

# Evaluation of the Arts Across the Curriculum Project

## Final Report

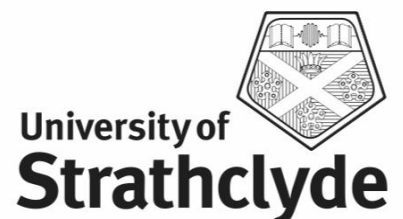
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### Available as a separate volume

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The team were supported by the following research staff, who provided invaluable support in relation to coding and data entry, pupil focus groups, teacher and artist interviews, initial analysis of both survey and interview data and preparation of the video diaries:

Jane McKay  
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All artists and teachers were invited to complete questionnaires and high return rates were achieved, so the team really appreciate the additional time and commitment that this involved. We also thank the schools and teachers who facilitated the completion of pupil questionnaires. Observations of integrated curricular lessons (ICLs), interviews and focus groups were carried out in a sample of schools and particular thanks are due to these schools. We are especially grateful to the local authority that provided access for our in-depth study; the enthusiastic support and engagement of senior management, teachers, artists and pupils as well as the CLO were very much appreciated.

We also thank Professor Kay Livingston, University of Glasgow, for her contribution to and support for the work of the evaluation in its initial stages.

# Evaluation of the Arts Across the Curriculum Project

## Executive Summary

### 1. Introduction

This is the final report on the evaluation of the Arts Across the Curriculum (AAC) project, prepared by the evaluation team in the Quality in Education Centre (QIE) at the University of Strathclyde, who were commissioned by the Scottish Government (formerly Scottish Executive) Education Department.

### 2. The Arts Across the Curriculum project

Arts Across the Curriculum is a three-year pilot project sponsored by the former Scottish Executive's Future Learning and Teaching (FLaT) programme<sup>1</sup>, the Scottish Arts Council, and seven local authorities in which the initiative is being piloted. In order to be eligible to participate in AAC, local authorities had to have a Creative Links Officer in post. The seven Creative Links Officers were responsible for the management of the AAC project in their local authority. The six key aims of the project are:

1. to increase pupils' achievement, particularly in understanding, in identified subject areas across the curriculum
2. to increase pupils' motivation to learn
3. to support and develop the skills of teachers to work collaboratively and creatively
4. to encourage links between different areas of learning and erode subject barriers
5. to improve the ethos of the school
6. to explore the efficacy of the expressive arts as a delivery mechanism across the curriculum.

The ideas expressed in the project's aims are drawn mainly from the Lakeside Education and Arts Partnership (LEAP) approach and their Arts Impacting Achievement (AIA) project. These follow the Chicago Arts Partnerships in Education (CAPE) approach, commonly known as the 'Chicago model'.

At the heart of Arts Across the Curriculum is the 'integrated curricular lesson' (ICL) that arts professionals and teachers plan and deliver together. Creative Links Officers were responsible for choosing the schools, artists and structure of these ICLs. Their purpose is to enhance pupils' understanding of curriculum content through arts activity and for pupils to gain greater insight into the arts. Artist and teacher integrate their specialist knowledge in designing lessons to achieve this end.

### 3. The evaluation

The aims of the evaluation, as agreed with the FLaT team, are to:

1. describe the extent to which the six *key aims* of the Arts Across the Curriculum project have been met
2. identify strengths and any gaps in the training and support available to teachers and artists involved in the Arts Across the Curriculum project in the participating schools
3. assess the overall impact of the Arts Across the Curriculum project on teachers, artists and pupils in the participating schools (including any gender differences in relation to outcomes)
4. explore how the expressive arts can be used as a vehicle for carrying current school curriculum knowledge and for achieving broader educational targets
5. establish conditions that support effective implementation and embedding of the Arts Across the Curriculum project.

#### Outline of research design

From April to August 2005, a picture of the initiative was constructed from interviews, observation of the main AAC training event and planning meetings, and from AAC documents provided from various sources including schools, local authority managers and the Scottish Arts Council.

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<sup>1</sup> Information on the FLaT programme can be found at <http://www.flatprojects.org.uk/>

During the period September 2005 to June 2006, data were gathered using a variety of instruments which included pupil, teacher and artist surveys, structured observation of ICLs and interviews with a sample of artists, pupils, teachers and parents.

Between September 2006 and June 2007, these measures were repeated in order to identify any changes in impact that might have arisen when stakeholders had accumulated experience of implementing ICLs.

In addition to these measures, a number of artists provided rich data through the compilation of video diaries (see Coutts & Dougall, 2005) and there was an in-depth study in three schools which involved semi-participant observation and extended exploration of teachers' and artists' understandings of the project aims and how they might be implemented effectively. The in-depth study included one focus group with the headteachers from the three schools and a further focus group with the artists and teachers. In June 2007, individual interviews took place with key members of the SAC and Creative Links Officers. Finally, the views of project monitors, who had been appointed by the FLAT team as 'critical friends', were sought in August 2007.

## **4. Key findings**

### **4.1 Artist and teacher interpretations of ICLs and related issues**

There was a high degree of diversity among authorities and schools in the ways in which ICLs were developed and delivered; for example, the frequency and length of art input, the length of time a group of pupils participated in AAC, the curricular area addressed and the art discipline involved. However, the classroom observation data showed that interaction promoting the key aims of AAC appeared in the vast majority of observed lessons; the observers noted in particular that arts activities were used to enhance the curriculum content. The evidence shows that the artists and teachers were adapting the Chicago/LEAP model in sensible, productive ways to fit curricula in Scottish schools. Throughout the project, the arts activities were being used to help pupils learn other knowledge, and this evidence differentiates AAC activities from other initiatives that have introduced arts activities into schools. However, the various strands of data suggest that more attention needs to be given to enabling pupils to develop creative thinking as well as content outcomes.

#### ***Suitability of art form for different academic content***

There was evidence, especially by the second year of the project, that teachers and artists believed that many ideas that are difficult for pupils could be effectively illustrated through the available art forms. In commenting that an art form 'involves looking at something from a different perspective', one artist summarised a view expressed by others: that it is reasonable to believe that any art form offers a way of promoting insight into ideas in most academic subjects. However, this does not mean that representation was straightforward, and both teachers and artists reported that this was challenging to achieve. Careful planning and pedagogical understandings are key to effective ICLs.

#### ***Planning for integration***

Taken together, the data suggest that teachers and artists collaborated very well together. Success depended on setting realistic goals for a series of ICLs, careful analysis of the concepts learners were to grasp and weighing up a range of possible pedagogical strategies. A key factor was the artists' ability to help pupils to represent challenging curricular concepts through artistic activities. Success was also associated with being able to balance the various constraints in the context and reach solutions acceptable to both artist and teacher.

Evidence of teachers and artists developing ideas jointly was more marked in the second than in the first year of the project, possibly because it takes time to develop understanding of the sophisticated notion of integrating two disciplines to enhance learning in both. The planning sheets provided were not particularly helpful: 'they are a formality, not a tool'.

#### ***Integration in action***

In almost all lessons, high levels of productive interaction were observed between young people and their artists and teachers. The highest proportion of invitations to talk initiated by artists in both years fell into the category connected with deepening pupils' understanding of curricular content. In both

years, artists initiated more than twice as many invitations to talk as teachers over the typical observation slot, a finding which can be explained in part by three inter-related factors (i.e. the artists often led the recap of curricular content; they orchestrated the lessons around the arts activities and they used many short questions to focus pupil attention). The artists demonstrated high levels of skill in using questioning techniques.

### ***Covering curriculum content***

The vast majority of teachers reported that it took longer to cover the curriculum content, but for most this situation was manageable. The extra time invested led to deeper understanding of the topic and was often recovered subsequently through not having to re-explain concepts at a later stage.

### ***Less successful ICLs***

Where lessons were less successful, explanations from artists and teachers proposed three inter-related factors: delivering the ICLs to classes with a high proportion of pupils with unusually challenging behaviour; inadequate support from school management; selecting academic goals and/or artistic content that were too difficult for the pupils.

## **4.2 Impact on pupils**

Views of pupils, teachers, artists and parents were sought in relation to the project's effect on pupils' learning and engagement with learning. The many different strands of evidence point in the same direction: the ICLs engaged the pupils; they were effective in enhancing understanding of academic and artistic content; and pupils, including those with social, emotional and behavioural needs, derived a range of benefits from these lessons.

### ***Pupil views on impact on pupils***

There was evidence that the pupils clearly understood that the main focus was the curriculum topic but also that there was opportunity to learn about different art forms and art skills. It is clear from surveys that the majority of young people believed that having an artist working alongside the teacher had the following benefits:

- enhanced interest, enjoyment and engagement with learning: for example, the majority thought that the lessons were more interesting, time seemed to pass more quickly and they looked forward to the lessons with the artists; the majority thought it would be a good idea to have artists in more lessons
- it was easier to learn the topic because of the way it was explained and they thought they could remember the ideas better
- the lessons helped them work with other pupils, including people they did not usually work with
- the things they did during the ICLs made them feel more confident.

Pupils' explanations indicated that: they liked having the freedom to make their own decisions about planning and executing tasks; the lessons enabled them to remain 'on task', because ICLs were active and involved less reading, writing and copying; the way the artist explained things and the things they did in these lessons enabled them to remember the concepts they were learning more easily. However, not all lessons with the artist were successful, and in a small number of lessons, they did not see the connections between the art activity and the subject they were learning.

Pupils indicated that they learned about different art forms and some would have been interested in learning more, but opportunities for further development were perceived as limited, both within school and in the wider community.

### ***Teacher, artist and parent views on impact on pupils***

Teachers reported increased engagement of the young people during ICLs and said that the interest in the curriculum topic/subject often continued when the artist was not present. They reported children 'loving it' and 'being excited'.

Teachers were also positive about the extent to which the approaches used in ICLs encouraged pupils:

- to work collaboratively
- to work creatively (i.e. to contribute and try out new ideas and take risks), and
- to develop confidence and self-esteem.

In relation to improved achievement and understanding, teachers offered evidence of benefits in the following categories:

- pupils' grades in the subject used for the ICLs
- pupils' grades in class tests for the topic used for a series of ICLs
- pupils' completion of homework connected with a series of ICLs
- pupils' understanding of concepts taught in ICLs – assessed verbally when new, related concepts were being introduced.

Artists reported high levels of interest and enthusiasm amongst pupils, although during interviews some indicated that amongst secondary pupils in particular there were some classes, or a few in each class, who were not 'on board'.

While some of the parents interviewed had only limited awareness of the AAC project, the majority indicated that their children had enjoyed the experience and had spoken enthusiastically and positively about the lessons with the artists. Most believed that the interest generated by the artists would help the children concentrate more and help them learn.

### ***Developing creative approaches and creative thinking skills***

Overall, the majority of the pupils thought that ICLs encouraged them to:

- try things they had not done before
- share their ideas with other people
- put new ideas into practice, and
- be more imaginative.

In open questions and focus groups they thought one of the purposes was to help them use their imaginations. However, there was no evidence of any difference in the development of creative thinking skills, between a small sample of AAC pupils and a comparator group of non-AAC pupils, as measured by a set of standardised creative thinking skills tasks. One possible explanation, supported by the data gathered during ICL observations, is that there was insufficient time in ICLs for pupils to practise a range of creative thinking skills. Typically, in ICLs pupils responded to questions and represented ideas in an art form, but there was little time for them to talk about forms of thinking that underlie artistic endeavour (see e.g. Tishman & Palmer, 2006). The standardised tasks reflect the view that creative thinking includes the ability to generate lines of enquiry and to engage in various forms of thinking embedded in particular art forms. Most research suggests that any form of thinking has to be practised quite intensively before a measurable impact occurs, and the nature of the thinking needs to be made explicit.

## **4.3 Impact on teachers and artists**

Evidence from all sources indicates that the majority of teachers and artists were very positive about their involvement in the Arts Across the Curriculum project and most agreed that they would like to continue working in this way.

### ***Initial training and ongoing support***

At the outset of the programme a 3-day training event was held, drawing together teachers and artists from the 7 authorities involved in the project and a team from Lakeside Education Arts Partnership, Chicago. This event was generally well received by both teachers and artists, although many of the artists reported that they already had experience of working in an educational context and believed that their talents could have been utilised more in the training event. According to both teachers and artists, an important aspect was the wealth of talented Scottish artists gathered together for the training event and who were participating in the project.

'New' artists and teachers became involved in AAC throughout the life of the project. Induction for such participants varied from authority to authority. Teachers and artists in some authorities reported meetings with CLOs and there were some locally organised induction and planning days. Others

reported little support, with teachers depending on experienced artists, and *vice versa*, to help them with the preparation and delivery of ICLs. More structured induction and clear information about AAC and the ICLs would have benefited all new participants to the project.

From the artists' perspective it was reported that, for the most part, schools had been welcoming and management supportive. This support was less evident in secondary schools, but artists indicated that the relationship with the teachers had been sufficient, although they believed that teachers could have benefited from greater support from management. Artists were extremely positive regarding support from local authority managers, with an apparent increase in appreciation over the course of the project.

### **Teacher development**

One aim of the AAC project is to support and develop the skills of teachers to work 'collaboratively and creatively'. Teachers reported working collaboratively with other adults and with their colleagues prior to involvement in AAC, but some indicated that working with the artist had made them more confident in working with others.

In relation to working creatively:

- almost all the teachers thought that they had developed new approaches to teaching
- most indicated they had tried out the new ideas in other lessons and
- most thought that working with an artist had developed their confidence to try out new approaches and to be less 'controlling' in their classroom practice.

### **Artist development**

While about one-third of the artists indicated that being involved in AAC had not led to further professional or personal development as they were already well experienced in working with schools, the remainder reported that they had:

- developed new awareness and understanding of issues related to schools and young people
- acquired new skills in working with young people, and
- been stimulated to develop new approaches in their art (a few artists).

## **4.4 Impact on schools**

AAC had two aims specifically related to whole school issues: to **encourage links between different areas of learning and erode subject barriers** and to **improve the ethos** of the school.

- Teachers saw the most obvious erosion of subject barriers occurring between art disciplines used in the ICLs and other areas of the curriculum, although some primary teachers suggested that this was not new practice.
- While by the end of the project some secondary teachers were seeing the potential for cross-curricular collaboration (e.g. English and Art, Social Studies and Drama, Maths and Music departments), there were few formal opportunities within schools (e.g. development days that focused on the AAC experience) designed to cascade the approach throughout the school.
- There was no general consensus reached as to whether or not AAC had impacted on the ethos of schools.

## **4.5 Sustainability**

About half the teachers believed that they could continue to implement the delivery of the curriculum through arts media as the experience had given them the ideas and the skills; the remainder believed this was not possible as the expertise and skills of the artists were essential for successful delivery. Sustainability was dependent on schools' commitment to giving time, resources and wider recognition within the school to an arts-infused approach and ongoing CPD/mentoring from artists.

## **4.6 Efficacy of arts for delivering the curriculum and conditions that support effective delivery**

All of the above evidence suggests that the expressive arts can be effective vehicles for carrying school curriculum knowledge and for achieving broader educational targets. The ICLs can be

understood as translating constructivist accounts of learning into practice in a way that is consistent with principles expressed in the *Curriculum for Excellence*. Many ICLs served the functions of illustrating abstract concepts by representing them in another, arts-related, way and providing a vehicle for problem-based and other participative forms of learning implied by the *Curriculum for Excellence*. There is no clear evidence that arts promote understanding of curriculum knowledge *more* effectively than other approaches derived from sound pedagogical research.

Factors contributing to effective delivery of ICLs that emerged from the data and that appear in related research literature include:

- strong leadership and support of the school management team
- the quality of joint artist/teacher planning
- effective communication
- appropriate time slots for lessons with provision for continuity and progression
- suitable locations and resources
- promotion of good artist-teacher relationships and collaboration in both planning and delivery
- projects that are not one-off but have multiple phases.

Features of effective planning include:

- choosing realistic academic and artistic goals
- analysing key concepts connected with lesson goals
- considering strategies for developing pupils' understanding
- using the art form to inject interest into 'difficult' or 'dull' content
- artists' ability to design a vehicle suitable for promoting the academic goals with manageable artistic activities accommodating such constraints as time, teacher/pupil resources and space.

## 5. Points for consideration

It is recommended that attention should be given to the following points in future attempts to build on the successes reported above in using art forms as a vehicle for enhancing curriculum learning.

- **Teacher/artist opportunities to explore pedagogy**

Representing curricular content in art forms requires more sophisticated pedagogical understanding, particularly of constructivist approaches; the AAC project training needs to address this through a joint approach with senior academic staff in universities who have evidenced their expertise in this area through, for example, publications in peer reviewed journals. Part of the pedagogical understanding relates to the idea that it is through learning to think more effectively that knowledge bases are grasped in ways that enable them to be used as flexibly as seems to be envisaged in the descriptors of the four capacities that capture the aims of the *Curriculum for Excellence*. Viewed in this light, there is little conflict between developing thinking through reflection in the way described in Project Zero (e.g. see Tishman & Palmer, 2006), while also achieving academic learning outcomes.

More constructivist teaching needs to be supported by more open-ended assessment tasks, including more use of what is known as authentic assessment tasks (e.g. see Knight & Yorke, 2003). For example, pupils might be assessed through presenting their work to school and community audiences.

- **Providing time to develop understanding of art forms**

More time might be allocated to opportunities for pupils to explore and analyse art forms, such as films, plays and visual art, in the ways described in Project Zero's *Artful Thinking* (Tishman & Palmer, 2006), if aims relating to creative and other forms of thinking are to be achieved.

