LEARNING FIELD ARCHAEOLOGY
Student Integrating Methods in Tertiary Education

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Abstract
The aim of this paper is to present a pedagogical development project which focuses upon student integrating methods for learning archaeology in tertiary education. The project was initiated by the teachers of the department because of the gap experienced between academic reflexivity and archaeological practice during our field courses. The students seemed to suffer from cognitive overload when they suddenly found themselves in the field so in order to bridge the gap we wanted to develop methods which would facilitate the students' verbalisation of their field experience and observations, and which would improve communicating about it during field work. The results are that students become more active when the opportunity to develop a voice starts early in their education and they become more visible as actors in their education. A general improvement in the learning environment is noticed, too. We position this project, its results and potentials in a progressively emergent international discourse on pedagogy in tertiary education in archaeology.

The aim of this paper is to present a pedagogical development project in archaeology. It is a project that focuses upon student integrated methods and the positive effects such methods have on the entire learning environment.

A *development project* is, generally speaking, a project aimed at the improvement and renewal of specific educational issues and one which also aims to disseminate new findings to other settings (Murphy 2003). The general theoretical and methodological approaches of this project can be found in the discourse of *border pedagogy*, and a number of qualities have also been found in theories connected to *action research*. We will begin by presenting some background information related to the project and then move on to the pedagogical methods developed, their context and effects, before closing the paper by returning to issues related to some general, but essential, aspects of the discourse on pedagogy in tertiary education. Needless to say when attempting to situate our development project in a wider structure we constantly relate to issues both inside and outside our own everyday situation, in order to highlight vital aspects of the rapidly expanding discourse on pedagogy in tertiary education. On the basis of our experiences of a pedagogical development project we therefore argue that didactic quality work ought to be integrated in the structures, in the regular practices, and as such also in the financial planning of academic education.

Background
Archaeology is an academic discipline which integrates aspects of *field training* and as such shares some formal organisational traits with disciplines like medicine, psychology and pedagogy. For this reason archaeology has qualities that are found both within the natural sciences and the humanities as well as the social sciences. Archaeology is usually situated within the structure of the Faculty of Arts but its specific character makes archaeology a discipline difficult to situate within traditional structures of academic organisation and whilst scientists have their labs and linguists their language exercises, as a substantial part of academic education, archaeology is organised according to the resource demands of a humanistic discipline, i.e. history without any field training as a constitutional part of the

discipline. Furthermore archaeological education in Sweden is also organised on the basis of free-standing courses and not as an educational programme.

The constitutional traits of its character also have certain consequences which conflict with its educational organisation. One problem specific to archaeology is that there has been one type of critical and reflective pedagogy for the theoretical courses and quite a different traditional pedagogy for the more practice informed field courses, the latter in the vein of an uncritical, non-reflective pedagogy built on the handing down of teachers' knowledge, and through the implementation of directives on how to dig a square in the field. Another aspect is that, in our experience, the most vital metaphors of archaeology amongst students are the two of "digging" and "finding". This attitude towards archaeology is communicated through powerful media like television and films so it is profoundly embedded in society and in the consumers of media at large, not only amongst new students in archaeology.

In the eyes of scholars, however, archaeological fieldwork is not just about digging, or about the dilemmas of how to dig a square or excavate a mound in accordance with appropriate antiquarian standards. Instead our focus is on the critical processes of planning the work, in observation, the identification of structures, the critical selection of information, and on documentation and interpretation in the field. Archaeological field work is therefore a rather long chain of complex procedures and assessment work.

In order to support student learning in this elaborate process a shift of focus is required which puts demands on both students and teachers. Not only are the teachers required to be able to make learning possible but active students are necessary too and this is after all what we as academic teachers aim to achieve in academic education. One of the greatest challenges for academic teachers in the framework of field courses is to change the "archaeology-is-digging" attitude in students and such an approach to learning field archaeology demands a different kind of pedagogy. Fortunately achieving the goal of generating active students is something that the department shares with the Swedish authorities at different levels of organization and the Swedish state has, during the past 15 years, provided financial support to the development of this kind of higher education. This is the way we were funded too.

