

S.2 Using Handheld computers to stimulate Critical Studies in A-level Art

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Aims of the project

To investigate whether the use of interactive computer-based lesson material can enhance the understanding and appreciation of artworks encountered first-hand in a gallery and improve students' critical and analytical skills.

Does the use of ICT in this context:

- Develop critical and analytical skills?
- Improve students' motivation to investigate works of art?
- Improve students' ability to relate this knowledge and understanding to their own art practice.

Project description

The pilot project took place in the school year 2003-2004 and was a result of a partnership between Warren Comprehensive School Art Department, Software Company StreetAccess and Dulwich Picture Gallery. Interactive software allows teacher and gallery educators to create lessons and study material – 'Trails'- that can be accessed on wireless handheld computers using students' direct experience of paintings in the gallery as the starting point.

Understanding the context in which artwork has been produced and developing the capacity to analyse it has always proved to be the most challenging part of the art curriculum. Many of the students on the pilot scheme had little knowledge of Art History; most of them had never been to an art gallery before. Feedback was given directly to the software designer as the project unfolded and staff at Warren Comprehensive School and The Dulwich Picture Gallery received training in the use of the software enabling them to be in full control of the teaching material students' received.

Who was involved?

The research focused on 3 groups of students, involved in 3 phases over the year. Each group had access to material that related to their area of study. Year 13 undertook a unit of work on Portraits, Year 12's work centred round the theme of Conflict in Art and GCSE textile students considered surface pattern and texture. Work using the handhelds was planned to complement the 'normal' work of the gallery and it therefore ran alongside a programme of gallery talks and workshops. I have primarily concentrated on the outcomes and responses of Year 13 students as their artwork, sketchbooks and critical analysis provides the most comprehensive 'evidence' so far. As part of the ongoing evaluation of interactive lessons using wireless technology however, the comments of observers and participants of all three 'Trails' have been included.

Year 13

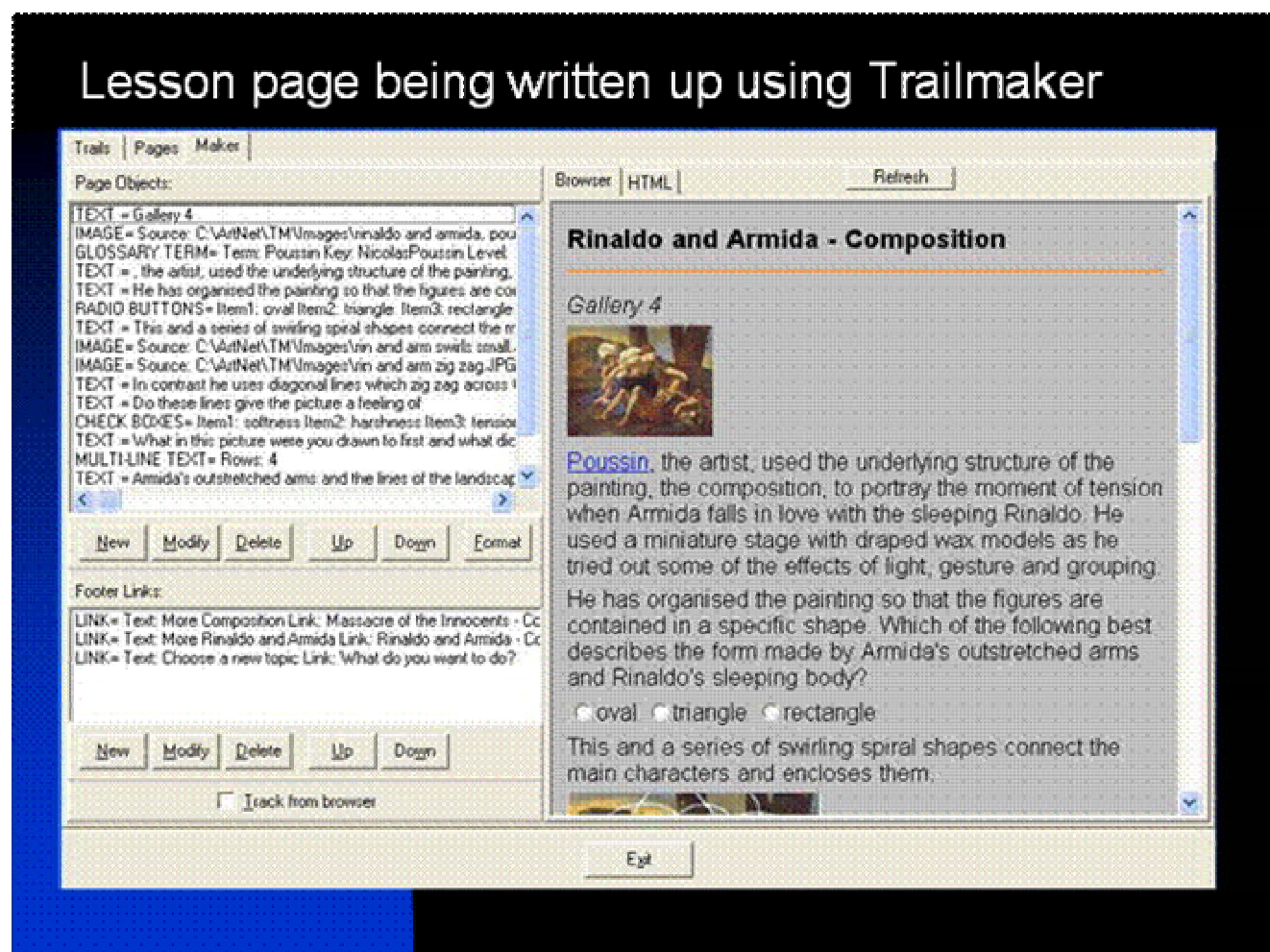
A group of Year 13 students made 2 visits to The Dulwich Picture Gallery