- **A whole school approach**

ICLs are likely to work optimally where there is a whole school approach which is actively supported by senior management, and which makes it possible for teachers and artists to identify both ICL and non-ICL lessons where young people can practise 'artful thinking', research knowledge, and engage

with related films, plays, novels, poems, documentaries and visual art. Without a whole school approach, practice in forms of thinking embedded in art forms is restricted to isolated classes and may be insufficient to develop competent thinking. Time for developing creative and other forms of thinking might be found through a whole school approach that re-examines curriculum knowledge to distinguish between fundamental ideas in areas of study and other information that pupils could access themselves through individual work.

A whole school approach would also enable young people to gain experience across the school of working in the constructivist ways that are implied by the *Curriculum for Excellence*.

- **Erosion of subject barriers**

A contribution to the erosion of subject barriers can be made through the use of a systematic approach in which school working groups identify forms of thinking in arts activities and draw up plans to enable pupils to practise such thinking across the curriculum.

Eroding of subject barriers can be promoted through the well researched, very influential approach known as problem based learning (e.g. see Boud & Felletti, 1997), in which the expressive arts could be used as the vehicle. Plainly, this endeavour would need to be supported by the senior management team.

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# Chapter 1 Introduction

## 1.1 Introduction

This is the final report on the evaluation of the Arts Across the Curriculum (AAC) project, prepared by the evaluation team in the Quality in Education Centre (QIE) at the University of Strathclyde, who were commissioned by the Scottish Government (formerly Scottish Executive) Education Department.

This first chapter presents a brief outline of the background of the project, the aims of the evaluation and the evaluation methods. Appendix A contains details of the phases of the evaluation, an extended description of and rationale for the research methods and information on samples.

## 1.2 Background to AAC

In Scotland, the National Priorities (SEED, 2004) explicitly promote the development of creativity and ambition. The Scottish Arts Council priorities (SAC, 2005) and the National Cultural Strategy (SEED, 1999) emphasise the role of arts education and promote the notion of a collaborative approach to learning involving artists directly in the learning experience of school students. Creative Partnerships (CP, 2005) and the Artist Teacher Scheme (ATS, 2005) in England have been promoting the role of arts practice in education with the support of the National Society for Education in Art and Design (NSEAD), the Arts Council England and the former Department for Education (now Department for Children, Schools and Families).

Arts Across the Curriculum is a three-year pilot project sponsored by the former Scottish Executive's Future Learning and Teaching (FLaT) programme, The Scottish Arts Council, and the seven local authorities in which the initiative is being piloted and evaluated. In order to be eligible to participate in AAC, local authorities had to have a Creative Links Officer (CLO) in post. The seven CLOs were responsible for the management of the AAC programme in their local authority. The six key aims of the project are to:

1. increase pupils' achievement, particularly in understanding, in identified subject areas across the curriculum
2. increase pupils' motivation to learn
3. support and develop the skills of teachers to work collaboratively and creatively
4. encourage links between different areas of learning and erode subject barriers
5. improve the ethos of the school
6. explore the efficacy of the expressive arts as a delivery mechanism across the curriculum.

The ideas expressed in the project aims are drawn mainly from the Lakeside Education and Arts Partnership (LEAP) approach and their Arts Impacting Achievement (AIA) project. These follow the Chicago Arts Partnerships in Education (CAPE) approach, commonly known as the 'Chicago model'. Evaluation of the Arts Across the Curriculum project offers an opportunity to gather evidence in Scotland.

The Arts Across the Curriculum project sets out to do something quite ambitious and promotes the notion of developing the skills of teachers; encouraging links between different areas of learning and testing the efficacy of the arts as a 'delivery mechanism' across the curriculum.

At the centre of both the Chicago and the Scottish variants is the 'integrated curricular lesson' (ICL), which arts professionals and teachers plan and deliver together. In the AAC project, the schools, artists and structure of ICLs were chosen by the CLOs. The purpose of the ICL is to enhance pupils' understanding of curriculum content through arts activity and for teachers and pupils to gain greater insight into the arts. Artist and teacher integrate their specialist knowledge in designing lessons to achieve this end. Science teachers and dancers, for instance, might teach together to enhance pupils' understanding of molecules.

## 1.3 The evaluation

### Evaluation aims

The evaluation aims in the tender reflect those outlined in the Invitation to Tender, and are as follows:

1. Describe the extent to which the six key aims of the Arts Across the Curriculum (AAC) project (outlined above) have been met and in terms of other benefits that might emerge from the evaluation.
2. Identify strengths and any gaps in the training and support available to teachers and artists involved in the Arts Across the Curriculum project in the participating schools
3. Assess the overall impact of the Arts Across the Curriculum project on teachers, artists and pupils in the participating schools (including any gender differences in relation to outcomes)<sup>2</sup>
4. Explore how the expressive arts can be used as a vehicle for carrying current school curriculum knowledge and for achieving broader educational targets
5. Establish conditions that support effective implementation and embedding of the Arts Across the Curriculum project.

### Evaluation phases

The evaluation comprised two major phases: April – August 2005 and September 2005 – December 2007. In the first phase, the aim was to gain a clear understanding of how the project was being implemented and to firm up research plans for addressing the aims of the evaluation. The aim of the second phase was to track the impact of the project on all stakeholders on matters related to the aims of the project. The work of phase 2 was addressed in 2 stages that paralleled the 2 school years of the pilot implementation.

### Outline of research design

During April to August 2005, a picture of the initiative was constructed from interviews, observation of the training event and of planning meetings, and from AAC documents provided from various sources including schools, local authorities (mainly Creative Links Officers but also Cultural Coordinators<sup>3</sup>) and the Scottish Arts Council.

During the period September 2005 to June 2006 (Stage 1) data were gathered using a variety of instruments which included surveys, structured observation of integrated curricular lessons (ICLs) and interviews with a sample of artists, pupils, teachers and parents.

Between September 2006 and June 2007 (Stage 2) these measures were repeated in order to identify any changes in impact that might have arisen when stakeholders had accumulated experience of implementing ICLs. The original design proposed following up on pupils who had been involved in both years of the project. However, in many of the schools, different classes and different teachers took part during the second year and, therefore, the majority of the pupils in the second year sample were experiencing AAC for the first time in 2006-07.

In addition to these measures, a number of artists provided rich data through the compilation of video diaries and there was an in-depth study in three schools which involved semi-participant observation and an extended exploration of teachers' and artists' understandings of the project aims and how

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<sup>2</sup> At the outset, this aim also included evaluating the impact in the local communities and arts organisations. During the course of the evaluation, it was agreed with the FLAT team that this was beyond the scope of the evaluation as there was little potential for noticeable impact in such a short timescale.

<sup>3</sup> Creative Links Officers (CLOs), posts funded through the Scottish Arts Council's Creative Links Programme, work at a strategic level to develop high quality arts practice and creativity in education across Scotland. Cultural Co-ordinators facilitate arts and cultural heritage visits, events and workshops for their local schools.

these might be implemented effectively. The in-depth study included one focus group with the headteachers from the three schools and a further focus group with the artists and teachers. In June 2007, individual interviews took place with key members of the SAC and Creative Links Officers. Finally, the views of project monitors, who had been appointed by the FLAT team as 'critical friends', were sought in August 2007.

## **1.4 Structure of the report**

A detailed account of evidence from all sources (all surveys, interviews, observations and participant observation) is given in the technical appendices. This report, therefore, focuses on the broad outcomes and issues of the evaluation and does not replicate the detailed findings, but provides references to the relevant appendices to support the issues presented and discussed here.

The report presents the findings of the evaluation as follows:

- Chapter 2: Artists' and teachers' interpretation of Integrated Curricular Lessons**  
This chapter draws on all data sources to present an account of the processes of developing and delivering ICLs, the meaning given to ICLs by artists and teachers and how they have interpreted the model for their own contexts in the light of the Chicago/LEAP model which underpins the project.
- Chapter 3: Impact on pupils**  
This chapter outlines the effect of AAC on pupils, drawing on evidence from pupil, teacher and artist surveys and interviews, and interviews with parents. It addresses project aims 1 and 2, and evaluation aims 1 and 3.
- Chapter 4: Impact on teachers, artists and schools**  
This chapter outlines the effect of AAC on the practices of teachers and artists, including the effectiveness of training and support, and addresses a range of whole school issues which might be influenced by interventions such as AAC. It draws on data from artist and teacher interviews and surveys. It addresses project aims 3, 4 and 5 and evaluation aims 1, 2 and 3.
- Chapter 5: Discussion and conclusions**  
The discussion section reflects on the findings in relation to each of the project and evaluation aims in the light of findings from other research and the current Scottish educational context. The conclusion raises points for consideration if an arts-infused approach to the curriculum is to be further developed and embedded.

The numbers of respondents to surveys, interviews and other participants in the evaluation are given in the Annexe to this report.

## Chapter 2 Artists' and Teachers' interpretation of Integrated Curricular Lessons

### Introduction

This chapter describes how Scottish artists and teachers interpreted the Integrated Curricular Lesson (ICL) drawn from the 'Chicago/LEAP model' that informed the project, and considers the affordances and limitations of their interpretation. Since the ICLs are at the heart of the project, substantial evaluation time was invested in finding out how teachers and artists interpreted and adapted the model before going on to examine the impact of the intervention on stakeholders (reported in Chapters 3 and 4). The main purposes of ICLs are to:

- enhance pupils' understanding of curriculum content through arts activity
- foster pupils' inclination and ability to participate in arts activities
- enable teachers and artists to learn from each other so that they can implement their enhanced understandings beyond the AAC project.

The model described to participants at the initial training event in Peebles implies that artists and teachers are to integrate their art form and pedagogical content knowledge in lessons directed towards these purposes. For instance, science teachers might teach with actors or dancers to enhance pupils' understanding of key scientific concepts by representing these in drama or dance. One artist's illustration of purpose captures the essence of the model:

*My contribution is like giving acting notes to each child, only the notes are connected to curricula, but the learning is better because I'm like a director focused on improving each individual's performance.*

A robust description of ICLs was built and tested by integrating the wide range of quantitative and qualitative evidence set out in Appendices A-F, which includes:

- participants' accounts of practice (including pupils') expressed in questionnaires and interviews
- observational data showing the frequency of teacher/artist/pupil interaction relating to ten purposes connected with the aims of the project (e.g. 'enhancing curriculum content through art activity', 'thinking', 'evaluating' and 'promoting enquiry')
- artists' and teachers' rationales, expressed in more open-ended, extended exploration during semi-participant observation in three schools.

### 2.2 Diversity in delivery of ICLs

Variation in the delivery of ICLs included the frequency and length of the art input, the length of time a group of pupils participated in AAC, the curricular area chosen and the art discipline involved. There was variation from authority to authority and, in some cases, from school to school. Some of this diversity has been represented in a figure in Appendix B2 which reports on the pupil experience, and further details can be found in Appendices B3, B4, C3 and C4, which report on teacher and artist involvement in AAC. Although there was significant diversity, the classroom observation data show that interaction connected with promoting the project aims appeared in the vast majority of the observed lessons. These data are discussed in the next section.

Examples of how art forms were combined with subject areas included:

- making propaganda posters with rationed arts materials to illustrate life during the war (visual art and history in a primary school)
- pupils writing and incorporating into DVDs the scripts they had written about electricity and about the digestive system (media and science)

- pupils filming French conversations they had practised
- translating musical sound into images (music and art)
- performing poems in a disused shower block dressed in keeping with the theme of the poems (theatre and English).

Other combinations included drama and dance with electricity and chemistry, music with times tables; visual arts with shapes and measurements; drama and history, drama and maths with secondary pupils with social, emotional and behavioural needs, dance with life cycle concepts in science, and environmental studies with film making.

### **2.3 Artist/teacher/pupil interaction during ICLs**

The quantitative analysis of observational data was designed to show the number of times that artist or teacher invited pupils to engage in talk connected with the project aims. Each invitation from the artist or teacher to engage in talk was recorded in a project-related category. Therefore categories of talk recorded included:

- clarifying curricular and artistic goals
- deepening understanding of curricular content through an art form
- developing thinking about the curricular and arts goals.

A similar instrument was used to show pupil responses to teacher and artist invitations to talk or, indeed, pupil initiation of questions. During the observations, only those occurrences of talk concerned with developing the curriculum and related thinking through the art form were recorded; talk relating to classroom administration, behavioural issues and other non-AAC matters was not recorded.

Tables E3 to E8 in Appendix E show, for each category, the total number of interactions initiated and whether teacher or artist initiated the interaction or, in the case of the pupil section of the instrument, whether pupils responded to teacher or artist or initiated the interaction themselves. The interactions were measured in ten-minute cycles when teachers and artists were working with the whole class, and 3 such cycles were recorded during an ICL. Field notes only were made when pupils were working on practical tasks such as painting or taking photographs. It should be noted that the duration of each interaction initiated by teacher or artist was not measured. Therefore a higher number of artist interactions in some categories might reflect a tendency for artists to initiate briefer but more frequent interactions than teachers. Chart 2.1 in Box 1 overleaf illustrates the findings which are explained in section 2.4.

### **2.4 Overview of findings**

The analyses of the observations, in both years of the project, show that, for the most part, the teachers and artists were adapting the Chicago/LEAP model in sensible, productive ways to fit curricula in Scottish schools and in ways that promoted project aims. Taken together, the findings are consistent with other data which suggest that, throughout the project, the arts activities were being used to help pupils to learn other knowledge, and this evidence differentiates AAC from other initiatives that have introduced arts activities into schools.

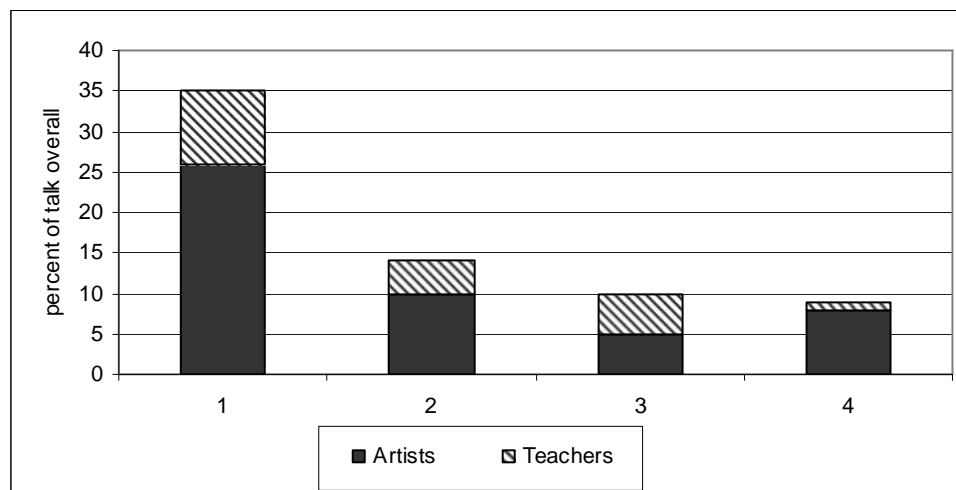
However, the various strands of data suggest that implementation of the Chicago model needs to be elaborated to enable pupils to develop creative thinking as well as content outcomes. What appears to be a conflict between developing creative thinking while also achieving academic learning outcomes might be resolved by building in time for reflection on the forms of thinking embedded in the arts activities (see e.g. Tishman & Palmer, 2006).

## Box 1

Overall, artists initiated 70% of the talk related to the art and curriculum content in the 32 ICLs that were observed over the two years of the project evaluation.

Chart 2.1 illustrates the proportion of talk initiated by artists and teachers in relation to arts and curricular objectives, making links to deepen learners' understanding and also to develop thinking about ICL goals. These categories illustrate central aspects of the AAC project aims.

**Chart 2.1 The proportion of talk initiated by artists and teachers during observed ICLs**



Key:

- 1 = making links between art and curriculum content and enhancing curriculum through art activity
- 2 = thinking about goals and strategies for achieving them and allowing time for thought
- 3 = curricular goals for lesson
- 4 = artistic goals for lesson

Over one-third of talk related to deepening pupils' understanding of the curricular content, while just under 15% of the talk focused on thinking about achieving curricular and arts goals. Just under 20% of the talk was about the curricular and artistic goals; the artist and teacher contributed equally to talk about the curricular goals, but teachers contributed rarely to talk about the artistic goals.

In particular, the analyses show that:

- Although there was significant diversity in delivery of the ICLs, in almost all lessons artists and teachers frequently invited pupils to engage in talk designed to clarify curricular and artistic goals, to link an art form and curricular content in order to deepen their understanding of both and to develop their thinking about the ICL goals.
- Overall the highest proportion of invitations to talk initiated by both artists and teachers fell into the category connected with deepening pupils' understanding of curricular content (including making links between arts and curricular content). This was the case for artists in both years of the project and for teachers in the second year, but in the first year the highest proportion of teacher invitations to talk was in relation to promoting thinking about curricular goals.
- In both years, artists initiated more than twice as many invitations to talk as teachers over the typical 30-minute observation slot. The field notes suggest that the greater frequency recorded for the artists can be explained in part by the following inter-related factors:

1. the artists often led both the recap of curricular content that was to be represented in the art form and the de-briefing of the arts activity;
  2. the majority of artists orchestrated implementation of the lesson plans, possibly because the arts activities usually functioned as the vehicle for implementing the curriculum content;
  3. some artists used many short questions to focus pupil attention; in particular they used questions to maintain pupil focus on tasks and to recap previously taught content.
- In both years of the project, teachers rarely invited talk designed to clarify *artistic goals for lessons* but artists invited talk about *curricular goals* about as often as teachers did.
  - In both years of the project, artists were more likely to be recorded as *allowing time for thought*.
  - Pupils responded to almost all invitations from teachers and artists to contribute ideas.
  - Pupils initiated contributions to both artists and teachers, but pupil initiations were less frequent than responding to questions from teachers and artists.