Objectives

As the title of our project *"From receiving to performing – learning field archaeology"* suggests there are a number of various approaches to learning professional archaeology at university. On the one hand there is the traditional style of teaching where the teacher passes on his or her knowledge to the student through lectures and instructions in the field and on the other hand there is a range of student integrated or student centred methods which seek to approach the learning process as an *activity* performed by the learner him/herself.

Working with pedagogical issues in tertiary education is, however, still rather unusual in archaeology but the field seems to be expanding. In our particular case the development of student centred methods was certainly aided by the fact that this pedagogical project was financed by *The Swedish Council for the Renewal of Higher Education* (2003-2005). The project seeks to test and evaluate methods in co-operation with the students themselves and we have searched for, and found a few good examples of published teaching methods, assessments and evaluations to which we can relate our own aims and which we believe will provide a basis for further dialogue for continued assessment work. Our primary aim is that a general pedagogical development is established at many different levels and that quality improvement in the learning of archaeology will be attained. The official policy of the Council of Higher Education and other authorities is that results from quality improvement, and the methods used in order to acquire this improvement in tertiary education, are to be circulated to other practices and disciplines.

In the following section we would like to present the different methods, results and consequences of this project. This will also include a presentation of how we record, publish and disseminate our action research and development work; how we relate to the publishing policy within archaeology and to pedagogy in general; and how we relate to the scholarship of teaching. Needless to say problems and potential issues of significance will also be deliberated.

APPROACHES

There are two general strands of theory and methodology behind this project, namely *action research* and *border pedagogy*. We will start by providing a brief description of how we relate to each of them.

Action research

According to a survey carried out by Patrick J M Costello (2003), there are many accounts which explain what *action research* is but a number of general characteristics can be discerned; i.e. its practical nature, its relationship to practice, its focus on change and its concern with participation. The basic methodology of our specific project is explicitly in line with that of action research (Lewin 1946; Hollingsworth ed. 1997; Costello 2003; Rönnerman 2004).

One significant feature in action research is that of critical reflection (cf. Costello op.cit.: 1ff; cf. Berlin 2004) and another attribute is that action research tests strategic development in academic contexts (Beaty & Cousin 2003). There is, however, one other aspect we deem vital to our own context and that is the aspect of *change* because this also implies that it contains the element of improvement. This matter is dealt with in detail by Rosalie Holian (1999) who used action research in her own organisation and as such had a range of aspects to work with. One of these is what she calls the *mistakes* experienced throughout the process of improvement, which implies that we have to cope with the imperfections, as well as recognise that we learned from them. Needless to say the successes are, almost always, much more apparent than the imperfections but according to Holian an investigation or argument would improve its level of authenticity if the mistakes were openly declared and analysed in the improvement work. Furthermore colleagues interested in the processes would also benefit from knowing what they should avoid (Holian op.cit.).

This process of trial and error is seen as an essential element in development projects but our experiences are of another character, size, and our mistakes are of a different nature. These will be discussed in their context later on in this paper.

The methodology of our project is close to that of action research but at the same time it differs in some respects. For example in action research the researchers and practitioners are usually situated in different groups but in our case the researchers and practitioners are in the same ones because we, as academic teachers, make enquiries into our own teaching practices as well as into the discourse of education in archaeology.

There is one method where we are definitely in line with the methodology of action research and which is vital to action research and that is the use of journals (cf. Rönnerman 2004; Berlin 2004). This will be discussed in more detail later on but to continue with regards to the details of working methods we would like to present some other methods and strategies because they too have contributed to the project work and its results. The methods are to be understood in terms of their various aspects of context and will be discussed in relation to both academic and educational processes in the present and with regards to their future potential.

