master: playing the canon 'Are you sleeping, brother John?' with each boy taking care of one part. The fact that the

boys managed to restore balance after a disruption indicates that they appreciated the periodic structure of this canon. Even so, completing a full cycle turned out to be very difficult: only in lesson 25 did Mark and Harry succeed in doing so. Another couple, two girls, also mastered this achievement during the first year.

The main obstacle to ensemble playing was lack of concentration. Impressive as the results just described were, Mark and Harry often performed far below their optimum. When they were successful with a difficult exercise, it often took them weeks to repeat this achievement – only because they could not reach the same levels of concentration.

Public performance

When all the children had finished their general music activities as well their piano lesson, the morning concluded with a joint session under the supervision of the general music teacher. During most of these sessions the PIPO children performed in public, playing songs and pieces they had worked on during the piano lessons or doing a short improvisation. It was remarkable to see how familiar these children became with playing in the presence of some 50 people: classmates, teachers, and relatives. Most of the children were much shyer when it came to communicating verbally; only when pressed by the teacher would they answer questions in public. But once they had mastered a piece of music they were keen to play it to the audience.

4. Educational issues

Because PIPO is a brand new project that can rely on existing piano training methods only to a small extent, there is a great need for its evaluation. After every lesson, the teachers, specialists in piano didactics, and staff members discussed the progress and the problems of the programme and assessed what adjustments needed to be made. A number of curricular and didactic issues emerged.

1. Working with groups

One major topic during the evaluation sessions concerned the pros and cons of the group approach to piano education. One of the advantages of this approach is that it gives the social nature of music its full due. Indeed, ensemble playing was among the largest successes of the first year. Because it entails children adjusting to each other's performance, ensemble playing also trains their listening skills. Another advantage is that with group lessons there is less pressure on the children than in a one-to-one relationship with a piano teacher. In the company of peers, they tend to be more at ease and, when concentration is low, as is often the case with children of this age, they can withdraw for a couple of minutes. Also, children can stimulate each other by transferring their enthusiasm, challenging their mates to arrive at a similar performance, or show or explain something to them. Besides cultivating the social dimension of music itself, the group lessons stimulated the development of the children's general social skills. The mother of the least sociable child, a highly talented boy who combined a shy attitude and frequent absent-mindedness with boisterous action that often disturbed the lessons, indicated how

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much she appreciated the opportunities for social development that the piano class provided.

On the side of the disadvantages, orderly behaviour proved to be a major problem in piano groups of four pupils. When the teacher was dealing with one child, the others would frequently disturb the lessons by walking around, playing their own things on the second piano, chatting, and having fun with each other. The children strongly infected each other with their subversive behaviour. A second disadvantage of the group method is that pupils cannot always be given the individual attention they need. This applies not only to musical matters – instructions about technique, additional explanation, exercises precisely matching the child's level – but also to the personal relationship between the teacher and the child. As one member of the educational team remarked, a teacher who has to go back and forth from one child to the other cannot really develop an intimate relationship with his/her pupils. Furthermore, group lessons have to cope with the fact that children achieve at different levels. When such differences become too large, this is likely to harm the musical progress of the children: the low achievers become discouraged, so that their development may stagnate altogether; the high achievers are challenged too little and lose interest in what their teacher provides them with.

The pros and cons were discussed during the evaluation sessions. The problems were met by two measures. First, the groups were reorganised in a way that matched children with respect to achievement level and character. Second, the group size was reduced from four to two. This reduced behaviour problems to an acceptable level and allowed for considerably more personal attention for each child. The children were left alone less frequently now, and when this did occur, they had no-one else who could join in and amplify their disturbing behaviour. It was concluded that, since the disadvantages had been reduced significantly, the positive experiences justified the continuation of the group lessons. It should be emphasised again that the philosophy behind the PIPO project is not to teach children to master the piano as quickly as possible. The PIPO project pursues a broader set of aims that include nurturing the love of music, developing the inner ear and the musical imagination, and stimulating the development of the child as a social creature. However, there was also a consensus that teachers should have the opportunity to work individually with the more advanced children on a regular basis. Although such solo lessons did occasionally occur later in the year, no structural arrangements could be made for them.