An interesting finding from the observational data is that artists, many of whom had no teaching qualification, were as skilful as teachers in questioning pupils to promote and check understanding of both curriculum and arts content, and to maintain attention.

Teacher and artist interview data suggest that, when certain categories of project-linked interaction did not occur, this was associated with three inter-related factors:

- delivering the ICL to classes with a high proportion of pupils with unusually challenging behaviour
- inadequate Senior Management Team support for the ICLs
- selecting academic and/or artistic content that was too difficult for the students.

For instance, in one ICL, pupils' difficulties with academic and artistic aims were compounded by the large class size and the presence of many pupils who seemed to have social, emotional and behavioural issues. Adjustments to the size or composition of the class might have enabled the artist and teacher to find out if their ambitious and interesting integration of maths and music might work, but SMT support for such changes was not apparent. The same artist had been observed delivering a very successful maths lesson with another teacher where more realistic maths and musical goals had been worked out with ample senior management support.

Field notes from the observations show artists dealing sensibly with the occasional behavioural issue, and in focus groups pupils mentioned that the artists afforded them a 'respect' that prompted their co-operation and disinclined them towards any inappropriate behaviour. The pupils' view was corroborated during observation of lessons. For instance, when a small minority of pupils did not work hard enough, artists responded as they might do in their workplaces in that they asked pupils to practise more before they went on to the next stage of the activity, such as filming what they had rehearsed. This seemed to work better than reprimands, which tend to invite resentment. Indeed, a small number of pupils reported that they did not like it if 'the artist shouted at them'. Artists were also particularly effective in maintaining younger children's attention by frequent questioning and varied activity.

Plainly, only a sample of ICLs could be observed. Although the observational data provide hard evidence of teachers and artists working together, the interview data suggest that, in the unobserved lessons, a few artists reported some abdication by teachers in the early stages of the project. It is possible that those teachers struggled initially to understand the complex notion of ICLs, but that experience of ICLs helped them to develop insight that enabled their fuller participation.

## 2.5 Issues arising from observational and related data

### Suitability of art forms for different academic content

Since some participants suggested in the semi-structured interviews that the success of the ICL depended on the match between the art form and subject area, the idea of more and less suitable combinations was explored further with artists during planning sessions, post-observation discussion of ICLs and during the more extended discussions connected with the in-depth study. Many artists and teachers understood the 'Chicago/LEAP model' in a more sophisticated way than is implied by the notion of some art forms blending with some curricular areas more easily than others. Some artists believed that most academic concepts could be understood more deeply through representing them in dance, drama and visual arts: one said, 'Representation in any art form involves looking at something from a different perspective'.

By the second year of the project, observational data and post-observation discussion suggested that artists and teachers were acting on understandings that many ideas in school curricula that are difficult for pupils could be illustrated effectively through the available art forms. There was growing evidence that ICLs could be effective for most academic subjects provided that the level of difficulty of the goals was appropriate. With some exceptions, the artists were becoming more able to help the students to represent quite difficult academic concepts through the art activity in ways that deepened understanding of both the academic content and art form. This interpretation was supported by observations of dance, drama and visual arts/media being used effectively to enhance understanding of key concepts in physics, biology, chemistry, maths, history and environmental studies and to encourage effective practice of French conversation.

This is not to say that representation is straightforward, and many teachers reported that realising this ideal presented significant challenge. Exploration of this issue during the in-depth study suggested that using any art form to good effect depended on careful attention to certain aspects of planning by artist and teacher. However, the evidence suggests that this issue is better analysed in terms of pedagogy rather than approaching it in terms of a technicist notion that there might be a formula for matching one thing with another.

### Planning for integration

Taken together, the data suggest that teachers and artists collaborated very well with each other.

Factors associated with success included:

- taking time to choose realistic academic and artistic goals
- analysing key concepts connected with lesson goals
- artist efforts to master key concepts in curricular content
- considering strategies for developing pupils' understanding
- using the art form to inject interest into 'difficult' or 'dull' content
- artist and teacher competences: these included a wide repertoire of activities for promoting conceptual understanding
- balancing claims of artistic and curricular goals
- artist ability to design a vehicle suitable for promoting the academic goals with manageable artistic activities
- allowing time for students to digest and practise concepts
- accommodating constraints such as time, teacher/pupil resources and space.

In the more successful planning sessions, once realistic goals for a series of ICLs had been established, the teacher led analysis of concepts learners were to grasp, pointing out previously encountered misconceptions and possible pedagogical strategies. When only perfunctory attention was given to this step, artistic activities were unlikely to contribute optimally to learning. Often, more value was added by artists when 'difficult' or 'dull' content was selected: teachers had tried other ways of injecting interest into such content, none of which had been entirely successful. The following comment was typical:

*Electricity is the most boring topic and it's the most difficult to understand because they can't see it. We are using drama to get them to imagine what's happening. We think they understand but when we ask them to imagine it we see they don't understand it.*

The success of the planning seemed to be facilitated by artists' ability to suggest ways of illustrating concepts which often appeared at first sight to be unpromising content for artistic expression, and their ability to help pupils to represent challenging curricular concepts through artistic activities that all the pupils could manage quite well with reasonable diligence. The more successful pairs included teachers who could discuss a wide range of pedagogical strategies that had worked, and who were experienced in choosing realistic academic goals. Success was also associated with being able to balance the various constraints in the context and reach compromises acceptable to both artist and teacher.

Sometimes the teacher gave the artist resource materials prepared for non-AAC lessons and sometimes the artist volunteered to do independent research on the content and returned with proposals for arts activities to illustrate concepts that the teachers had identified. The teacher and artist together went on to discuss and refine plans, but developing ideas jointly was more marked in the second than in the first year of the project, possibly because it takes time to develop understanding of the sophisticated notion of integrating two disciplines to enhance learning in both. The sophistication of the endeavour was summed up by an artist's view of the planning sheets provided: 'they are a formality, not a tool'. Other comments included the following:

*We exchanged resources and talked by email; I was able to get a lot of advice from artists through email...we worked really well together...it's been a team approach – chatting and discussing.*

Some artists reported that they contributed most of the ideas for developing understanding of academic content. Data relating to planning sessions and post-observation discussions suggest that one reason for artist led planning was that teachers, particularly in secondary schools, had so little arts background that they needed to have possibilities described to them before they could participate in the planning. Most teachers reported towards the end of the project that they were much better informed about the potential of expressive arts for promoting subject learning.

### **How was integration of academic and artistic content interpreted?**

In most school lessons, teachers introduce new concepts at some points and at other points they set tasks designed to deepen and elaborate the learners' understanding of these concepts or to enable them to apply the ideas to execute tasks. In one ICL that was used to introduce concepts relating to foetal alcohol syndrome, the secondary teacher and artist helped pupils to represent in dance the various aspects of developmental delay in infants. Teachers and artists reported that they used ICLs for both purposes. However, the vast majority of observed ICLs served the second purpose, i.e. teachers and artists used the ICLs to deepen understanding of concepts that had been introduced by the teachers alone in non-ICLs.

Often, this second purpose was pursued by teachers introducing quite complex concepts in non-ICLs, followed by the artists helping pupils to represent the concepts through drama or dance. Other examples of using ICLs for this second purpose included teachers helping pupils to research a topic before the ICLs, with the artists using the ICLs to help the pupils to organise and present the knowledge gathered through compiling a DVD. In other schools, the primary teacher had explained the mathematical concepts to prepare for ICLs in which a drama or music artist provided activities to encourage pupils to apply the concepts. Sometimes artists contributed to pupils' research endeavours either during the ICL or through specifying homework.

Although the evidence from the various sources suggests that the majority of artists led lessons, it also suggests that decisions about who was to lead the lesson were based on quite complex judgements by artist and teacher. In one observed ICL, the agreed plan was that the teacher would outline the historical context before the ICL but the artist would choose concepts that she judged most appropriate for dramatic illustration. The teacher, artist and pupils believed that this division of labour worked very well.

When artists functioned as directors of lesson plans, teacher involvement was often substantial. Forms of this teacher involvement included:

- participating in the art activity alongside the pupils
- interjecting to clarify difficult concepts
- working with small groups who were preparing/rehearsing scripts
- helping pupils to find information from the internet
- talking with pupils to help them to relate their arts work to subject matter.

Some teachers said that they preferred to take the lead, but since this was not apparent in the ICLs observed, the preference was possibly exercised more in planning than in delivery, particularly in specifying what the pupils had to grasp. The importance of the planning was summed up by one teacher who compared ICLs with many previous experiences of working with artists: 'I liked ICLs because I'm in the driving seat'. An artist commented '[The teacher] contributes when appropriate – it felt very natural the way we did it'.

Other teachers said that they preferred taking a 'back seat' in the delivery of lessons, particularly where the purpose of the ICL was consolidation rather than initial teaching of what had to be grasped, and this preference was reflected in many observed ICLs. Several teachers commented that a flexible approach was most effective, where artists and teachers could share the lead, depending on the circumstances. Probing of this comment revealed that even when teachers did not lead an ICL they contributed effectively in ways described above. Where the teachers' role was so minor that it caused artist dissatisfaction, the teachers seemed to have received insufficient briefing on their role in an integrated lesson.

One reason for artist led lessons is that many drama, dance and media endeavours require an artistic director if they are to contribute to effective learning. Often teachers perceived that the artists had far greater knowledge of the arts activity that was the vehicle for carrying the content. Since most observed ICLs involved using an arts vehicle to work with knowledge previously introduced by the teacher alone, it is not surprising that the data show more frequent classroom interaction by artist than teacher. Nevertheless, in both the post-observation discussions and the survey, many teachers said that they would be able to use some of the arts vehicles when the artist was not present, although they strongly preferred artist support.

Some artists and teachers evolved a more equal sharing of the lessons in the second year of the project, whether the lesson focused on introducing or applying concepts. A drama artist pointed out that, in the early days of the project, neither artist nor teacher had the experience to mount a genuinely integrated lesson. However, the artist later reported that when they had gained experience of ICLs they worked out how they could integrate their delivery, although a more integrated approach involved more extensive preparation. A subsequent observation of this teacher with a different drama artist confirmed that she had continued with this more highly integrated delivery of content and art form. For instance, in a French lesson, both artist and teacher commented on grammatical constructions in a French lyric the teacher had written, and both coached the pupils to perform their scripts in a 'travelogue' video.

### **Does it take longer to cover curriculum content if ICLs are used?**

The main findings from post-observation discussions and related data were:

- The vast majority of teachers reported that it took longer to cover the curriculum content, but they also said that the situation was manageable.
- The extra time invested was often recovered subsequently through not having to re-explain fundamental concepts in the subject. Enhanced understanding of concepts seemed to be connected with qualitatively improved pupil engagement and cognitive effort compared with many non-ICL lessons. This view tended to be expressed by teachers with a more sophisticated pedagogical understanding.

Pedagogical research support for the way in which ICLs were delivered can be found in constructivism, one of the most influential contemporary accounts of learning (Brophy, 2002). Most ways of implementing constructivist approaches will be more time consuming than simply telling learners what is to be learned. However, constructivists point to research that strongly suggests that knowledge cannot be transmitted unproblematically from teacher to pupil. There is strong research support for the idea that people learn more effectively when they engage in activities designed to help them to construct a personal understanding of academic and other knowledge (e.g. see Soden & Maclellan, 2005; Maclellan & Soden, 2004). According to this perspective, learners need to work with concepts in some way: for instance, they might complete a piece of writing, solve problems or represent the concepts in different ways.

The ICLs seemed to provide effective vehicles for working with and transforming knowledge. Plainly, there are other well researched ways of implementing constructivist principles that do not require artists' input (see Brophy, 2002). However, the justification for the AAC project did not lie only in bringing about more effective learning in school subjects: the potential of ICLs for introducing young people to art forms was a second powerful justification. Field notes made during the observations and evidence from pupil focus groups suggest that young people did learn more about art forms through ICLs than in other approaches.

The time that is typically allocated to each topic in the curriculum might well be insufficient for effective use of any constructivist vehicle such as ICLs. As one artist said, 'just as they're catching on, the period is over'. However, although the vast majority of teachers reported that it took longer to cover the prescribed knowledge, they also said that the situation was manageable. Many artists accommodated time constraints through selecting activities that could be mastered fairly quickly. Challenges might well be better accommodated in changes introduced in the *Curriculum for Excellence*, which draws its rationale from constructivist perspectives.

Evidence from post-observation discussion with secondary teachers suggests that, although it often takes longer to cover the same ground, the extra time invested is more than recovered subsequently through not having to re-explain fundamental concepts that permeate future work in the subject. A science teacher said:

*Often I teach the same content twice to try to ensure they all understand it; this doesn't work well because some get bored that way if they got it the first time. It's quite usual to have to go back and re-teach. Doing it through ICLs might save time in 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> years.*

This view is supported strongly by evidence from pupil focus groups. A recurring theme in the pupil focus groups was that they were much less engaged by many non-ICL lessons. However, one teacher observed that high achieving science pupils probably could have learned as thoroughly without an arts vehicle, but that lower and middle achieving pupils learned more effectively through ICLs. The view that ICLs enhanced understanding of school knowledge for at least a significant proportion of pupils was echoed in some teachers' responses to questionnaires and interviews, and by pupils. On the other hand, one science teacher mentioned opportunity costs connected with ICLs: in previous years there was time available, after the basic syllabus was covered, to 'take the pupils further in their scientific understanding', by exploring related ideas and procedures.

## 2.6 Summary

The way in which the ICLs were conducted sheds light on the potential of the expressive arts as a vehicle for carrying school curriculum knowledge and for achieving broader educational targets. The ICLs can be understood as translating constructivist accounts of learning into practice in a way that is consistent with principles expressed in the *Curriculum for Excellence*. Many ICLs served the function of illustrating abstract concepts, which abound in physics and chemistry, for example, by representing them in another, arts-related way. The notion of bridging analogies (see e.g. Bryce & Macmillan, 2005) implies that sufficient attention needs to be given to selecting analogies that are fit for the purpose of bridging understanding.

In future ICLs, attention needs to focus on the following points:

- What appeared to be a conflict between developing creative thinking while also achieving academic learning outcomes might be resolved by building in time for reflection on the forms of thinking embedded in the arts activities (see e.g. Tishman & Palmer, 2006). Time for reflection might be found if curriculum knowledge were to be re-examined to distinguish between essential ideas that pupils need to grasp and information that might be less worthy of time.
- ICLs would work optimally where there is a whole school approach, supported by the SMT, to allocate blocks of time that enable the teacher and artist to design ICLs which include time for young people to practise arts 'skills', to 'research' knowledge, to view and discuss films, plays, documentaries and visual art; a sustained approach (see e.g. Harland *et al*, 2005)
- A future version of AAC should include more open-ended assessment tasks, including more use of what is known as authentic assessment tasks (see e.g. Knight & Yorke, 2003). There were good examples observed of series of ICLs that were assessed in ways that count as authentic, such as pupils presenting their work in drama, dance or media to an audience of other pupils in their schools.
- Representing curricular content in art forms requires more sophisticated pedagogical understanding, particularly of conceptual learning; the AAC project training needs to address this through specialist input: e.g. engagement with constructivist lessons written up in the research literature (e.g. Brophy, 2002).
- Investigation of other models, and evaluations, of arts-infused education (e.g. Catterall & Waldorf, 1999; Cochrane & Cockett, 2007; Harland *et al*, 2005; Tishman & Palmer, 2006; Uptis & Smithrim, 2003).
- Young people need to gain experience across the school of working in constructivist ways to disturb typical conceptions that learning is transmitted by teachers and that teachers will do all that is required to ensure that the transmission has been successful.

## Chapter 3 Impact of the AAC project on pupils

### 3.1 Introduction

The impact of the project on pupils is the main focus of this chapter. The first evaluation aim included establishing the success of the project aims:

- to increase pupils' achievement in subject areas when ICLs were used
- to increase pupils' motivation to learn
- to engage in collaborative working
- to develop a creative approach to learning
- to encourage pupils' understanding of and engagement with the arts.

The third evaluation aim included 'assessing the overall impact of the Arts Across the Curriculum project on ... pupils in the participating schools (including any gender differences in relation to outcomes)'.

This chapter draws on data from the following sources:

- Pupil surveys and focus group interviews in both years of the project
- Teacher and artist responses to survey and interview questions, in both years of the project, about the impact of AAC on pupils
- A study of a small sub-sample of AAC groups and comparator groups on the development of pupils' creative thinking skills and interests and involvement in arts out of school
- Teachers' and artists' contributions to post-observation discussions
- Parents' interviews
- Observational data

Pupil views of impact expressed in surveys and focus groups in the sample as a whole are considered before reporting on differences connected with gender, primary/secondary pupils and years 1 and 2 of the project. This is followed by consideration of the effect on promoting creative approaches and developing creative thinking skills. Teacher, artist and parent perceptions of the impact on pupils are reported and, finally, the observational data is compared with other sources of evidence.