Border pedagogies

The pedagogical background to this project is formulated as student centred learning, a methodological practice found in *border pedagogy* (Cook 2000; Hamilakis 2004), a term supposedly used to describe its untraditional character. Its unconventional character is, amongst other things, defined through a change of focus, which includes alternative relationships to the traditional hierarchical ones between teachers and students, teaching and learning. Its theory and practice has its roots in the politics of difference-literature, which means that critical approaches such as feminism, postcolonial and postmodern theory are crucial to its development (Freire 1970; cf. Conkey & Gero 1997; Conkey & Tringham 1996). Vital to this perspective is not only what to teach, but also *how* to teach, and not least, how students learn (Cook 2000: 13 ff with ref.; Park 2003: 184).

Learning in this instance calls for active involvement by the learner. This is attained through *reflection* along with *communication* between learners, and this in turn supports the process of growing into a professional knower (Tompkins 1991; Lövkvist & Hjørungdal 2002; 2005). Methods in progress build on *modes of communication, verbal and non verbal, between students and between students and teachers, and on the documentation and critical evaluation of the methods tested*. The methods chosen are believed to empower the students so that they dare to talk about and discuss their observations, ideas and thoughts in the course of the learning process, and are designed to help them to grow confident with regards to their own judgments and choices. One broader aim is to help students develop a voice in the learning process that will gradually lead them into professional archaeology.

Border pedagogies give students the chance to get more personally involved in their education and the process of learning, and this has emancipatory potential (Cook op.cit: 14; cf. Park 2003; Hamilakis op.cit.: 288). Student journals are often used as a device in education informed by border pedagogy and this is a device used in action research too. These were also used quite extensively in our own attempts at developing student integrating methods.

STUDENT JOURNALS – OUR IDEAS AND EXPERIENCES

Initially the idea was to test the use of student journals during the *field courses* because the development project was initiated in field courses but we soon found that it was worth testing the writing of journals in other courses too and in the courses with comprehensive writing exercises the use of journals has been the most extensive. Here we will show how we have used journals in the field and in our theoretical courses and we will also discuss how it might be possible to develop the use of journals further in both these instances. The following examples have been taken from different courses and focus upon quite different aspects of the use of journals. It should be noted that there are two different genres of journal, namely the more traditional field diary (also used by our department prior to the project) and the student journals used in field courses but all examples are taken from the latter because the more traditional field diaries primarily provide descriptions of the field work procedures and do not contain any critical reflection or explanation about the decisions made during the process of field investigation.

We will start with examples of the use of student journals from the A-course (1st term) and end with examples from the D-course (4th term). The examples have been taken from different years and terms within the period 2003-2005.

Example from the 1st term (A-course) level

The field course held during the first term is primarily an *excursion* intended to introduce new students to the practice of visiting sites. They are also introduced to the practice of learning how to make observations and descriptions of sites and monuments, in accordance with

established antiquarian standards, as well as being an exercise in how to document the observations in written form.

From this course there is only one example of a journal from one team of students. At this level the use of journals has not really been developed at all.

On the first meeting with field survey
"We were asked to survey burial fields, again by being subjected to things we were not familiar with. Later we were given the task of finding two sites within a certain area. Here our knowledge was tested. With a compass we were thrown into a densely forested area and left with the task of finding both the sites and the bus home. We were forced to use our senses and our limited knowledge."
(A team of two women and one man, in their twenties)[1]

Examples from 2nd term (B-course) level

The field course at this level is concerned with the dilemmas of how to *plan an excavation*, how to carry out investigations in the field, and last but not least about how to make observations, describe and document the work process in the field.