2. Songs or idiomatic piano pieces?

The aural approach to the piano is one of the principal characteristics of the PIPO project. Piano playing starts with familiar songs that the children have to figure out by ear. One reason for postponing the introduction of standard notation is that the younger pupils, the five-year-olds, are not yet ripe developmentally for reading. The main argument, which applies to the older children as well, however, is that playing from scores hampers the development of the aural sense: when children play from scores, they learn to associate keys with notation symbols but not with actually sounding tones. They do not need to imagine the precise nature of the melodic curve, the rhythms, and the harmonies, and then realise these at the keyboard. Instead, they translate abstract symbols into finger move-

ments. If audition skills are to be trained during piano lessons, the children should start from music firmly established in their minds, which they then relate to the keys of the piano by ear. Children's songs are the only substantial body of music available to young children.

Playing from notes not only fails optimally to develop the children's listening, it is also harmful to fluency, as one teacher emphasised. Without notation, children can focus wholly on their hands and have an overview of the keyboard; with sheet music they have to go back and forth between the score and their hands. Translating note symbols into finger movement costs the pupils so much energy, they can pay less attention to the actual quality of what is sounded. Because of this, children's play often sounds mechanical, according to this teacher. When playing without notation children attain the fluency characteristic of their singing much more easily.

Songs, then, were the main material used during the piano lessons. Working with these clearly proved their usefulness: all children progressed strongly in transferring songs to the piano. With key transpositions, they learned by ear when to use black keys. A majority also actively learned to discover the match between melody and simple chords. Nevertheless, there are major drawbacks to this method. To start with, it is difficult to devise a systematically progressive curriculum from a corpus of diverse songs. Although many songs do train one or more abilities, one song does not logically build on another. No sequence of songs exists in which each one takes the skills acquired through earlier songs one step further. Second, the idiom of children's songs has significant limitations. All the tunes used during the first year conformed to the traditional major–minor tonality and to corresponding modes of forming melodies. This could be extended with pentatonic songs and songs in the traditional 'church' modes (Dorian, Phrygian, Lydian, Myxolydian), but even then the song repertoire remains restricted: (1) qua melodic curve: song curves always have a certain evenness (so that they can be sung appropriately); (2) qua tonality: (a) songs always remain within the framework of some form of tonality – atonal songs do not exist; (b) songs generally feature no or few modulations, and if they do have them, they are usually only the most simple ones.

Children who play from scores can easily become acquainted with more varied tonal idioms (think, for example, of Bartók's *Mikrokosmos* (1935/1980) and with a wider repertoire of melodic curves. It is precisely the idiomatic instrumental formulas, like triadic figures and runs, that children's songs do not provide for. The same goes for rhythm. The rhythms of children's songs tend to be fairly simple and, if they become more complex, they are typically motivated by the rhythms of speech. Piano music features all kinds of rhythms that are not amenable to vocal performance.

In short, playing songs is not the same as playing the piano, as one member of the educational team put it. To develop genuine pianism a more varied diet than vocal songs is necessary. At some point, idiomatic keyboard pieces need to be introduced. This poses a threat to the aural approach, though. Because the more advanced pieces can be mediated only through scores, the children will have to be involved seriously in notation. Once they come to play idiomatic keyboard music from sheet music, they are likely to lose interest in the simpler, less varied songs. During the first year, the piano teachers were able to avoid facing the dilemma between the aural approach and the idiomatic notation-based approach. The eight most advanced children had their first experiences with piano pieces

from *Alfred's Basic Piano Library* (Palmer *et al.*, 1991) and *Folk Dean* (Dean, 1964, undated), but, because these were very simple, they could rely mainly on the auditory method. They sorted out the melodic parts by ear and were shown the primitive chords by their teachers. Although the PIPO children did learn some simple principles of notation during the first year, only the two children who had additional piano lessons outside PIPO were able to produce pieces from scores. The teachers were happy to prolong this situation in which the aural approach was combined with a repertoire of both songs and simple idiomatic piano pieces. Inevitably, a new balance between the aural approach and playing from scores will have to be found when the pupils are ready for more complex pieces.