In October 2003, their first visit, students explored the gallery using wireless handheld computers to access information about portrait paintings. In the afternoon they attended a life-drawing workshop. They returned for a further visit in December 2003 to learn about the studio techniques of the Old Masters. They studied pictorial details, learnt how to make a 'cartoon' and mixed their own paints using traditional techniques and materials.

Shortly after their second visit students gave a short video presentation on Baroque Art. They used the gallery visits and their responses to the guidance material - 'Trails' - as the basis for the Contextual Studies Unit of work for the A2 examination and they were encouraged to use their studies and research to inform their practical work.

Background

The project uses wireless connection to the internet to provide students with information about the artists and the paintings they are studying in the gallery. A typical page includes diagrams, close-up details of the paintings being studied and a range of interactive facilities such as multiple choice click boxes and text boxes for comments and opinions on the artwork.



The interactive nature of the 'Trails' allows students control over the pace and direction of their learning and as they type their responses into the handheld computers these are recorded individually via the wireless connection and saved on the StreetAccess server. When they are back at school students can access the 'Trail' they took, undertake further research, scan in their own sketches and present their findings in a work journal or 'electronic sketchbook'. Subsequent practical work is informed and influenced by the gallery visit.

Students written evaluations reflect how important the handheld computers are in introducing them to the art of this unfamiliar period:

'They (the Handhelds) made it more fun, like using a mobile and texting. They gave you interesting information and made me understand the painting better, why things were painted and how. I could read first and then answer the questions. There was the right amount of

text so you weren't bored but there were enough questions to make you think.' Year 10 Textile student

Collection of data and initial findings

There have been many people involved in this project both as independent observers and active participants. Reports from the media, gallery educators, Art Department staff and representatives from the software company have been collected and evaluated.

All students were asked to fill in an evaluation sheet and they have been photographed and observed working. Sketchbooks, work journals, students' art work and their individual path of discovery recorded in the gallery and subsequent research provides practical evidence.

Initial findings

- **Increased confidence, motivation and involvement** (pupils and staff!)

The use of handheld computers and interactive lessons has enlivened my teaching and students' learning in incredible ways. Many of the students had never been to an art gallery before and they came away with a very positive attitude. The words '*enjoyable*', '*interesting*' and '*helpful*' occur repeatedly in their evaluations and many found it: '*the best art trip so far... it was a great way to learn/look at the paintings and it made it more fun.*'

A gallery educator noted that students quickly learned how to use the handheld computers '*They responded well to the questions and were immediately engrossed. They worked their way through a lot of information and wanted to and did continue into their lunch break! Their concentration and focus were exceptional and they were adept at typing using the small keyboard.*'

Some, especially the sixth formers, were motivated to return to the Picture Gallery and make further visits to National collections independently to further their research. Baroque art is not the most accessible art for the students to analyse but somehow the handheld computers enabled them to question and analyse works of art in a way that they have not been equipped to do before.

- **Keys to success**

Any programme, tailor-made for a particular group of students, involving intense preparation and planning on the part of gallery educators, Software Company and teachers would be bound to succeed but the evaluation of students, teachers, and independent viewer's pinpoints technology as being the key to learning in this instance.

'The technology holds their attention. They are totally absorbed and focussed on their work. Noticeable was the length of time students spent actively engaged in recording their observation, making notes, commenting and detailed analysis. 30- 40 minutes in front of one painting was not uncommon as they spark ideas off each other, make suggestions and give encouragement. Practical sketchbook tasks such as trying to draw at arms length like Gainsborough prompted lively and interesting comments such as 'it really is difficult' 'his arm must have got so tired' "perhaps he supported it somehow".'