Examples here are taken from students at 2nd term level (B-course). Their use of journals in the spring term of 2005 was not abundant but varied. Here is a selection:

Attitudes to initial field experience- excavation
"The first three days I was very careful and almost afraid to destroy the structures. I dug cautiously, brushed everything and asked too much, but little by little my self-esteem grew and I started to dig until I was given a warning about how I was cutting the structures!"
(Male student in his thirties)

"In the beginning you excavate very carefully, trust the teacher blindly. You do not dare to use the trowel properly and study every stone you find very carefully to see if they have been worked on by humans. Maybe you have very high expectations about the digging itself, you expect to find something, at least."
(Female student about 30 years old)

"You soon got to know who liked this kind of work and had a feeling for it, but generally speaking we all co-operated with each other and when the evening came it felt sad to leave work."
(Anonymous)

Cooperation in the field
"My colleague was an excellent one and so the work went well. If I had worked with another it might have looked different because some of them became a little disgruntled when the weather got warm or wet."
(Anonymous)

Ways of dealing with contradictory information from the teachers
"I found that I preferred the different answers given to my questions by the two teachers because it made me reflect and draw conclusions on my own. This provides more space for one's own opinion about field work."
(Female student in her twenties)

Attitudes to the use of journals for 2nd term (B-course) students
"The journal helped me in two ways; first it worked as a starting motor …; second it is like gold to the documentation of the excavation to have a well written journal."

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[1] All quotations from journals and other archive material have been translated from Swedish by the authors

(Male student in his thirties)

"My team wrote in the field diary on the bus home every day but I did not see anybody else writing."
(Anonymous)

Examples from the 4th term (D-course) level

The use of student journals during the final term (D-course) worked extremely well. In a pre-arranged exercise, two (or three) students were teamed up to carry out an analysis of one of the discourses in which archaeology is brought into play in society; for example it might be an analysis of a museum exhibition, a museum homepage, or an investigation into how education is organized at a number of different universities; about publication policy and practice, to name just a few. A general theoretical point of departure is usually taken from Pierre Bourdieu's concept of field, a rather flexible term, and as such continually being redefined by the student teams themselves. The second stage of this teamwork is to write an article based on their findings and the format of the paper has to be in accordance with international scientific standards (cf. journals like World Archaeology or European Journal of Archaeology). Cooperation is of particular importance during this task, along with the process of negotiation on how to organize the collaboration. It is a task restricted in time and the work load is rather heavy. In addition to this the students are asked to write journals about how their work and the collaboration are going, i.e. if they meet with any difficulties and how they solved any problems that arose. A few examples on different aspects of cooperation can be found in the following journal quotations:

Cooperation
"Our teamwork is working well and this feels good because we have never collaborated with each other before."
(Team with two female students in their twenties)

"The cooperation has gone well and without any problems other than those we have had to face together."
(Team with two male students: one in his twenties and the other in his thirties).

"This collaboration has gone very slowly …but today we are working together again and will get something done… For a while we were a little worried about the distribution of tasks. It felt like some of us had too much to do while others thought that everything had already been said about the issue. But this turned out well in the end and new aspects are being taken into consideration…"
(Team with two male students and one female student in their twenties and thirties)

What we learnt from testing journals in the different courses

We tested the use of student journals in a variety of field related and theoretical courses. From this we have gained information about some critical points in a learning process, i.e. reactions to initial field experiences; how to cope with conflicting information; how to make one's own decisions in a field situation; and also on the actual use of journals during work procedures and as part of the learning process.

Some general conclusions about the use of journals at the D-course level were that the journals help the students to reflect on the work process; i.e. why do we do what we do, how, and how do we make decisions? One student also said that one becomes conscious about the changes taking place during the process and also about field work procedures as well as the different roles people played in the teams, and even about co-operation and communication. On their path to a more *reflective* attitude in the learning process most students do get some use out of the writing of a field journal because they have to put their observations into words,

confer on what to write, and therefore even about what to do in the field, for example how to plan, dig and draw and also decide what to record, how, and why. Some students, however, did not see the point of using the student journals or found them to be nothing more than extra work.