Descriptions of the timing of data gathering, methods of data analyses and justification for methods, the participant samples and return rates appear in Appendix A; detailed information about academic content and art forms in ICLs, analyses of survey and interview responses, observations and the study on creative thinking skills appear in Appendices B to F; the instruments are contained in Appendix H.

The original design proposed following up on pupils who had been involved in both years of the project. However, in many of the schools different classes took part during the second year and therefore the majority of the pupils in the second year sample were experiencing AAC for the first time. As the responses of pupils at both stages of the evaluation were very similar, the data presented in charts in this chapter are drawn from the second survey in May 2007 (see Appendix C2). The results have been combined for all year groups (n = 350).

### 3.2 Pupil views on the impact of AAC (detailed information appears in Appendices B2 and C2)

#### What did they think they were learning?

Since the purpose of the project was to integrate academic and artistic learning, questions were posed in the survey and focus groups to shed light on the extent to which pupils noticed this purpose. Overall, there was evidence that the pupils understood that the main focus was the curriculum topic but also that there was opportunity to learn about different art forms and art skills. Pupils who had media and biology said, 'we can put a presentation together now on the digestive system, and we can

edit it to make a DVD'. Younger pupils tended to report either the subject or the art as a focus for learning, although in one P7 class most of the young people identified that they had been learning both about different art forms and curriculum topics. Older pupils provided more complex explanations, including reference to developing learning and personal skills such as being creative, using their imaginations, working together and gaining in confidence. Many pupils spoke about how the art form helped them to learn the subject. (Their comments are in the next section.)

Typically, the young people's description of ICLs was similar to descriptions elicited from teachers and artists during interviews and their descriptions were highly consistent with the evaluation team's observational data. Taken together, the pupil responses support other evidence (e.g. see Chapter 2) that the teachers and artists were interpreting the Chicago/LEAP model in sensible and productive ways.

### **How effective were the ICLs?**

This section focuses on pupil views of how effective ICLs were in terms of motivating them, helping them learn and encouraging them to work collaboratively. Motivation was deconstructed into interest and persistent engagement with tasks; learning was conceived as a change in understanding of ideas. It is clear from surveys that the majority of young people believed that having an artist working alongside the teacher had the following benefits, which are illustrated in charts 3.1 to 3.3 (p15):

- enhanced interest, enjoyment and engagement with learning: for example, the majority thought that the lessons were more interesting, time seemed to pass more quickly and they looked forward to the lessons with the artists
- it was easier to learn the topic because of the way it was explained and they thought they could remember the ideas better
- the lessons helped them work with other pupils, with 60% reporting they worked with people they did not usually work with.

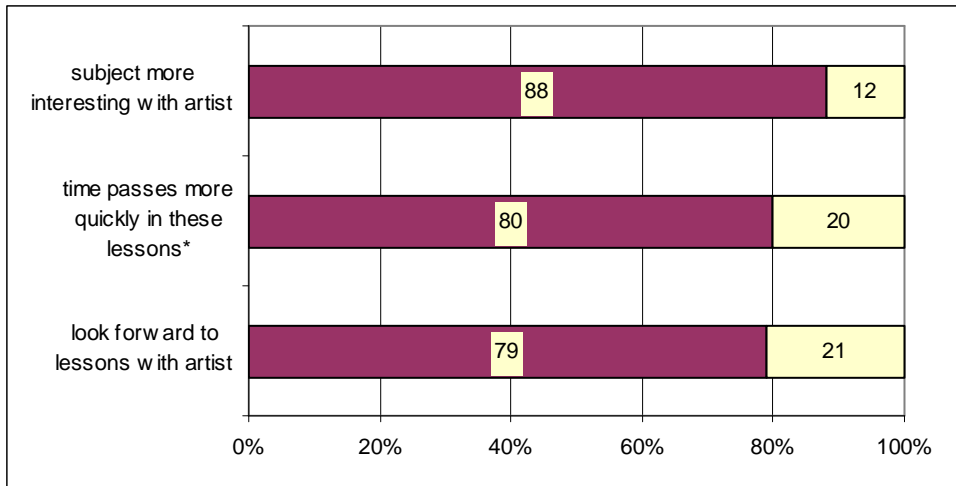
Additionally, over three-quarters thought that it would be a good idea to have artists in more classes, while two-thirds thought that the activities in these lessons made them feel confident.

The focus group data is broadly consistent with the views expressed in the survey and responses illustrate what were perceived as interesting and effective learning experiences. Pupils liked having the freedom to make their own decisions about planning and executing tasks, and the secondary pupils commented that it was better when they could work in this way, rather than have the teacher 'interfere'. Thus, there seems to be a pupil preference for teaching methods derivable from constructivist research on learning (see Soden, 2003, in Bryce & Humes). Such methods encourage students to find questions worth pursuing, to pursue their questions through self-directed search and interrogation of knowledge and to debate their emerging views with others. Such practices are informed by the idea that teaching approaches should encourage learners to be more self-directed and autonomous.

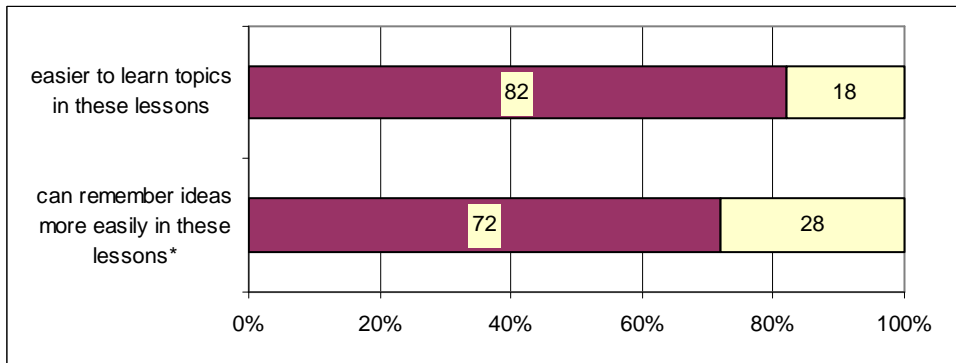
Other pupil evidence suggests that they perceived that constructivist teaching methods helped them to learn. One of the main themes was that the lessons with the artist had helped their performance in the class because they were able to remain on-task for longer than they did in non-ICLs, because there was less listening and writing (e.g. note-taking from texts or completing worksheets), which were perceived as reducing their engagement with content. The general impression from all the groups was that, because the lessons were fun and the artist explained things clearly and made it interesting, they learned and remembered things more easily. Typical comments in open-ended survey items and in focus groups were:

- *In normal classes you lose your concentration but not in these lessons*
- *There wasn't nearly as much listening, listening gets boring after a while, then you cut off.*

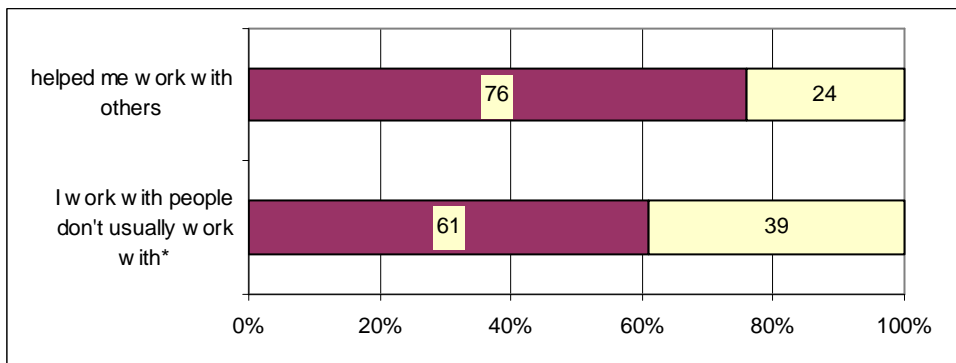
**Chart 3.1 Pupil perceptions of interest, enjoyment and engagement in lessons in which an artist and teacher worked together**



**Chart 3.2 Pupil perceptions of help with learning in lessons in which an artist and teacher worked together**



**Chart 3.3 Pupil perceptions of working with others in lessons in which an artist and teacher work together**



\* P4 pupils were not asked these questions; the percentages for these responses are based on P6 to S3 figures (n = 311).

**Key:**  **agree**  **disagree or don't know**

In the focus groups, pupils provided examples of constructivist methods that had been particularly effective. For instance, secondary pupils described a particularly effective role play they did which was connected to forensic science. One pupil said, 'it makes you want to go to science'.

The secondary pupils who had media with biology talked about the satisfaction of self-regulation in a DVD they had made of the digestive system: they explained:

- *We were interested in what we were doing so it made it easier to get on and do it – to understand it.*
- *You usually write what you need to revise but this is a different way of revising – you can go back to the DVD.*

However, constructivist methods make heavy demands on teachers' and artists' ability to design lessons. Given that there was the additional challenge of integrating art and curriculum topic, it is not surprising that sometimes the lesson design challenges could not be met adequately. As pupils explained in one focus group, some ICLs worked better than others:

- *When we were mixing chemicals, when we had the artist we didn't have a clue what was going on.*

Some pupils who thought that ICLs worked well in biology thought that it would have been easier to understand physics and chemistry concepts if they had been told about it rather than '...jumping about kidding on we were light bulbs'. 'It didn't make any sense, it was just a laugh.'

The notion of bridging analogies (e.g. see Bryce & Macmillan, 2005) also helps to explain why some ICLs might have been more effective than others. The role of analogies is to help learners to understand abstract concepts, which abound in physics and chemistry. Bryce and Macmillan point out that, if analogies are to be effective bridges between concrete illustration and the abstract understanding that is necessary for progress, they need to be carefully chosen. In the more successful ICLs, aspects of art forms were identified that offered more accessible representations of concepts, whereas in the least successful ICLs, the chosen aspects of the art form obscured understanding. It is possible that, for some concepts, the more effective analogies for bridging understanding will be found in areas other than art forms: for instance, young people might grasp some physics concepts more easily if they are encouraged to relate them to their experience of playing snooker or football rather than representing the concepts through dance or other art forms.

Overall, the features of ICLs that engaged pupils the most are those connected with teaching based on social constructivist views of learning. While working with an artist is only one of many ways of designing constructivist lessons, pupils' responses in surveys and focus groups suggest that it is quite an effective way of promoting constructivist approaches. Such active, experiential learning is characteristic of both arts practice and arts education (see Coutts, 2003, in Bryce & Humes).

While it is clear that the majority of young people believed that having an artist working alongside the teacher had the benefits described above, there were some who did not like doing some of the activities or did not like working with a particular artist or art form and, as happens in non-ICLs, behavioural issues sometimes arose. Similar findings were noted by Harland *et al* (2005) in relation to arts interventions in schools. In any curriculum initiative there are likely to be some dissenting voices.

### **Pupils' engagement with arts, including out-of-school interests**

With respect to children's hobbies and interests out of school, pupils at both stages of the evaluation and in all year groups (P4, P5, P7, secondary) were least likely to be involved in learning music or singing, dance of any kind and drama compared to other activities such as sports, using computers and 'making things'. Less than half of the pupils thought they were good at dance and drama. Music, dance and drama were all art forms used in AAC. That many pupils were not involved in these activities outside school could add to the value and interest of them when introduced in school generally, or through AAC in particular. It may, however, present pupils with greater challenges, as exemplified by a small number reporting 'feeling stupid' or embarrassed by some of the activities.

In the surveys just over three-quarters of the pupils indicated that they had learned something about the art forms introduced in the ICLs (note that when the questionnaires were completed there were clear instructions to ensure that the pupils understood 'art' as being whatever art discipline was being used i.e. craft, dance, drama, media etc):

- 77% agreed that they had learned new things about art
- 77% agreed that they had learned new artistic skills.

However, the opportunity for further development appeared limited. During interviews some pupils said that what they had done with the artists had made them want to take up new hobbies, for example in media and animation, but there was often no opportunity in school to pursue these interests. For instance, there was time for pupils to learn about the camera angles they needed to use to produce a DVD on a science topic, but no time to explore other aspects of film making, and time to engage in a forensic science role play but no time to explore how forensic science is represented in, say, TV or stage drama. The pupils' perception of a lack of suitable opportunities in their local areas was a further limiting factor.

The small study which explored certain aspects of development of a sample of AAC participants compared with a comparator group, found that pupils involved in AAC were no more likely than non-AAC pupils to take up arts activities out of school (see appendix F).

### **3.3 Differences connected with gender, primary/secondary pupils and stages 1 and 2 of the project**

#### **Gender differences**

There were no differences in the views of younger boys and girls. At P7 and secondary school levels, boys were less in agreement than girls across a range of items related to engagement, effectiveness of learning, being creative, working with others and being confident.

#### **Differences between P7 and secondary pupils' responses**

As the P7 and secondary pupils completed the same questionnaires, it was possible to compare their responses. In an open question, a greater proportion of the secondary pupils referred to the benefits gained in terms of better understanding of the curriculum topic, compared to P7 pupils who commented more on liking the art and learning new skills.

While, on the whole, S1 and other secondary pupils responded positively to the experience of working with the artist, a greater proportion of secondary than P7 pupils recorded negative responses on statements that were concerned with engagement and enjoyment of the learning experiences, learning about the art forms, working creatively and with others, and gaining confidence from participation; figures showing their responses are given overleaf in Table 3.1.

**Table 3.1 P7 and secondary pupil agreement on statements where the P7 pupils' responses were significantly\* more positive than secondary pupils' responses**

	<b>% of P7 pupils agreeing</b>	<b>% of Sec pupils agreeing</b>
<b>Engagement and enjoyment</b>		
I look forward to the lessons when the artist and teacher worked together	90	73
I wanted to work longer on the tasks	76	60
<b>Learning about art</b>		
I learned new artistic skills	91	73
I learned new things about art	86	70
<b>Working creatively</b>		
I tried new things I had never done before	91	76
I was able to put forward my own ideas during the lessons	86	74
It made me want to try out new ideas and be more imaginative	79	60
<b>Working with others</b>		
I think other people in the class had good ideas	94	86
The things we did helped me work with other pupils	86	74
<b>Confidence</b>		
The things we did made me feel confident	84	63

\* Questions were rating scales and analysed using the Mann-Whitney test for ordinal data;  $p < 0.05$

It is possible that the complexity of the subjects studied in secondary school, and of organising ICLs within the timetable and classroom environment, presented more challenges in mounting interesting and effective ICLs for all classes. Similarly, a more negative response in secondary school pupils was noted in Harland *et al's* (2005) evaluation of arts interventions. They raise the wider issue of engaging that age group more generally and there is the view that when such interventions are managed to take account of this 'dip' in interest, they can indeed increase engagement. This is confirmed by the view expressed by some S1 pupils, in both survey and focus groups, that AAC lessons were enjoyable because they were different from what they usually experienced. Therefore, while more negative than their P7 counterparts about ICLs, they were potentially more positive about ICLs than some other lessons.

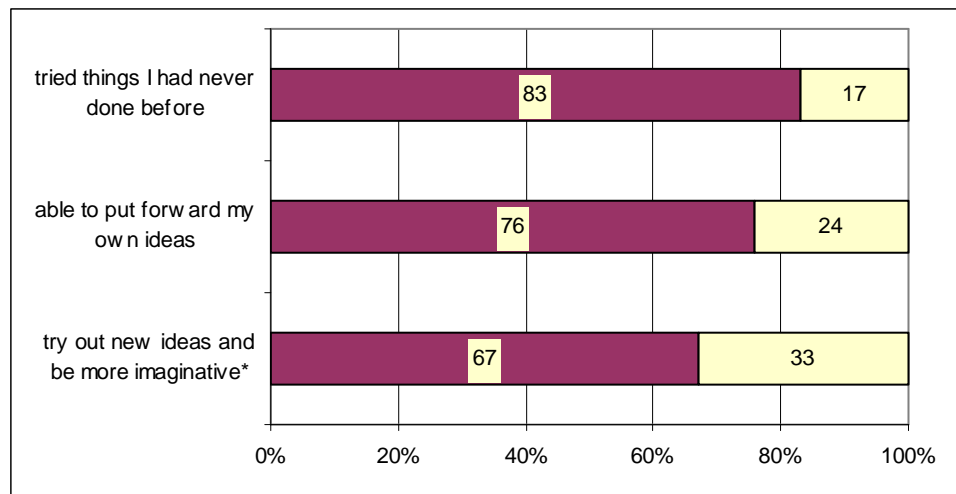
### **Differences between pupil responses in stages 1 and 2 surveys and focus groups**

The views of both cohorts of pupils were largely positive about their experiences of working with the artist and teacher together. There was no consistent pattern of change in pupils' responses over the two years, though some changes did occur on a few items: for example, younger children were more likely to respond that they 'did not know' in response to some of the questions in stage 2 surveys. These minor differences do not reflect any substantial change in pupils' overall positive perceptions (see Appendix D).

### **3.4 Impact on developing creative approaches and pupils' creative thinking skills (detailed information appears in Appendix F)**

For the purpose of the pupil survey, 'creative' approaches were addressed as the opportunities to try things they had not done before, to share their ideas with other people, to put new ideas into practice and to be more imaginative. Responses are illustrated overleaf in chart 3.4.

**Chart 3.4 Pupil perceptions of approaches considered consistent with developing creativity**



\* P4 pupils were not asked this question; the percentages in this case are based on P6 to S3 figures. Wording of statements varied according to age of pupils.

