

**Institute of Continuing Education,  
University of Cambridge,  
Madingley Hall.**

**LTSN Project 2003**

**Developing Critical Thinking in Adult Learners 2003**

**Final Report For Projects undertaken with classes in:**

- 1. Archaeological Monument in Its Landscape (Certificate in Local History and Field Archaeology)**
- 2. Certificate in Garden History: Project based Module**

**By Dr T Way**

**Introduction:**

This report follows on from the Interim Report produced 30<sup>th</sup> June 2003.

In the interim report the aims and methods of the project were described in detail. In addition appendices to the interim report included the worksheets completed by both project groups during the class based period of the exercise. This final report does not repeat these discussions or duplicate most of the material presented at Interim stage.

As stated in the interim report the final research based written projects had not been handed in at time of writing in June 2003. These projects have now been completed by most students, and where time extensions have been applied for the part of the work discussing approaches, sources and methods have been requested by the tutor for examination in draft. The tutor is therefore now in a position to comment on how the LTSN exercise affected the final student (and tutor) learning experience.

**Brief Re-Cap of Aims (see Interim report for Full Discussion)**

The overall aims of the project were:

- i. To assist students to recognise the need for critical thinking generally, and more specifically within the subject of landscape (and garden) history
- ii. To enable and encourage students to develop critical thinking skills generally within their work, both implicitly and explicitly
- iii. To specifically concentrate on critical thinking skills within the areas of concepts, recognition and manipulation of data, logic, relevance, assumption and counter argument, principles and evaluation. To enable students to place these within the framework of their own studies these were further structured into construction of arguments, drawing conclusions and creating further theoretical generalisations.

These aims were then modified and implemented with specific relation to the courses named above:

In particular the research based nature of both of the courses, combined with the interests of the students, emphasised critical approaches to data and data collection and understanding.

Strengths and Weaknesses of these aims were discussed in the Interim report.

**Additional Comment on Interim Report:**

Re-reading the strengths/weaknesses contained in the interim report several months on, I am struck by the fact that my memories of the course (and the students memories as stated on their PSLs) do not retain or reflect any of the weaknesses; only the strengths! The dynamic and discussive nature of the classes appears to predominate in my memory – rather than any problems with limited class time.

**Final Report Findings**

In the interim report it was noted that the project appeared to have been a great success with approach to study and to study materials being quite different to that usually encountered. The final report agrees with the conclusions reached in the Interim report and further emphasises/adds the following points:

**In Class Findings:**

Students showed strengths in evaluation, assessment and integration of different ideas and different materials, as well as developing critical awareness of differing methodologies within the classroom context. There was lively classroom debate and discussion on these subjects and a very sophisticated approach to the subjects being taught.

The level of class participation was also exceptionally high as students learnt very quickly to apply critical evaluation of the methods and content of the material presented by the tutor. Once the tutor had become accustomed to this it proved a very energising force within the two classes.

Although there was no control group against which to judge levels of critical thinking amongst the students: it should be noted that the tutor had taken a high percentage of the students in different classes prior to the project and was able therefore to note differences in their approaches during the LTSN project, in addition to noting the development of others during the course.

**Worksheets Findings:**

As part of the project the students were asked to fill in worksheets between each class meetings. These worksheets continued to emphasise critical thinking outside of the classroom context. *A copy of the worksheets for each class/subject was appended to the Interim report and they are therefore not included again here.*

The students were encouraged to bring the worksheets in to the following class and they were usually discussed during that class (although this was not the case with worksheets 3 in one class, and the final worksheet 4 in both classes).

The students were then encouraged to keep the worksheets and look back on them during the research and writing up period of their work. (NB: This will now be returned to them as 'classwork' along with their final marked projects).

The worksheet questions asked the students to think about such areas of research as conflicting evidences, degree of reliability, explicitness on methodologies and sources in other works, and explicitness on methodologies and sources in their own work.

All but one student filled in all of the worksheets in with care, diligence, and a great deal of thought. The degree of thought that went in to them was a surprise to the tutor and demonstrated that the students were responding well to the exercises despite the extra work involved. Critical awareness was demonstrated by all the students at this period.

**Final Student Projects:**

Of the final projects received all demonstrate the impact of the exercise on Critical Awareness, although (as might be expected) some are more explicit about it than others, and some appear to have implemented the approach to a greater degree than others. At the most explicit extreme are those projects which contain critical discussions of methodology and/or discussion of source materials which demonstrate an awareness of differing reliability of source materials.

Three students in particular appear to have developed strong critical awareness and demonstrate this by both the approach and content of their work. Two further students demonstrate an awareness in either methodology or sources (although one of the projects concentrated upon very 'factual' material); whilst one student (who has an extension and has therefore only handed in outlines) does not appear to have made explicit a critical approach; although this may be developed further in the final piece of work. It is interesting that this student is from a high level academic science background and has often stated that they found the move from result description to discussion difficult.

In addition the comments of the students on the Personal Statements of Learning (PSLs) indicate that they felt that the course provided them with a wide range of experience and skills which would enable them to carry out research in a confident manner. Whilst specific mention is not made of the critical exercise comments on the approaches to research and sources would seem to indicate emphasis on this aspect has been successful.

### **Observations for Future Projects**

As highlighted in the Interim report, it proved difficult to 'assess' the success of the exercise in an objective way due to the lack of a 'control' group of non-participants. It might be suggested that future exercises of this nature could be 'controlled' by looking at essays produced by the students in previous courses/years. However it would still be difficult to assess the impact of continuous learning and development on the student with/without the exercise.

In this instance the production of worksheets combined with the final report AND the experience of the tutor in teaching some of the same students previously allowed a degree of objective as well as subjective measurement of success.

These comments should be re-visited if future projects of this type are proposed (which is recommended).

### **Conclusion**

Based on the in-class experience and the early results of the worksheets, the Interim report concluded that the project had been a success in its aims of developing vital awareness and patterns of critical thinking in adult students. Following the completion of projects by the majority of the students, and the completion and handing in of all of the worksheets, this judgement can be confirmed.

All students have demonstrated a strong awareness of the need for, and development of, critical thinking during the course of the project. In addition, several have gone on to integrate this fully into their project work, whilst others have integrated it in a more select way.

In addition, the inter-action and discussion generated by the exercise resulted in very positive and pro-active student participation within the classroom context. This in turn led the tutor to re-evaluate their teaching methods in order to enhance and further develop this student based learning experience. Classes became more mentally creative and rewarding for both tutor and student with a positive feedback on learning and the learning experience.

The success of the project can perhaps additionally be 'measured' by the fact that all the students have or will shortly complete their projects for the class and all are intending to continue in active learning by enrolling in further classes.

**TW 3/10/03**