Student journals have been used more regularly in the theoretical courses than in the field courses and this is an issue in need of critical discussion and further assessment. What is clear, however, is that the completion of student journals was much more difficult to implement in the context of the field courses than in the classroom courses. There might be any number of different reasons for this but according to some of the students they felt they did not have the time to write in the field because the digging, observing as well as the documenting of finds and structures was more than enough (oral information from student Annika Bünz, autumn 2005).

This is obviously one of the *weaker points* in the process of developing the use of journals. Our conclusion here is that we have to find better procedures to help the students better understand the potential use of journals and improve the organization so that they are better prepared to grasp the aims and prerogatives of journal use during field work. Even though the journal material is not in abundance at present it has already provided us with a multifaceted picture of how students think about field work while they are in the process of doing it, and it tells us a lot about the use of journals in the different kinds of courses. It also gives us some ideas about which questions we might develop in the future, and how we should organize the use of student journals in a better and more effective way. One challenge is to find improved working procedures that will enable us to implement the use of journals on a more permanent basis.

FURTHER EXPERIENCES IN STUDENT INTEGRATING PEDAGOGY

Although the use of student journals is new at the department in Gothenburg and not yet successful in all aspects, student integrating pedagogy is not entirely unknown to us. Along with our senior colleagues we have in fact tried a few methods which we would like to present. We would also like to mention some earlier experiences in order to integrate them into a general and critical reflective discourse on student centred pedagogy.

Classroom research

This is a method integrating both teacher and student in a cooperative way (Cross et al. 1993), and the experiences are on the whole positive. In the classroom research procedure, students give answers to questions posed by the teacher and the teacher surveys and analyses the answers in order to assess and develop specific issues pertinent to a specific course or the over all general learning process. Classroom research has been tested in several classes with various and mixed results. This is a methodology which includes the student in the reflective process and which helps the development of a student's voice in the critical discourse on educational development. The exercises, however, are usually performed individually and in written form, so these might be somewhat unconstructive in that the student does not practice how to *speak about archaeology* and its context, and many students certainly need to learn how to do this.

The method of classroom research might, in other words, be as much for the teacher as for the students. However, on the subject of classroom research, Bruce Kochis writes;

"Classroom research is based on the principles of "naturalistic" inquiry. In addition to being context-dependent, it is interactive, multiple-focused, interrelated, formative, and concrete. I have often used the words "conversational" or "artistic" to describe it, as opposed to the "technological" approach of traditional research."
(Kochis homepage)

We do, however, acknowledge that the students benefit in that it gives them an opportunity to transform their experiences and thoughts related to a specific issue or process into written structure and as such they are forced to reflect upon the process too. The teacher benefits in that he/she is given the opportunity to get a glimpse of the students' processes of learning in a specific situation.

We have also attempted classroom research in connection with the writing of more extensive papers at B- and C-course levels where questions about the writing process have been asked in a variety of ways. The upshot of these has always been related to what the learning process is like.

Examples of Classroom Research from the 2nd term (B-course) level
Students are asked how the work with their papers has contributed to their knowledge in archaeology, and to their knowledge with regards to the *writing of scientific papers*.
All the answers from this course are anonymous.

"One learns to have a more critical viewpoint with regards to the reading lists and one learns to question the theories."

"One has really had the chance to go into an issue of interest to oneself, and this makes it easier to take in what you read. One has read books one otherwise would not read."

"It definitely is much more difficult than one thinks. How to write, took a long time to learn."

Examples of Classroom Research from the 3rd term (C-course) level
The questions about classroom research at this level are of a quite different character and deal more with the *tutorial process*. On this course students are writing an extensive, individual paper on a chosen issue and they are asked to work with the classroom research questions in teams of two or three and answer questions about what a good/bad tutorial is like. A selection of examples is given here and all the answers from this course are anonymous.

"Contact (between tutor and student) on a regular basis… Tutor and student are equally involved in the discussion of the paper."