**Key:**  **agree**  **disagree or don't know**

Groups of AAC pupils were selected for more in-depth study with respect to the effects of AAC on creative thinking skills. This was carried out by using a repeated measures design, with completion of instruments near the beginning of the pupils' engagement in AAC and after or near the end of their involvement. As other influences might affect pupil progress, comparator groups were identified to take part. The purpose was not to compare the performance of the AAC and comparator groups directly, but to investigate if those involved in AAC were likely to make greater progress than those who were not. The groups included in the study were P5 to P6; P7 to S1 and S1 to S2.

Standard instruments for creative thinking skills – the Torrance Test of Creative Thinking (TTCT) – were used.

The main findings were:

There were no statistically significant differences in the scores obtained on the TTCT for any of the AAC or comparator groups; no differences were found between boys and girls. The three AAC groups were involved with different art forms and different subjects over different lengths of time. Their experiences do not appear to have made a notable difference to their creative thinking abilities as measured by the Torrance Test of Creative Thinking skills.

One possible explanation, supported by the data gathered during ICL observations, is that there was insufficient time in ICLs for pupils to practise a range of creative thinking skills. Typically, in ICLs there was time only for pupils to respond to questions posed by teacher and artist, whereas, in common with other such instruments, the TTCT also measures the ability to generate relevant questions and other forms of thinking embedded in particular art forms. As noted elsewhere in this report, teachers did not have time outside the ICL to develop pupils' thinking about an art form being studied because they had to address curricular demands.

Most research (e.g. see Livingston *et al*, 2004) suggests that any form of thinking has to be practised quite intensively before a measurable impact occurs, and the nature of the thinking needs to be made explicit. In the more successful initiatives (e.g. see McGuinness, 2005), forms of thinking embedded in an art form or academic subject have been identified at a planning stage and the different forms have been systematically and explicitly introduced and practised in each lesson. An example of such an initiative in the arts is the Artful Thinking Program, which was designed and implemented through a relationship between Project Zero at Harvard University and Traverse City Area Public Schools

(Tishman & Palmer, 2006). Taxonomies of thinking (e.g. see Moseley *et al*, 2004) provide a landscape of thinking processes that can be developed. While other aspects of the evaluation indicate that pupils have benefited, it became clear that the overall planning of the project had not incorporated messages in the research literature on developing thinking.

### **3.5 Teacher views on the impact of AAC on pupils (detailed information appears in Appendices B3 and C3)**

#### **Academic achievement and attainment**

Information about the project's impact on pupil achievement and attainment comes from teacher views in surveys and individual interviews and from exploration of this issue during in-depth study in three schools. Teachers offered evidence of benefits in the following categories:

- Pupil grades in the subject used for the ICLs
- Pupil grades in class tests for the topic used for a series of ICLs
- Pupil completion of homework connected with a series of ICLs
- Pupil understanding of concepts taught in ICLs – assessed verbally when new, related concepts were being introduced.

These benefits seemed to arise from greater engagement by pupils in learning. A secondary school teacher said: 'they talk about the subject outside class – it's very unusual for them to talk about any class work outside it'. Primary teachers spoke of pupils 'learning new work faster' and 'coping better'. Points that teachers made in connection with each of the above benefits illuminate how the project seems to have impacted on learning.

#### ***Pupil grades – end of year or class tests***

In one school where pupils had participated in science ICLs for two years, the class teacher reported that, for the first time in several years, all the pupils in the class achieved a grade that qualified them for entry to a Standard grade science subject (physics, chemistry, biology). Typically, in previous years, a significant proportion of pupils had achieved class examination marks that indicated they could not cope with physics, chemistry or biology at Standard grade and such pupils were channelled in S3 and S4 into a less demanding science course from which it is difficult to switch in S5 to Higher grade courses in physics, chemistry or biology. Therefore, by improving pupils' chances of entering a Standard grade physics, chemistry or biology course, the AAC project seemed to help to keep open the prospect of eventual Higher grades in these subjects for pupils who were slow starters in early secondary school science. The teacher of the AAC project class saw more benefits for slower learning and average achievers than for those who coped easily and well with early secondary school science.

Some teachers reported that their AAC project class had higher scores in class tests designed to gauge progress than former classes who covered similar content. Such reports came from primary teachers who had tested children on their knowledge of science concepts such as force, gravity and magnetism. These pupils had experienced ICLs in which they represented these concepts through dance. A secondary teacher reported higher class test scores in Social Studies after the class had represented key concepts (e.g. conflict, communication) concerning World War II battles in drama ICLs.

Higher scores on recall in German were noted by a teacher whose class had been supported by a dance artist. In at least one primary school, pupils' class test scores were higher than previous cohorts for physics concepts. In another primary school where pre- and post-project records had been kept of literacy scores, an increase was recorded in the year the artist worked in the school. Both primary and secondary teachers spoke of improved quality in writing, exemplified in greater use of imagination and better understanding of characterisation.

### **Completion of homework**

A few teachers mentioned that pupils who had been homework avoiders completed quite challenging homework that had been set by the artists or teachers. Avoiders, for instance, consistently responded to artist set homework that required them to respond to factual questions, responses that would be used to advance the artistic goals. This enthusiasm for homework seemed to arise because successful completion of the drama and the media tasks depended on finding out what was to be represented (e.g. historical conditions and events), and often there was not enough time in school to do this preparation. The pupils were very keen to achieve the artistic goals and homework seemed to be valued as a means to achieving these goals, rather than an (uninteresting) end in itself.

### **Better understanding of concepts**

Both primary and secondary teachers saw evidence of greater understanding than in pre-project days of concepts in science and history. Pupils' understanding was enabling them to build on concepts they had learned in ICLs to a much greater extent than before. Abstract ideas such as the nature and behaviour of electricity, for instance, were grasped more accurately through drama and dance. In one secondary class that was observed in depth, the pupils wrote and performed a sketch to illustrate this content. The pupils co-operated more actively than usual with the teacher's and artist's efforts to check their understanding of this content, possibly because they perceived this academic work as necessary preparation for representing their understanding in their sketch. Teachers reported that, for the first time, they did not have to spend substantial amounts of time re-teaching central concepts in subsequent lessons.

Formal assessment data were not analysed because the view expressed by key informants was that such analyses were likely to yield limited information for the following reasons:

- national assessment results were unlikely to be a good way of monitoring the impact of a project; some children made good progress but they still might not have reached the level the government says they should be at for their age
- everything schools did was about raising attainment and improvements could not be attributed to one initiative; the project was one influence amongst many
- there were fluctuations between year groups and some years do have higher attainment.

### **Perceived benefits likely to impact on attainment**

Teachers' views on the benefits to pupils were derived from various sources: in the survey they were asked to rate the extent to which they noted beneficial outcomes to pupils in their situation, their views were elicited during individual interviews, during post-observation discussion and during the more extended explorations that took place during the in-depth study.

Many of the benefits they mentioned, such as improvements in pupil engagement, persistence with tasks and completing homework, are connected with academic attainment.

In the final teacher survey the following percentages of teachers thought there was strong evidence that:

- pupils were more positive towards the subject matter in ICLs – 83%
- pupils showed greater involvement with the topic even when the artist wasn't present – 66%
- pupils persisted with related tasks longer than they would have expected – 51%.

They reported children 'loving it' and 'being excited'. By the end of the project, around half of the teachers indicated that there was strong evidence that the ICL was more effective than other approaches they had used previously to teach the selected topics.

One experienced secondary teacher reported that pupils in the top end of the attainment range learned abstract concepts easily without ICLs. On the other hand, he believed that ICLs did help the majority in the class to learn science concepts. A substantial number of teachers thought that the project was particularly beneficial for lower attaining pupils. A theoretical explanation noted earlier is that arts activities have the potential for generating analogies that help subject matter learning.

Teachers were also positive about the extent to which the approaches used in ICLs encourage pupils to work collaboratively, creatively (i.e. to contribute and try out new ideas and take risks) and to develop confidence and self-esteem.

However, as noted throughout the report, teachers indicated that introducing young people to art forms was an important aim of the project, for all young people, as well as promoting more effective learning of curriculum content. The majority felt that the children valued the art element and around three-quarters thought that children were interested in knowing more about the art forms which had been introduced.

### **3.6 Artist views on the impact of AAC on pupils (detailed information appears in Appendices B4 and C4)**

Artists were largely positive in their views on the outcomes for pupils in terms of engagement in learning, their valuing the art discipline and learning arts-related skills. Some would have liked more opportunity for the pupils to develop better arts-related skills prior to engaging on the ICL, as their lack of skill, say, in dance movements or in use of film-media limited the extent to which the art form could be applied. The artists' perceptions were slightly more negative in relation to secondary pupils. Experience in secondary schools seemed to be more varied, with some pupils and classes engaging with ICLs less well than others.

In both sets of interviews, artists had viewed the aim of AAC as being mainly about engaging pupils in learning by taking account of different learning styles. (The artists seemed to use 'styles' as a way of describing broad preferences in learning activities, such as a preference for learning by enacting rather than by listening or reading). The view was expressed that it was of particular benefit to the less academically able. At the later stage, one artist suggested it was also about raising the profile of arts.

Some artists spoke of the benefits of the arts activities giving children responsibility for their own learning, giving them alternative ways of expressing themselves and also, for some, discovering hidden talents.

### **3.7 Parent views on the impact of AAC on pupils (detailed information appears in Appendices B5 and C5)**

While some of the parents' interviewed had only limited awareness of the AAC project, the majority indicated that their children had enjoyed the experience and had spoken enthusiastically and positively about the lessons with the artists. Most believed that the interest generated by the artists would help the children concentrate more and help them learn. It was particularly beneficial to have another adult in the classroom and some parents spoke of the way in which the artists had taken an interest in the children and had taken time to listen to them. Only one parent reported that her child had not enjoyed the AAC experience and had found that it got in the way of learning about the subject. Most parents had no concerns about integrating arts and other areas of the curriculum – the general view being that if it made it more interesting and kept the children involved then it could only be a good thing. A few expressed reservations that it could be a distraction and they thought that it was probably not suitable as children progressed in secondary school.

### **3.8 Observational data**

For the most part, the analyses of interaction initiated by teachers and artists, and pupils' responses, confirm other stakeholders' accounts of high levels of pupil engagement during ICLs, and all the observers' field notes mention pupil enjoyment of these lessons. The descriptions of ICLs offered in pupil focus groups are also consistent with teachers', artists' and observers' accounts of what went on in ICLs. Most pupils were enthused by the arts activities and, while aptitude and experience of art forms varied, most tried their utmost to do the activities as well as they possibly could. Artists set achievable targets, and were consistently supportive and positive about pupils' output. The time available for ICLs was a serious constraint in deriving more benefits from the art forms.

In a few lessons (media/environmental studies, drama/ history) it was possible to categorise pupil talk when they were planning in small groups how to integrate images with text and how to dramatise key incidents in Operation Barbarossa. The following categories of pupil talk (see descriptions in Appendix E) that are connected with attainment were recorded:

- self-regulates
- generates suggestions for changing direction
- tries to advance/clarify understanding of content
- evaluates

As in other small group work, the pupils were on task most of the time, highly engaged and keen to persist with their task.

### **3.9 Summary**

The many different strands of evidence point in the same direction: the ICLs engaged the pupils, they were effective in enhancing understanding of academic and artistic content, and pupils, including those with social, emotional and behavioural needs, derived a range of benefits from these lessons. There is therefore robust evidence that a similar future project that builds on lessons learned from AAC is likely to engage pupils with curriculum content and with art forms. More generally, the evidence also suggests that a shift towards teaching methods derivable from constructivist research on learning, such as is implied in the *Curriculum for Excellence*, is likely to be acceptable to pupils and teachers.

One limitation of the project is that constraints arising from the need to cover other curriculum content precluded following up the art forms in non-ICL lessons, particularly in secondary schools. Consequently, it was possible for pupils to experience the art forms only in a way that was consistent with learning a topic in an ICL.

## Chapter 4 Impact of the project on teachers, artists and schools

### 4.1 Introduction

The main focus of this chapter is the evidence relating to evaluation aims connected with the project's impact on teachers, artists and schools. The first evaluation aim included establishing the success of the project's aims to 'develop skills of teachers to work collaboratively and creatively', 'to encourage links between different areas of learning and erode subject barriers' and to 'improve the ethos of the school'. The second aim was to 'identify strengths and any gaps in the training and support available to teachers and artists' while the third aim included assessing the overall impact on teachers and artists.

This chapter draws on data from the following sources:

- Participants' perceptions of the training event (April 2005, views from survey in September 2005)
- Survey of teachers and artists new to AAC during the second year of the project, i.e. academic year 2006-07
- Teacher survey and interviews in both years of the project
- Artist survey and interviews in both years of the project

Descriptions of the timing of data gathering, methods of data analyses and justification for methods, the participant samples and return rates appear in Appendix A; detailed information about academic content and art forms in ICLs, analyses of survey and interview responses appear in Appendices B and C and the instruments are contained in Appendix H.

Most teachers and artists completed questionnaires or interviews in either the first or second years of the project. However, only 14 teachers and 11 artists responded to both surveys, therefore the majority of respondents in the first year are different from the respondents in the second year.

For the most part, teacher and artist views remained the same from the initial experience of AAC in Year 1 to the end of year 2. In the second year survey, no statistically significant differences were found in the responses between primary and secondary teachers, and there are few marked differences in interview responses. Therefore, findings for teachers from both sectors are presented together, with any notable differences in interview responses pointed out.

This chapter considers, firstly, views on training and support; secondly, views on the impact on teachers; thirdly, views on the impact on artists and finally, the impact on whole school issues.

### 4.2 Participants' perceptions of the initial training event and support for new participants (detailed information appears in appendices B1 and C1)

#### Initial training event

The survey data (September 2005) indicate that the training event was generally well received by both teachers and artists. At interview, teachers used positive terms such as 'highly inspirational', 'growing confidence', 'being put in the position of learner' and having their 'comfort-zones challenged'. The joint sessions where artists and teachers were able to work together in local authority groups were particularly well received. Key benefits, as perceived by the teachers, included seeing how artist and teacher could work together, developing an understanding of the Chicago model and the SAC project and, critically, exploring how the arts might be used to teach non-arts subjects. According to both teachers and artists, an important aspect was the wealth of talented Scottish artists gathered together for the training event. However, both groups reported that the least effective part of the training was about the specific application of the arts into the curriculum and how to apply the principles of AAC to teaching pupils and school subjects.

Overall, the teachers responded more positively than the artists. For the artists, the most positive

aspects of the training were getting to know the teachers with whom they would be working and forming a network for support. Many of the artists reported that they already had experience of working in an educational context and that the artists' talents could have been utilised more in the training event.

Both in response to the surveys and at interview, artists and teachers who had not attended the training event reported receiving limited information about the project and some indicated that they would have found more information and initial support helpful.

Responses to the questionnaire and evidence from the interviews raised issues for consideration. There was a perceived bias towards the 'performing arts' (e.g. dance and drama) at the training. Teachers said that they would have liked more detailed information about the Chicago model, how it could be contextualised for the Scottish education system and to see how it worked with children. In addition, a suggestion was made by an artist to involve a wider range of staff in the training, e.g. principal teachers or members of the senior management team, arguing that this might have been beneficial in developing an understanding of the project in schools. Induction and support, particularly for those starting the project without the benefit of attending the training event, should have been given greater consideration. In a video diary, one artist commented that 'there needs to be more arts training for teachers and more teacher training for some artists.'

### **New participants**

'New' artists and teachers became involved in AAC throughout the life of the project. Induction for such participants varied from authority to authority, with both teachers and artists in some authorities reporting meetings with CLOs and some locally organised induction and planning days. Others had little support, with teachers depending on experienced artists, and *vice versa*, to help them with the preparation and delivery of ICLs.

Some 'new' teachers and artists, in preparation for the second year of the project, had the opportunity to attend the recall day at Livingston in June 2006, and this had helped them gain insight into the project, which they found helpful. Others who were not able to attend, or who joined the project later than that date, appeared to have had less support. Where artists and teachers had taken part in some kind of induction process, this was generally seen to be effective, mainly in relation to understanding how art could be used in different areas in the curriculum and in getting to know the artists and beginning to plan lessons. Most expressed some kind of uncertainty or concern at the outset.

Communication between artists and teachers appeared to be established quickly and was generally effective. The quality of communication with the CLOs varied from very effective to not effective for both artists and teachers, as did the quality of information received about the project, both at local and national levels.

More structured induction and clear information about Arts Across the Curriculum and ICLs would have benefited all new participants to the project and could have allayed some of the initial concerns.