3. Improvisation

One of the basic principles of the project was that *improvisation* should be one pillar of the piano lessons. In practice, it remained a sideline rather than being integrated into the lessons as a whole. The main reason for this was that the lessons were organised around songs. Also, because the piano teachers had difficulty linking the song approach to free improvisation, the dominant use of songs hampered the pupils' inclination to improvise. Their main interest was in getting the songs right; deviating from the original was alien to their minds. The children's focus on songs is nicely illustrated by the response of a boy who was first asked to represent 'walking on the sand' and then 'swimming in the water'. With the first task the boy simply reproduced the melody that had been rehearsed just before; with the second he played the same melody in the minor mode. Harry and Mark did not seem to understand what was expected from them when asked to improvise, even if the request was phrased in evocative language. Typically, the most convincing results with improvisation were achieved in relation to familiar songs. When asked to play an introduction, both boys came up with something interesting. And, as we have seen, Mark was very creative in improvising various forms of left-hand accompaniment.

The lack of interest in free improvisation these boys showed may be related to the transition from a pre-conventional to a conventional stage, as hypothesised by Gardner, Phelps & Wolf (1990). They hold that, while very young children improvise freely without much attention to musical conventions, from about 7 years onwards they start to conform ever more strictly to existing musical styles. As these children adhere to already existing music, their inclination to improvise declines: free improvisation without concern for musical rules is no longer an option, whereas improvisation consistent with a specific idiom is as yet too difficult for them.

Conclusion

As the above discussion indicates, PIPO is very much a pioneering project in search of a successful format for teaching piano and general musical skills to very young children. During the first year, a number of issues were not settled definitively: the size of the piano groups; opportunities for additional solo lessons; the balance between songs and idiomatic keyboard pieces, and between composed music and improvisation; the role of parents in the educational process.

The experimental aspects of the project proved to be no impediment to the children's

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musical growth. After one year, their musical achievements in rhythmic exercises, ensemble playing, harmonic accompaniment, and performing canons produced a level of musical competence not recorded so far by developmental research. Perhaps even more important than the acquisition of musical skills is the fact that the children's affection for music has been greatly enhanced. One mother stated that she considered the feeling and love for music her daughter had acquired to be invaluable. Thanks to the project, music was now present always and everywhere in her child's life.

Acknowledgement

I would like to thank all those involved in the PIPO project – teachers, staff members, parents, and children – for allowing me and my assistant to follow the lessons and evaluation sessions.

Notes

1. The concept of audiation has been introduced and developed by Edwin Gordon (e.g. Gordon, 1984).
2. The PIPO project has not been significantly influenced by the Suzuki method, the most famous method for teaching young instrumentalists. Apart from the fact that the educational team considered adaptations of the Suzuki method to the piano to be inadequate, the approach of the project differs from the one taken by Suzuki in a number of ways: the PIPO project is less narrowly focused on the instrument; it does not aim at quick achievements in the form of advanced performance; though parents play an important role, the mother–child relation is not the alpha and omega; whereas Suzuki's eventual goal is the development of the character as a whole, the PIPO project primarily aims at the development of musical competence.
3. The largest part of the observations was carried out by the writer. For the lessons I could not attend an assistant researcher was engaged. The attendance of the two researchers was as follows:
   Myself: Lessons 1, 2, 4, 6, 8, 10, 12, 14, 16, 18–28, 30. Total: 21.
   The assistant researcher: Lessons 1–13, 15, 17. Total: 15.
4. For the sake of privacy the boys' names have been altered.
5. This famous melody, originally from the concluding section of part one of cantata BWV 147, is not the chorale itself but Bach's ingenious counterpoint to it.

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