A member of the Gallery Team observing GCSE students in the Gallery July 04

My conclusions from the research

- **Students become independent learners**

Handheld computers seem to enable students to take control over their learning and become active participants in their learning. There are opportunities to discuss ideas, share their thoughts and observations with each other and with the adults around them or they can work alone if they chose.

A gallery educator noted that the use of this technology produces more pertinent questions and individual discussion than would ever be possible in the normal gallery talk setting and concluded that this was because students quickly overcome their shyness and feel confident in their responses. They feel free to discuss answers and issues or work alone if they chose. This comment was overheard when students were discussing expressions in Van Dyck's painting of Samson and Delilah *'It helps if you've read the story – have you?' 'No' 'You should, its good'*

- **Raising attainment.**

Students seem able to access and process what they have learnt and lively and personal practical work is informed by their analysis of the work of artists.

Within a very short space of time I have been amazed to see students undertake further research back at school and be able to give short video presentations about an aspect of Baroque Art.

Students felt they could achieve things they could never have done without the use of this interactive technology as this Year 13 student comments:

'The handhelds were very helpful and I found them as an inspiration. They allowed me to look at the artist's work in great detail in a way I wouldn't have done without them. They allowed me to understand the painting and they showed me how to evaluate paintings and the artist. The background knowledge was a great help and difficult words were explained in detail in the glossary.'

This year 10 out of 14 of the A Level students achieved their highest marks in the Critical and Contextual component of their course and written evidence in their sketchbooks shows a vitality and energy not evident before. In previous years all but the very fluent would struggle to analyse the work of other artists in any depth and written work tended towards description rather than being reflective or analytical; many would copy from books and the Internet with little personal analysis or annotation. The external moderator this year recognised the central place this project played in their work and was able to comment that:

'A visit to the Dulwich Picture Gallery was well documented by all candidates within their journals and on video (although the latter would have benefited from being edited). It obviously provided a stimulating focus to Unit 4.'

Motivation

'This makes learning fun' not words you often hear from teenagers in the context of critical and contextual studies, traditionally a difficult area of study for some. All involved in the pilot project have noted how engrossed students become and how readily they engage with the paintings. Their motivation, enthusiasm and comments exceeded all expectations and the technology makes them *want* to respond to the questions and therefore they have to look closely at the paintings.

'it (the information on the computers) helped me to figure out what the paintings were about and gave me a lot of information to work with to help me understand the paintings and what the artist is trying to say through the paintings. I don't think I would have sat and analysed a painting in such depth if it had not been for the handhelds' writes a Year 12 pupil.

Many of the A Level students are now confident users of galleries as a direct result of the project. They seem to have acquired the necessary skills to question and analyse paintings, as one student notes: '*to take into consideration aspects of the painting I would not really have taken notice of.*' Prior to this project although students would have been encouraged to visit London galleries on their own they often struggled with independent research. They would not have possessed the confidence or understanding to undertake comparative studies as two Year 12 students did over the summer holidays when they compared a Rubens painting of Samson and Delilah at The National Gallery with that of Van Dyck at the Dulwich Picture Gallery.

Final thoughts

From the point of view of the teacher it is the simplicity and flexibility of the Trailmaker software which appeals. Very little prior technical experience is needed to create a Trail leaving the teacher free to concentrate on the content of the teaching material. The gallery recognises that for the programme to have lasting effect it is best done by teachers participating in creating the content of the lesson material and taking the trail themselves whilst acknowledging that this demands a high level of interaction between the gallery and the school and is a time consuming process. As the programme is repeated in the next academic year more emphasis will need to be placed on extending work back at school so that students can demonstrate in practice how their art and design practice is shaped and influenced by the work of others.

The Art Department at Warren Comprehensive School has the challenge of finding ways of enabling students to present their work and communicate their learning appropriately. Will they cut and paste their research into their sketchbooks? Are 'Electronic sketchbooks' the answer? How will they extend and develop their initial research and build upon the enthusiasm offered by this technology? What changes in teaching styles will be needed to facilitate this new form of learning? Can we be sure that teachers, moderators and exam boards recognise this learning? Can students *really* apply their research and analysis to their own art practice?

The benefits of this particular project are far reaching and exciting and the introduction of wireless hubs in classrooms at Warren Comprehensive School will enable wireless technology to be used more extensively within the art department and beyond. Students will be able to access lesson materials, diagrams and images using handheld computers whilst at their desks or workbenches. The possibilities for teaching and learning outside the confines of the classroom, in PE lessons or on Geography fieldtrips for example are immense and cross-phase and cross-curricular links within the locality are a small step away.

In the Art Department increased confidence in the use of ICT has already seen students opting to present work electronically as a web site, or in one case devising a 'Trail' for younger visitors to the Dulwich Picture Gallery. One unexpected by product is that sixth formers for the first time are considering Art History as a course of study at University: a small but significant step towards training the gallery educators of tomorrow. Their future is definitely mobile!