## **4.3 Teacher views on the impact of AAC on teachers (detailed information appears in appendices B3 and C3)**

### **Teacher development**

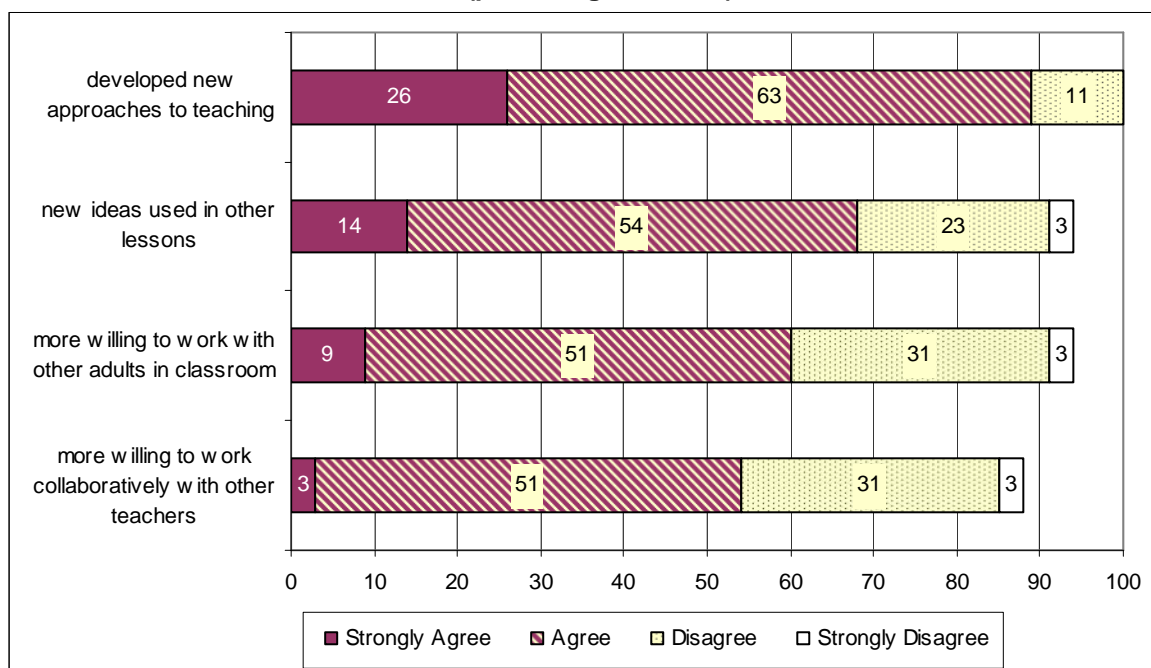
One aim of the AAC project is to support and develop the skills of teachers to work 'collaboratively and creatively'. The purpose of survey and interview questions was to identify if AAC has provided the opportunity for development, regardless of the starting point of the teachers.

In both years of the project, teachers reported working collaboratively with their colleagues and other adults prior to involvement in AAC; some indicated that working with the artist had made them more confident in working with others, and one teacher said that she now had more confidence in suggesting unusual ways to present the curriculum. The majority spoke of the benefits of working

collaboratively with artists but reported not having the opportunity to work with other teachers in developing the ideas of AAC. Survey responses are illustrated in Chart 4.1.

In relation to working creatively, almost all the teachers thought that they had developed new approaches to teaching, most indicated they had tried out the new ideas in other lessons and that working with an artist had developed their confidence to try out new approaches and to be less 'controlling' in their classroom practice. See chart 4.1 for survey responses.

**Chart 4.1 Extent to which teachers agreed that working with artists encouraged them to develop creative and collaborative approaches (percentages; n = 35)**



Some teachers were rethinking how the classroom was managed, they were more willing to let pupils make mistakes and they encouraged the children to ask more questions (though many said this was already part of their practice). Over 90% of teachers strongly agreed or agreed that they had learned about arts disciplines and gained arts skills from the experience.

#### Working with artists and implementing ICLs

Teachers who responded to the surveys were unanimously positive about the quality of the artists with whom they worked and valued the skills, expertise and ideas they brought to the ICLs. Their views on the process of implementing ICLs are given in Chapter 2, which provides a description of the ICLs built from observational data, tested against survey and interview data, and includes discussion of issues arising from implementing the Chicago/LEAP model.

#### 4.4 Artist views of the impact on artists and related issues (detailed information appears in appendices B4 and C4)

##### Artist development

While about one-third of the artists indicated that being involved in AAC had not led to further professional or personal development as they were already well experienced in working with schools, the remainder reported having developed new awareness and understanding of issues related to schools and young people and new skills in working with young people. Some said it had encouraged them to develop new approaches in their art. At interview, one artist spoke of having developed resources that were different from the 'usual things they did in schools' and which they could continue to use. All agreed that they would like to do more of this kind of work.

## **Working with teachers and implementing ICLs**

The artists were positive about the majority of teachers they had worked with, although in a small number of cases it was reported that some primary teachers had been less engaged in the process and less participatory than the artist would have expected. Issues on how roles varied in delivering ICLs are discussed in Chapter 2. Some had felt that the effectiveness of the delivery of their art form had been constrained by the limitations of the classroom setting.

### **School and authority support**

For the most part, schools had been welcoming and management supportive but, in some secondary schools, artists indicated that concentrating on the relationship with the teachers had been sufficient. In these cases, however, they noted that teachers could have benefited from greater support from school management.

On the whole, views were extremely positive regarding support from local authority managers, with an apparent increase in appreciation over the course of the project. For the 11 artists who had been involved in both years of the project, there was a statistically significant shift in their views on the effectiveness of communication with local authority managers, mainly CLOs. In the first questionnaire, 5 out of the 11 had rated the CLOs' communication negatively, with only one giving a strongly positive response. In the second questionnaire, all 11 artists rated communication with CLOs positively.

## **4.5 Teacher views on the impact of AAC on whole school issues (detailed information appears in appendices B3 and C3)**

### **Eroding subject barriers**

As one of the AAC aims is the erosion of subject barriers, secondary teachers were asked if AAC encouraged collaboration between departments and across subjects. As noted in the next section, specific whole school measures need to be introduced to facilitate changes such as erosion of subject barriers or increased collaboration, and the ICL model alone cannot be expected to fulfil this purpose.

While the majority (25: 72%) of teachers thought that AAC had encouraged collaboration between teachers (see chart 4.2) and 8 out of the 12 secondary teachers indicated that they had had the opportunity to discuss developments with other subject teachers, there was little evidence of other cross-curricular working. However, some teachers saw the potential for it, for example, with the art and English departments working together. Generally, the application of AAC was too limited to erode subject barriers. In some schools, cross-curricular developments were unlikely to occur because no one else knew about the project and, in the midst of several other initiatives, often it was not a school priority. At both stages of the evaluation, teachers saw the most obvious erosion of subject barriers occurring between art disciplines and other areas of the curriculum, although some primary teachers suggested that this was not new practice.

In the post-observation discussions and other interviews with teachers, it emerged that there were rarely formal mechanisms designed to facilitate collaboration between AAC and non-AAC teachers, such as AAC teachers leading staff development sessions on ICLs. Without such mechanisms it is difficult to see how one or two artists and teachers working together in a school could collaborate with non-AAC staff, although in some schools there were reports of ongoing informal staff room conversations. Therefore it is not surprising that some teachers commented in interviews that they had enjoyed collaborating with artists, but that the opportunity to cascade this collaboration in other areas of teaching was limited.

## Enhancing ethos of schools

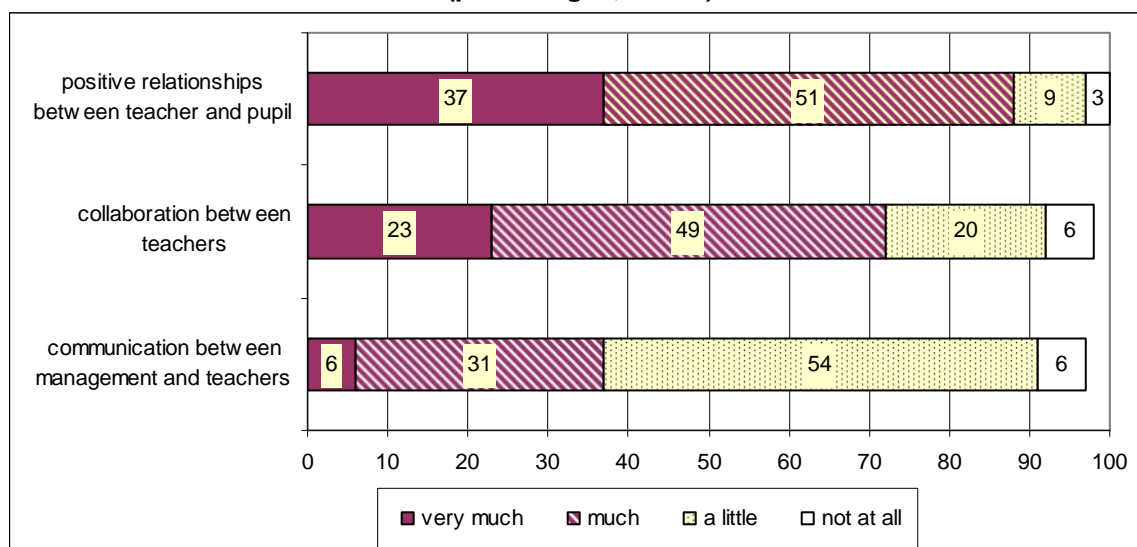
During the in-depth study of three schools, and during observations in many other schools, it was clear that the management teams often communicated to AAC teachers that they valued the project, were interested in what pupils were doing, and provided practical and other support for the project. In some of the project schools however, this sort of communication did not happen.

The majority (24: 69%) of teachers who completed the surveys thought that AAC fitted in with school development planning, with a minority (8: 23%) thinking it fitted in a little and 3 thinking it did not fit in at all. Obviously, where an initiative is in line with what a school is planning, it is likely to be easier for teachers to take it on board. However, where it is something additional to what has already been committed to through the development plan, then additional resource and effort is required.

Views on the extent to which AAC could contribute towards schools' National Priority targets and the aims of the *Curriculum for Excellence* were sought. National Priorities and the *Curriculum for Excellence* are aiming at similar long term outcomes, but were presented separately as they are 2 key frameworks for school and curriculum development. The majority indicated that AAC contributed to the national frameworks for educational priorities, but a minority had reservations about the extent to which it was contributing to achievement and attainment. The majority were also positive about the extent to which AAC fitted in with the aims of the *Curriculum for Excellence*; the primary teachers were more positive about this after the second year of the project. The headteachers interviewed during the in-depth studies were all extremely positive about how approaches such as those developed through AAC contributed to the *Curriculum for Excellence*.

Teachers were largely positive about AAC encouraging more positive relationships between themselves and pupils, though they were less convinced that it could encourage more collaboration amongst teachers or communication with management. Teacher responses are illustrated in chart 4.2.

**Chart 4.2 Teacher views on extent to which AAC contributed to aspects of school ethos (percentages; n = 35)**



The teacher interview data relating to school ethos are broadly consistent with the survey responses. No general consensus was reached as to whether the inclusion of AAC had impacted on school ethos, with opinion evenly divided between the views that there was either little or no impact beyond the ICLs themselves, or that the effect was difficult to isolate due to the presence of many other initiatives in schools. Some said they thought their school ethos was already very good.

Those who believed that the introduction of ICLs had impacted on school ethos struggled to articulate the ways in which the ethos had changed; however, allusions were made to the adoption of a more open approach to learning, the generation of a positive learning environment and the injection of a

sense of excitement and curiosity into the school. However, other initiatives in the schools at the same time are likely to have encouraged similar features in the learning environment.

One CLO summarised the description that emerged from the teacher data as follows:

*... it needed somebody from within the schools to take this forward. Secondary schools in particular work in separate silos and many initiatives and projects are constantly on-going in departments without that experience being shared across the school, so AAC was seen as another of these 'initiatives'.*

## **Parental involvement**

Greater involvement of parents in schools and with their children's education is a government priority. Views were sought on the extent to which AAC had provided schools with opportunities to involve parents. Seven teachers reported that parents had been involved in the project in some way, with some indicating that they had received feedback from parents.

They reported that parents had been invited to a presentation, performance or assembly to hear about the project and see what the children had been doing. The feedback received had all been verbal at the presentations or at parents' evening. Comments were all positive – parents had thought it was helpful, unusual and logical to have an 'expert' and were impressed by the quality of the work and the skills of the pupils.

## **4.6 Challenges, factors for success and sustainability (more detailed information appears in appendices B3, B4, C3 and C4)**

Teachers and artists were asked in both surveys and at interviews to indicate what had been the greatest challenges in AAC, what factors contributed to success and the potential for sustainability.

### **Teacher views on challenges and factors for success**

The most frequently stated challenges describe aspects of designing the ICLs. As discussed in Chapter 2, the notion of integrating an art form with academic content to bring about enhanced learning of both is a sophisticated and challenging notion, requiring a sound grasp of the art form and of how people learn. Comments in interviews included being 'less rigid about things' and having a 'better appreciation of the compatibility between topics and certain art forms'. Thus, it is not surprising that frequently stated challenging aspects of this process related to 'ensuring planning time is incorporated from the start of projects' and practical concerns such as reorganisation within school, e.g. timetables for access to gym, other school events, and finding suitable accommodation and adequate resources in the school. The limited time slot in which the ICL took place, especially in secondary schools, was sometimes a problem.

Other challenges mentioned by a small minority included ensuring joint delivery of the lesson with the artist and learning new skills, particularly using technology. Although another challenge mentioned was that some pupils could be disruptive on occasion, this arises in most lessons and is not unique to ICLs. Convincing other teachers of the value of what was happening was mentioned, but again this challenge arises in any new initiative.

Factors contributing to success included support from management, wider awareness in the school of what AAC was trying to achieve, adequate lead-in time for initial planning and adequate time for ongoing planning and review.

## **Artist views on challenges and factors for success**

Artists identified a range of challenges, but these need to be balanced against the very positive views reported in relation to working on the project at both stages of the evaluation, during the in-depth study, and during post-observation discussion.

As with teachers, artists reported that finding sufficient time for initial planning and ongoing review was challenging. There had been challenges in adapting to the project and developing ideas and lessons along with teachers; for example, investing time in understanding the curriculum and developing suitable arts activities. Artists emphasised the importance of the teachers' commitment and their role in establishing connections between the art forms and the learning objectives. For the most part these were challenges which were 'relished'.

Artists also highlighted the importance of the artist and teacher working as a team; as noted above, some artists found some teachers less participative than others and, in a very small number of cases, effective relationships did not develop. The availability of suitable facilities and resources was important for success. Support from school management was indicated as a factor which could make a difference to the success of the project. Additionally, the artists interviewed at the second stage reported the need for the whole school to be aware and involved (even in order to make space and resources available). Further factors suggested were: the willingness of both artists and teachers to be flexible; teachers' willingness to allow pupils to have ownership of the learning; and artists' willingness to try different art forms.

At both stages of the evaluation, a small number of artists thought that better opportunities for artists involved in AAC to liaise with each other and learn from each other would have made the project more effective. At stage 2, the view was expressed that it was disappointing that there had been little media coverage and that the project did not have a higher profile in schools and in local communities.

## **Sustainability of AAC**

The teachers were asked if they thought they could deliver arts-infused lessons without the input of an artist. Just under half of the teachers thought this was a possibility. The teachers were asked to give reasons for their response.

The reasons given by those who thought they could do it without an artist covered the following points:

- They could deliver a modified version as they had always taught art, but extra classroom assistance would be required to manage large classes; some teachers indicated that they had the skill to do it.
- The teachers had gained skills through working with the artist and had gained the knowledge to link art to the curriculum.
- It could be possible as long as there was support for the teacher, e.g. an online forum for sharing ideas and asking questions; examples of a range of ICLs would be helpful.
- One secondary teacher thought that working with other subjects in a cross-curricular way would make it possible.

For those who thought it was not possible, the overwhelming reason given was that the expertise and talent of the artist was essential. The view of many was that the teacher did not have the skills or 'fresh ideas' which the artist brought. Other reasons included: the school did not have the resources; teachers had to deal with too many other things; and, even if the teacher had the skills to do it, the artist was key in motivating the pupils.

Teachers were asked what would help them to deliver arts-infused lessons when the AAC project was over. One primary and one secondary teacher simply said they would not try it without an artist. The following suggestions were made:

- There was a need for resources and materials and a budget to buy them. In many cases it was the artist who had supplied materials and equipment. Linked to this, sharing resources of previously developed ICLs would be helpful – for example, a resource pack with examples and ideas
- Working with an artist as a mentor, to help with planning and ideas
- Time to plan and develop new strategies
- CPD in arts-related activities and skills
- More support from colleagues – a greater belief that it is worthwhile; more sharing and collaboration with others in school

During interviews, teachers also emphasised that a less content-driven curriculum would be required, referring to the issues discussed in Chapter 2, and that better understanding could be achieved, but it took longer to cover the learning objectives. The most significant legacy of sustainability comes from reports that some schools have started to implement plans to continue with elements of AAC. For instance, in one secondary school the headteacher is testing out sustainability by creating a new post towards this end.

For artists, the main issue of sustainability was funding. As they were employed independently, resources had to be found to pay them to continue their work in schools, although, as reported, they had developed teaching and learning ideas and materials that they could use in the future.

#### **4.7 Summary**

It is clear that the impact reported by artists and teachers on their own practice was overwhelmingly positive, encouraging many of the teachers to try new approaches beyond the confines of the ICL. There were challenges in terms of finding time, accommodation and resources which impinged on wider school arrangements, although these varied between schools. Contribution towards eroding subject barriers and improving school ethos were constrained by the limited application of the model in schools; the effects were also harder to determine at a whole school level, as they were often compounded with the effects of other initiatives.

Just under half the teachers believed that they could continue to implement the delivery of the curriculum through the arts as the experience had given them the ideas and the skills; the remainder believed this was not possible as the expertise and skills of the artists were essential for successful delivery. Sustainability was dependent on schools' commitment to giving time, resources and wider recognition within the school to an arts-infused approach and ongoing CPD/mentoring from artists.

## Chapter 5 Conclusions, discussion and points for consideration

### 5.1 Introduction

This chapter presents a brief summary of the main findings and conclusions reported in Chapters 2 to 4 of this report. It then goes on to discuss the findings in the light of findings from other relevant research. It addresses, firstly, aims 1 to 5 of the AAC programme and aims 1 and 3 of the evaluation, namely:

- the impact on pupil achievement, motivation and personal development
- teacher and artist development
- the erosion of subject barriers, and
- improving school ethos.

It then considers the final AAC aim, and the final 2 aims of the evaluation, which relate to:

- the efficacy of arts as a vehicle for delivering the school curriculum and other educational outcomes, and
- establishing the conditions which support its effective implementation.

Issues related to aim 3 of the evaluation, the effectiveness of training and support, are addressed in the final section, which proposes some key points for consideration for further development of the model of arts integration indicated by the use of ICLs.

### 5.2 Main findings and conclusions

- The evidence shows that the artists and teachers were adapting the Chicago/LEAP model in sensible, productive ways to fit curricula in Scottish schools. Throughout the project, the arts activities were being used to help pupils learn other knowledge, and this evidence differentiates AAC activities from other initiatives that have introduced arts activities into schools.
- Evidence from pupils, teachers and artists suggests that ICLs increased pupils' understandings of the concepts being addressed and facilitated remembering of the topics covered.
- Evidence from all participants indicates that pupils were engaging with approaches designed to encourage creativity, but various strands of evidence suggests that more attention needs to be given to developing creative thinking skills as well as content outcomes.
- There is strong evidence from pupils, teachers, artists and parents that the pupils found working with the artist made curricular topics interesting, enjoyable and fun. Participants also reported gains in pupil confidence and self-esteem.
- Pupils reported learning about the art-forms and developing new skills; while some new interests had been cultivated, there was perceived lack of opportunity both in school and in the community to develop them.
- The impact reported by teachers on their own practice was very positive; the experience encouraged many of them to try new approaches beyond the confines of the ICL.
- Many of the artists were already well-experienced in working in schools; however, two-thirds indicated they had developed new understandings of, and skills in, working with schools and young people.
- There were challenges in terms of finding time, accommodation and resources which impinged on wider school arrangements, although these varied between schools.
- Just under half the teachers believed that they could continue to implement the delivery of the curriculum through the arts as the experience had given them the ideas and the skills; the remainder believed this was not possible as the expertise and skills of the artists were essential for successful delivery. Sustainability was dependent on schools' commitment to giving time, resources and wider recognition within the school to an arts-infused approach and ongoing CPD/mentoring from artists.

- The contribution of AAC towards eroding subject barriers and improving school ethos was constrained by the limited application of the model in schools; the effects were also harder to determine at a whole school level, as they were often compounded with the effects of other initiatives.
- Overall, the Arts Across the Curriculum project has been a predominantly successful initiative, due to the commitment and enthusiasm of the majority of teachers and artists who engaged with the ideas and practices of Integrated Curricular Lessons. To build on the successes and to further develop the model, some points for consideration are given in section 5.6 below.

### 5.3 Meeting the aims of Arts Across the Curriculum

The Arts Across the Curriculum project began with an ambitious set of aims which sought to enhance pupil achievement and motivation, offer development to teachers and bring positive change to schools. This was to be achieved through artists and teachers working together to deliver the school curriculum through integrated curricular lessons, i.e. teaching and learning of the curriculum through the medium of an art form.

This project sits in the context of an extensive and longstanding debate about the value and role of arts in education. At a global level, the UNESCO World Conference on Arts Education (2006) produced a *Road Map for Arts Education: Building Creative Capacities for the 21<sup>st</sup> Century*. The document aims to promote a 'common understanding of the importance of Arts Education and its essential role in improving the quality of education as a whole' (p1). It endorses two main approaches: arts taught as individual subjects in their own right and what they call 'Arts in Education', i.e. as a medium for teaching and increasing the understanding of curricular subjects (p6). The *Road Map* makes many claims for the benefits of arts in social, cultural and educational terms; in relation to the final point, the claims are for cognitive and creative development and enhancing the relevance of learning to the individual.

Comerford Boyes and Reid (2005), in a review of relevant literature, note that most advocacy and research evidence literature emanates from North America and the United Kingdom. The UK and North American perspectives are acknowledged as being different in that the UK has had a longstanding commitment to arts in schools not found in general across North American education (Cochrane & Cockett, 2007). Claims for the benefits of engaging in arts education and integrating arts in the curriculum include: developing qualitative and flexible forms of thinking (Eisner, 2004), cognitive functioning and affective development (Catterall, 2002) and cognitive, personal and social skills (Comerford Boyes & Reid, 2005).

These claims are in line with the aims of the AAC project and issues explored as part of the evaluation: namely, increasing achievement and understanding, raising motivation, developing collaborative and creative skills and aspects of pupil personal development such as esteem and confidence. The findings are considered below in relation to findings from other evaluation and research. Issues of teacher and artist development and whole school issues are found in the literature and the related project aims are also addressed. It is not possible within the confines of this report to give details of the projects reported in other literature, but an annotated bibliography is provided to allow readers to investigate the issues further.

#### Impact on pupils' achievement, understanding and attainment

Evidence from pupils, artists and teachers suggests that the ICLs increased pupils' understanding of the concepts being addressed and facilitated remembering the concepts and topics covered. Teachers provided specific examples of where they had noted improvements in test scores and better recall of concepts which reduced the need to 're-teach' topics. This is in line with findings reported elsewhere: for example, Ofsted (2006) stated that teachers involved in arts interventions reported improvements in literacy and numeracy, though they found that there was inadequate tracking of pupil progress.

Evidence that learning gains from specific arts interventions transfer to better learning overall and improved attainment, in terms of improved performance in national testing or examinations, is elusive.

The diversity of practice in AAC meant that any overall tracking of learning gains in such terms was inappropriate. Further, evidence from the literature suggests that such gains might only be expected to occur after consistent, long-term participation in interventions.

The Chicago Arts Programme in Education, the inspiration behind AAC and CapeUK, is often quoted as being successful in this respect. Evaluation of CAPE (Catterall & Waldorf, 1999) revealed that after 4 years CAPE schools began to show significant differences in maths and reading scores compared to non-CAPE schools; after 6 years this was evident especially at elementary levels and by sixth grade (age 12); however, no effect was found at grade 8 (age 14) and although there were positive gains in CAPE high schools, they were not statistically significant. This suggests that impact was likely to occur only after long-term investment and was more likely to be evident with younger pupils.

The evaluation by Uptis and Smithrin (2003) of *Learning through the Arts (LTTA)*, a large-scale arts integration programme in Canada, used standard tests for maths and English on a large sample of pupils from Grades 1 to 6 in LTTA schools and in control schools, tracking progress over three years. This study found no significant differences on most measures and drew the conclusion that 'involvement in the arts for the students in the LTTA schools did not come at the expense of achievement in mathematics and language' (p17).

As part of the evaluation of the Creative Partnerships programme, Eames *et al* (2006) undertook an analysis, using multilevel modelling, of national assessment and qualifications scores in English, maths and science for young people at key stages 2, 3 and 4. The results for 3 groups of young people were investigated: young people who took part in Creative Partnerships activities, young people from Creative Partnerships schools but who did not take part in activities, and young people from similar backgrounds nationally. When compared with national data, the analysis of young people's progress showed no evidence of impact on attainment at key stages 2 or 4 and a very small positive impact at key stage 3. Within the Creative Partnerships schools those who participated in the arts activities outperformed their peers at all 3 stages, but the differences were not large enough to be confident that they were educationally significant; it could not be concluded that Creative Partnerships activities had caused the observed differences.

### **Impact on development of creative approaches and creative thinking skills**

Evidence from pupils, teachers and artists suggests that pupils were engaging with approaches that should encourage the development of creativity and so by extension creative thinking skills, for example, generating their own ideas, working in new ways and with new ideas, solving-problems, working collaboratively and taking risks. However, tasks designed to specifically explore creative thinking skills with a small sub-sample of AAC pupils and a control group, showed for that specific group at least, the AAC intervention had not led to any development in creative thinking skills.

Harland *et al* (2005) found that the development of thinking skills were nominated amongst the least frequent outcomes of arts interventions and Ofsted (2006) found that while most Creative Partnerships programmes were effective in developing in pupils some attributes of creative people, the pupils were often unclear about how to apply them independently to develop original ideas.

More positively, a study into the effect of arts-integrated lessons compared to non arts-integrated units on learners' cognitive processes by DeMoss and Morris (2002) found that learners demonstrated greater analytic interpretation after the arts-integrated units. Analytic interpretation was judged by evidence of interpretation, analysis, synthesis or evaluation of the subject matter in students' writing (pp 9-10). The arts-integrated lessons which produced this result, however, had particular characteristics which they describe as having arts and curriculum content 'tightly coupled'; in these cases arts were used as applied concepts for investigating and expanding content as opposed to summarising or enhancing 'regular' content. Such lessons required careful joint planning with the artist 'clearly attuned to the academic content'.

As discussed in section 3.4, most research suggests that any form of thinking has to be practised quite intensively before a measurable impact occurs, and the nature of the thinking needs to be made explicit. In the more successful thinking skills initiatives (e.g. see McGuinness, 2005), forms of thinking embedded in an art form or academic subject have been identified at a planning stage and

the different forms have been systematically and explicitly introduced and practised in each lesson. Section 3.4 refers to the 'Artful Thinking Program' linked to the work of Project Zero at Harvard Graduate Education School. This project merits further consideration.

Project Zero, focusing on developing learning and understanding, has undertaken development which emphasises the importance of 'making thinking visible' and has concentrated on thinking dispositions and routines. The Artful Thinking Program (Tishman & Palmer, 2006) is one aspect of Project Zero that has concentrated on using visual art as a means for developing thinking. The work of Tishman and Palmer is premised on the view that thinking does not develop by chance, but by clear modelling and practice. After the intervention they explored students' conceptions of thinking, though not their ability to apply or use their understandings. (Research by others indicates that the different beliefs students hold about the nature of thinking and learning are correlated with different outcomes on measures of thinking – p74.) Their work showed that students who took part in the Artful Thinking Program increased the number of conceptions and understandings they had about thinking compared to a control group. Both groups displayed awareness of ways of thinking which increased over time, but the Artful Thinking group showed a statistically significant greater growth in awareness than the control group (pp 85-86). They also found that low-achieving students made greater gains in their reasoning abilities. This supports the view of the benefits of making (and the need to make) thinking explicit and to include practice in thinking as a routine within the classroom environment.

While the presence of the artist along with the teacher is beneficial, the mere presence of a creative person will not help young people develop creativity or creative thinking skills. The creative thought process needs to be made explicit, dialogue and discussion should be built on problem-solving and creative thinking models, and tasks set need to be designed to require the use of such skills and provide the opportunity for pupils' creative expression. This implies the kind of careful planning endorsed by DeMoss and Morris, referred to above.

### **Impact on pupil motivation and personal development**

Achievement is generally understood as going beyond results in attainment tests and other assessments and relates more to children's success in participating in the wider life of the school. Cochrane and Cockett (2007) and Tishman and Palmer (2006) both emphasise that the developments that occur through effective arts interventions go well beyond what can be measured by SATs in England, and high-stakes standardised testing in the USA. Therefore, benefits found in terms of the impact on pupils' engagement with learning and in other aspects of development are important outcomes.

#### ***Motivation***

Motivation was deconstructed as interest, enjoyment and persistent engagement with learning tasks. There was strong evidence from pupils, teachers, artists and parents that pupils found that the experience of working with artists helped to make curricular topics interesting, enjoyable and fun. Such findings are strongly evident in the literature (e.g. see Catterall & Waldorf, 1999; Upitis & Smithrin, 2003; Harland *et al*, 2005; Ofsted, 2006; Cochrane & Crockett, 2007).

Reasons for the strong motivational impact of arts interventions include:

- having clear and tangible outcomes to work towards
- authentic experiences
- the intrinsic value of the activity
- contact with skilled professionals
- contact with adults who were not teachers, who were not part of 'the system' and who did not take account of their 'school history'
- learning was active and 'hands-on'.

#### ***Personal development***

There was strong evidence from pupils, teachers and artists that pupils gained in terms of developing confidence. Teachers spoke emphatically of benefits to children's self-esteem. There was also

evidence that the approaches used encouraged the children to work collaboratively and to appreciate the ideas put forward by their fellow pupils. These findings are confirmed in other studies. For example, Harland *et al* (2005) found that the development of self-esteem and social interaction were amongst the most frequently reported outcomes of arts interventions. Ofsted (2006) and Catterall and Waldorf (1999) found similar reports from teachers.

Pupils involved in AAC reported that they had learned new things about art and developed new skills; while some new interests had been cultivated, there was perceived lack of opportunity both in school and in the community to develop them. Harland *et al* (2005) found that art form knowledge, skills and techniques were frequently reported outcomes of arts interventions and more likely to deliver art form appreciation than the normal secondary art curriculum. Tishman and Palmer (2006) found that using art as a means for developing thinking led to changes in pupils' thinking about art; for example, from views that visual art was 'not engaging' to visual art 'inviting enquiry' and being 'beautiful and fun'.

### **Impact on teacher development**

An aim of AAC was to support and develop teachers' skills to work collaboratively and creatively. Teachers, for the most part, reported that they already worked collaboratively, but the experience of working with the artists had helped some to become more open with their classes and had given them more confidence to collaborate. The main collaboration which occurred was that of the teacher and artist and this was generally seen to be very effective and valuable. Harland *et al* (2005) found that the quality of the artist-teacher relationship was one of the factors which most affected the outcomes for both artists and teachers. This was understood as a good working relationship and effective communication rather than personal rapport.

In relation to working creatively, teachers reported being challenged in how they thought about classroom management and some indicated they were willing to be more open and 'less controlling'; many reported trying out new ideas they had learned from working with the artists in other non-ICL lessons. This outcome is reported in other studies (e.g. Werner & Freeman, 2001; Upitis & Smithrin, 2003; Harland *et al*, 2005), although Harland *et al* suggest that 'the extent to which teachers were able to make significant and sustained changes to their practice remained open to question' (px/p102). This links to the issue of sustained and ongoing professional development for teachers (see 5.5 below).

### **Impact on artist development**

Artists were less likely than teachers to report that involvement in AAC had led to professional or personal development as they were already well experienced in working with schools. However, two-thirds indicated they had developed new understandings of issues related to schools and young people and had developed their skills in working with young people. Similar findings were reported by Harland *et al* (2005) and Upitis and Smithrin (2003). Harland *et al* conclude that there appeared to be limited capacity for experienced arts educators to gain outcomes distinctive from those already acquired from previous work.

### **Impact on schools**

AAC had two specific aims in relation to school developments: encouraging links between different areas of learning and eroding subject barriers; and enhancing the ethos of participating schools. Limited impact was reported in both these areas. The literature would support the view that these are most likely to be achieved over the long term and as the outcomes of whole school strategies.

For example, in an evaluation of CAPE, Catterall and Waldorf (1999) report that there were indications that teachers in CAPE schools had more positive perceptions in relation to school climate, quality of relationship with parents, professional development, instructional practices and relationships with the community than non-CAPE schools (p50). However, the influence grew over time and was more likely in schools that had high levels of involvement with all teachers engaging in multiple ways but in at least in one unit per year. It was more likely to become a major part of a school where the principal thought highly of it and nurtured it – in relation to funding, space and professional development.

In the context of developing creative schools, Cochrane and Cockett (2007) view the development of creativity as a 'slow burn'. They reflect on the challenges of funding for schools and distinguish between schools who see funding for arts initiatives as 'providing time and space just as long as the funding lasts' or those who build in arts as part of an overall vision of school improvement (p105).

#### **5.4 Factors which facilitate effectiveness**

Factors contributing to effectiveness can be seen from at least two perspectives: firstly, the practical issues which make the project and activities possible; and secondly, and arguably more importantly, the underlying understandings in relation to pedagogy and how the intervention enhances learning.

##### **Practical issues**

In line with the views expressed by artists and teachers in AAC, factors identified in the literature as contributing to success (or whose absence hampers effectiveness) are:

- strong leadership and active involvement of SMT
- time for planning; quality of the planning process; interventions which emphasised collaboration and joint planning of the teacher and artist
- effective communication
- projects were not one-off but had multiple phases, or one-off interventions were part of long-term strategy
- appropriate allocation of time (e.g. enough time to complete tasks, but not too long for attention of pupils), with continuity and progression built in
- the role of the teacher during the intervention; 'adventuresome, risk-taking teachers'
- positive artist-teacher relationships

(Doherty & Harland, 1995; Catterall & Waldorf, 1999; Harland *et al*, 2005; Tishman & Palmer, 2006; Cochrane & Crockett, 2007)

In relation to planning, it is not only ensuring that time is available that is important, but also the quality of the planning process. The AAC evaluation highlighted the following factors in relation to planning that contributed to effective ICLs:

- taking time to choose realistic academic and artistic goals
- analysing key concepts connected with lesson goals
- artist efforts to master key concepts in curricular content
- considering strategies for developing pupil understanding
- using the art form to inject interest into 'difficult' or 'dull' content
- artist and teacher competences: these included a wide repertoire of activities for promoting conceptual understanding
- balancing claims of artistic and curricular goals
- artist ability to design a vehicle suitable for promoting the academic goals with manageable artistic activities
- accommodating constraints, including time, teacher/pupil resources and space

These points are underpinned by strong pedagogical understandings.

Throughout the literature it is emphasised that benefits accrue over a long-term period of development and there is a learning and growth process in working towards effective practices.

##### **Pedagogy**

As noted above, the effectiveness of the planning process is underpinned by pedagogical understanding. Harland *et al* (2005) found that the overwhelming factor leading to effective outcomes for all participants, but for pupils in particular, was the artist's pedagogy. Pupils identified this as the quality of explanation and nature of feedback that the artists gave. Particularly effective were artists who were willing to repeat or offer alternative explanations and who were able to relate to pupils' everyday lives. The AAC pupils were extremely positive about the quality of the explanations given

by the artists during ICLs as contributing to making the topics easier to learn. Ofsted (2006) reported that 'for many pupils, the high quality of the experience was directly related to the unpredictable approaches taken by creative practitioners...and the different relationships that developed' (p2). In the words of some AAC pupils: 'it was different from usual'; 'you were allowed to do cool things without being shouted at'.

The work of Creative Partnerships distinguishes between creative teaching and teaching creativity. Teachers need to distinguish between using 'a wide range of stimulating strategies and teaching that created the conditions for the pupils to express their creativity' (Ofsted, 2006, p13). Cochrane and Crockett (2007) reported that after 18 months of involvement, teachers were focusing on creative teaching and found the shift to teaching for creativity far more challenging. This links to the challenges noted above of approaches which explicitly encourage the development of creative thinking skills, and further development of teachers' pedagogical understandings.

The implications of the importance of pedagogical understandings in relation to the efficacy of arts to deliver the curriculum are addressed in sections 5.5 and 5.6.

### **5.5 The expressive arts as a vehicle for carrying current school curriculum knowledge and for achieving broader educational targets**

The fourth evaluation aim included exploring the potential of the expressive arts as a vehicle for carrying current school curriculum knowledge and for achieving broader educational targets.

It is clear that the impact reported by artists, teachers and pupils was overwhelmingly positive, and there is some evidence of impact on broader educational targets such as engagement with learning. Indeed, by the second year there was growing evidence that ICLs could be effective for most subjects provided that the level of goals was appropriate for the pupils. Throughout this report, a recurrent theme has been viewing the AAC project as one way of translating constructivist accounts of learning into practice in ways that are consistent with principles expressed in the *Curriculum for Excellence*.

The many different strands of evidence point in the same direction: the ICLs engaged the pupils, they were reasonably effective in enhancing understanding of academic and artistic content – but there is not sufficient evidence to say that the ICLs were more effective for these purposes than other approaches derived from constructivist research. Many ICLs served the function of illustrating abstract concepts, which abound in physics and chemistry, for example by representing them in another, art-related way. The notion of bridging analogies (e.g. see Bryce & Macmillan, 2005) helps to explain why some ICLs might have been no more, or even less, effective for this purpose than other approaches to developing understanding. Many writers (e.g. Bryce & Macmillan) point out that, if analogies are to be effective bridges between concrete illustration and the abstract understanding that is necessary for progress, they need to be carefully chosen.

While there were many examples of art forms being used to create more accessible representations of concepts, in a minority of ICLs the chosen aspects of the art form obscured understanding. It is possible that more effective analogies are to be found in areas other than art forms: for instance, young people might grasp some physics concepts more easily if they are encouraged to relate them to their experience of playing snooker or football rather than representing the concepts through dance or other art forms.

However, the justification for the AAC project did not lie only in bringing about more effective learning in school subjects: the potential of ICLs for introducing young people to art forms was a second powerful justification. Field notes made during the observations and accounts from pupil focus groups suggested that young people did learn about and become enthusiastic about art forms through ICLs. The time available for ICLs limited what the young people could learn about art forms, particularly where the stakeholders perceived that curriculum content had to be privileged over in-depth engagement with the art forms. Teachers followed up the curriculum content in subsequent non-ICLs but there was almost no time available for following up the art form.

## 5.6 What needs attention in future AAC-type projects?

To build on the successes reported, this section proposes points for consideration.

### Teacher and artist opportunities to explore pedagogy

If teachers and artists are to reap the affordances of constructivist teaching, they need more opportunities to understand principles arising from this perspective. If the training had included opportunities for teachers and artists to understand such principles, the design of ICLs is likely to have been easier and more satisfying. For instance, the initial training might be extended to include engagement with constructivist lessons written up in the literature (e.g. Brophy, 2002). Sometimes, in the interview data, there was talk of pedagogical notions that have little research support, notions that impeded the design of ICLs. While artists did not often articulate pedagogical notions in interviews, their practice was often consistent with developing what Gardner (2007) characterises as a creating mind, a respectful mind and an ethical mind.

Inherent in constructivist approaches is primacy of dialogue in developing thinking skills and in the construction of knowledge. A fundamental assumption is that talk/dialogue is more than a means for sharing thoughts: it is a tool for the joint construction of knowledge by teachers (and, in this case, artists) and learners (Mercer, 1996). Barnes and Todd (1977) emphasised the importance of learners exploring ideas about what is relevant and having a joint conception of what they are trying to achieve. The purpose of talk is to stimulate students to ascertain and resolve, *for themselves*, what is confusing or problematic (Brophy, 2002). Therefore, while ICLs promoted children working and planning together, and cases of complex dialogue were noted, further opportunities for artists and teachers to understand and develop skills in making thinking explicit and promoting constructive dialogue would have enhanced the learning experience.

It is not suggested that large-scale training events are required to achieve these purposes. Teachers themselves highlighted as elements of sustainability the importance of ongoing mentoring by artists and sharing with other teachers involved in developing integrated curricular lessons. For artists, more opportunities to network with other artists was seen as important. Views in the literature on what constitutes effective CPD emphasises using experts, being part of a sustained process which is relevant to and links directly to teachers' classroom practice, peer support, and dialogue and reflection (Cochrane & Crockett, 2007; Joyce & Showers, 2002; Cohen, 1994). In the Chicago model, the Chicago Teachers' Center played a critical role in bringing artists and teachers together, with the emphasis on the underpinning pedagogy for ICLs.

### A whole school approach

Brophy's (2002) illustrations of constructivist teaching suggest that ICLs would work optimally where there is a whole school approach, supported by the senior management team, to allocate blocks of time that enable the teacher and artist to design ICLs that include time for young people to practise arts 'skills', 'research' knowledge, and to engage more widely with the art form – for example, to view and discuss films, plays, documentaries and visual art.

Artists and teachers in the project were effective in introducing tasks and supporting participants in clarifying and performing such tasks, but they simply did not have enough time to include activities that would have enhanced the value of the art forms or to repeat and practise activities as in, for example, the *Artful Thinking* Program (Tishman & Palmer, 2006). Young people need to gain sufficient experience of working in these ways to disturb typical conceptions that learning is transmitted through listening to teachers and that teachers will do all that is required to ensure that the transmission has been successful. Their courses would also depend for their success on more open-ended assessment tasks that are sometimes difficult to design in the present climate. Assessment that rests on prescriptions of a narrow range of acceptable responses to tasks, an approach that delivers high reliability in grading, discourages intellectual risk taking by students. The ICLs did incorporate some elements of what is known in the educational literature as authentic assessment tasks (e.g. see Knight & Yorke, 2003). Such tasks have some use beyond the assessment requirements and generate new knowledge through engaging in disciplined enquiry. Thus, many pupils presented their work in drama, dance or media to an audience of other pupils in their schools.

### **Erosion of subject barriers**

An aim of the project which was less well achieved was the erosion of subject barriers, and promotion of this aim plainly needs a whole school approach, supported by the senior management team. Erosion of subject barriers can be promoted through the well researched, very influential approach known as problem based learning (e.g. see Boud & Felletti, 1997), in which the expressive arts could be used as the vehicle. Like many of the ICLs, this approach starts with a problem, such as representing ideas in a particular art form, rather than with subject knowledge, and thus encourages subject boundaries to be crossed. As was often the case in the ICLs observed, what has to be learned is identified by addressing a problem (for instance, producing a travelogue or writing and performing a sketch about electricity). The problem is clarified by reference to resources, some of which may have been provided, and some of which may have been located by the pupils themselves. Students work in small groups which allocate knowledge gathering tasks and which serve as a forum for discussing progress with their problem. Teachers and artists become designers and facilitators of activities and discussions, as was often the case in the ICLs.

### **Providing time to develop understanding of art forms**

As implied above, far more time needs to be allocated for teachers to follow up what young people have learned about art forms by, for example, providing opportunities for pupils to discuss films, plays and visual art.

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### **Annotated bibliography for Chapter 5**

Chapter 5 took account of a wide range of evaluation studies related to arts interventions, but there was insufficient space to give explanations of these studies. Therefore an annotated bibliography is included here to give an indication of the focus and extent of each work referred to.

Catterall J S and Waldorf L (1999) Chicago Arts Partnerships in Education: Summary Evaluation in E B Fiske (ed) (1999) *Champions of Change: the Impact of the Arts on Learning*. Washington DC: Council of Chief State School Officers

This paper presents a summary of evaluation findings for the Chicago Arts Partnership in Education. CAPE was founded in 1992. It was based on developing artist-teacher partnerships charged with the planning of integrated instruction; joint instruction of an art form with specific instructional goals in other academic subjects. The paper focuses on the first six years of CAPE, up to 1998.

Cochrane P and Cockett M (2007) *Building a Creative School: a dynamic approach to school development*. Stoke on Trent: Trentham Books

This book reports on the experience of developing partnerships between schools and creative practitioners and organisations under the auspices of CapeUK, established in the late 1990s and building on the model of the Chicago Arts Partnership in Education (CAPE). The book explores discussions around the meaning of creativity, considers its application to the curriculum, particularly in relation to science, addresses the issues of inclusion, how creativity develops and how that can be observed, assessment, partnership development and professional development.

DeMoss K and Morris T (2002) *How Arts Integration Supports Student Learning: Students shed light on the connections*. At <http://www.capeweb.org/demoss.pdf> (accessed December 2007))

Research related to the Chicago Arts Partners in Education (CAPE). The study investigated development of cognitive processes of the same 30 students following an arts-integrated unit of learning and a non arts-integrated unit of similar content and level. They investigated depth of knowledge, analytic interpretations and affective connections to learning.

Doherty P and Harland J (2001) *Partnerships for Creativity: An Evaluation of Implementation*. Slough: NFER

Early evaluation of the arts interventions introduced by CapeUK.

Eames A, Benton T, Sharp C and Kendall L (2006) *The impact of creative partnerships on the attainment of young people: Final report*. Slough: NFER

A study related to the evaluation of the Creative Partnerships Programme (2002-2004). The programme-level evaluation focused on measuring the changes in self-confidence, self-esteem and attitudes to learning amongst young people who took part in Creative Partnerships activity (Sharp *et al*, 2005 – note: referenced as unpublished draft report). Eames *et al* looked at progress in national assessments for young people using multi-level modelling to see if there was a difference between young people involved in Creative Partnerships and those who were not, when all relevant background details were taken into account.

Harland J and others (2005) *The arts-education interface: a mutual learning triangle?* Slough: NFER

A research study undertaken between 2001 and 2003 by NFER for the Arts Council England into the effectiveness of different kinds of arts-based interventions in schools and community learning. The purpose was to examine the outcomes for pupils, teachers, schools, artists and arts organisation and to explore factors which affected the range and quality of those effects. This was not particularly focused on integration of art and curriculum but on a range of arts-based interventions, some which were for the purpose of engaging in the art form, some with a personal development focus and some which had a curriculum (other than art) focus.

Ofsted (2006) *Creative Partnerships: initiative and impact*. HMI 2517

Creative Partnerships (<http://www.creative-partnerships.com>) (accessed December 2007), based at Arts Council England, set up by the Department for Culture, Media and Sports in England in 2002 and jointly funded by DfES, is about increasing the opportunities in schools, particularly those in deprived areas, for children to develop creativity and creative skills by enabling children, teachers and creative professionals to work together both in school and in other settings such as museums, galleries and theatres. CP aims to build sustainable relationships between schools and creative individuals and organisations with a view to encouraging a focus on the development of creativity in young people and creative approaches to teaching in all aspects of the curriculum. The Ofsted report is based on evaluation carried out in 6 of the 38 Creative Partnerships areas.

Tishman S and Palmer P (2006) *Artful Thinking: stronger thinking and learning through the power of art* Final report by Harvard College to Traverse City Area Public Schools. Cambridge: Harvard Graduate School of Education.

The goal of the Artful Thinking Program is to 'help students develop thinking dispositions that support thoughtful learning – in the arts, and across school subjects'. It was developed by the Project Zero team at Harvard University, along with Traverse City Area Public Schools. The purpose was to develop an arts-infused curriculum in which the arts were used as entry points for pupils to develop deeper thinking and learning skills. This was addressed through enabling teachers to make rich connections between works of art and curricular topics and helping teachers use art as a force for developing students' thinking dispositions. The art focus for the project was visual arts and the approach was to allow teachers to use the routines without requiring the input of an artist.

Dispositions are explained as predilections or tendencies to use knowledge and skills. 'Dispositions are formed when people routinely engage in specific patterns of behaviour. Accordingly, in the Artful Thinking Program, thinking dispositions are developed through the use of thinking routines – short, easy-to-learn procedures that help students enact thinking dispositional behaviour' in and across six thinking dispositions that 'have special power for exploring works of art and other complex topics in the curriculum' (pp 8-9). Routines not only 'uncover' users' existing ideas and ways of thinking but encourage them to construct ideas in process of applying them. This program is part of the work of the Visible Thinking Team at Project Zero.

Uptis R and Smithrim K (2003) *Learning Through the Arts: National Assessment 1999-2002: Final Report to the Royal Conservatory of Music*. Ontario: Queen's University

*Learning Through the Arts* is an extensive programme of arts integration in elementary schools in Canada. It was created and developed by the Royal Conservatory of Music and launched in 1994. It is estimated that by 2008 there will be 600 'LTTA' schools in Canada and involvement from schools in 10 countries worldwide. The programme has extensive planning and support mechanisms in place. Distinctive features are that schools agree to engage all teachers over a 3-year period; strong programmes of CPD for artists and teachers are in place, and usually the same artists, representing a range of art disciplines, continue with the school for a 3-year period. It follows the curriculum integration model, where professional artists work directly with students after developing curricula with teachers. For more information on the programme, go to <http://www.lta.ca/>. The research reported in the above document was commissioned by the Royal Conservatory of Music in 1999 and covered a 3-year period.

Werner L and Freeman C J (2001) *Arts for Academic Achievement: Arts Integration – a Vehicle for Changing Teacher Practice*. Presentation at the annual meeting of the American Educational Research Association, Seattle, WA, April 2001

This article reports on the 'Arts for Academic Achievement' project, which introduced art-integration into 37 mid-western schools (Minnesota) based on 'Annenberg' funding, money made available by Walter H Annenberg 'to invest in the survival of public schools'. The focus is on changes in teacher practice in one large urban school district.

Winner E and Hetland L (2000) *The Arts and Academic Achievement: what the Evidence Shows* *The Journal of Aesthetic Education* 34, 3/4. Illinois: University of Illinois Press. At <http://pzweb.harvard.edu/Research/Reap/REAPExecSum.htm> (accessed December 2007)

Output from Project Zero's REAP (Reviewing Education and the Arts Project), Harvard.

## Annexe: Number of respondents to surveys and interviews

The sample sizes and response rates for all surveys are given in table 1.

**Table 1: Survey samples and response rates**

	Target	Achieved	Response rate
<b>Stage 1</b>			
Artist initial questionnaire	26	19	73%
Artist second questionnaire	30	26	87%
Teacher initial questionnaire	49	36	73%
Teacher second questionnaire	50	44	88%
Primary pupil questionnaire	200	175	85%
Secondary pupil questionnaire	220	213	97%
<b>Stage 2</b>			
Artist 'new start' questionnaire	5	3	60%
Artist third questionnaire	35	23	66%
Teacher 'new start' questionnaire	18	15	83%
Teacher third questionnaire	47	35	74%
Primary pupil questionnaire	200	183	92%
Secondary pupil questionnaire	200	167	84%

These represent a good return rate and, although the artist return rate in stage 2 was lower, the responses are sufficient to be taken as representative.

The number of participants interviewed is given in table 2.

**Table 2: Number of AAC participants and others who were interviewed**

	Number of individuals
<b>Phase 1</b>	
CLOs and SAC staff	9
Headteachers/SMT	22
<b>Phase 2 – stage 1</b>	
Artists (individually)	7
Teachers (13 individually, 14 in 3 groups)	27
Pupils (in 17 groups)	112
Parents (in 6 groups)	14
<b>Phase 2 - stage 2<sup>1</sup></b>	
Artists (individually)	6
Teachers (individually)	12
Pupils (in 9 groups)	68
Parents (individually)	21
CLOs and SAC staff	9

<sup>1</sup> At stage 2, additional artist and teacher interviews occurred as part of the in-depth study. Members of school senior management teams were also interviewed as part of the in-depth study.

Three schools participated in an in-depth study and included 4 artists, 4 teachers, 3 classes of pupils, 3 headteachers and the Creative Links Officer.

In the first year 19 observations matching the observation criteria were completed, with 13 in the second year. Further class sessions with artists were observed in both years but they were either preparatory or follow-up to ICLs and as such did not constitute lessons matching the observation criteria.