"A good tutorial is when communication works… A bad tutorial is when the tutor steers too much or too little; lack of communication…"

"A good tutorial is to have undisturbed time together, without other people or ringing phones… Problems should be solved as soon as they arise…"

Communicating in the field, developing a voice - Methods of potential
During the course of the project we tested a range of additional methods and strategies which were designed to make students more active in their learning process.
One strategy has been the development of *teamwork,* and as such *group dynamics*. In this respect we invited professional pedagogues from the Department of Pedagogy at Gothenburg University to teach us about group dynamics and role play (cf. Forsyth 2006). Teachers and students were taught together at this special lecture, which was a very useful experience for all of us because it taught us something about consciousness and about roles and positions in teamwork.
Another occasion which worked with the co-teaching of teachers and students was when Charles Goodwin taught us something about how we can develop studies related to *communication* in the field (Goodwin homepage). In this instance both the teachers and the students filmed the way archaeologists communicated in the field and the films were then

used for analysis by a number of student teams. This method is still at a very early stage but it seems to have merits and potential as a tool to be used in the learning of cooperation and teamwork in archaeology, even for learning how to be aware of teamwork dynamics. How do you use your body language when communicating with colleagues in a field situation? Do you include or exclude anybody in the discourse through your choreography or gestures?

Peer teaching is another important strategy being tested where versed students teach and coach new students and concomitantly deal with their own experiences (cf. Falchikov 2001). Peer teaching encourages many students to be more active in the education process and also helps to smooth contact between students at different stages of their education. Some students are more apt to listen to their peers than to the teachers because they feel closer to them and feel that they share experiences. This is particularly apparent when it comes to experience in the field. This matter seems to be of special import because fieldwork is not just about digging a square in the ground or finding things. Being in the field is very much about communicating, cooperation and deciding together about the observations being made, about formulating them verbally and concisely, and about how to document them appropriately.

HOW THE PROJECT EVOLVED – shifts of focus through time

In an attempt to provide deeper insight into our working process we would like to mention in more detail how the project progressed from the time it began.

Due to the fact that none of us are pedagogues by training (archaeologists are not usually; we have only 30ECTS or maybe a little more in pedagogy), it was necessary from the beginning to look for, and read as many good examples of teaching and learning methods as possible before trying to position them in the archaeological discourses. The project group started out with plenty of time to think, discuss and explicate its aims, taking notes from the discussions all the time – we defined this as a slow project.

And this has, very much, been a "slow project." Time has therefore been a positive attribute in the carrying out of this project and searching for and reading pedagogical literature has been paramount throughout the entire project. It was particularly intense at the onset and then again during the concluding phases but needless to say it has also been necessary throughout the planning of this present article.

During the in-between phase focus was placed more on the matter of achievement and at this stage the students played a more active role in the project too. This was the time to try out the new methods we had found about learning, along with an initial testing and evaluation of the methods. Experts were brought in, pedagogues, as well as the linguist Charles Goodwin, in order to show us and test with us methods and strategies previously unknown to us. A SWOT analysis[2] was carried out at the half-way mark and the results, in general, were encouraging. However, the matter of how to integrate students more actively into the project work was not quite solved and so half way through the project representatives from the Council of Higher Education paid us a visit and gave us some constructive advice, support and modification proposals.

The closing phase of the project was to be more evaluative and to be spent on the planning of future strategies which would enable us to keep up this high pedagogical standard. Åsa Berggren who worked with reflexive archaeology along with Ian Hodder at Çatal Hüyük, in Turkey (Hodder ed. 2001) paid us a visit towards the end of the project. Berggren was the official reference person in the project and she has experience with specific methodologies on reflexive archaeology in the field. Her visit provided us with the chance to discuss these methods and compare them with the methods tried and developed by our project.

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[2] SWOT = Strengths - Weaknesses – Opportunities - Threats

The methodology of reflexive archaeology is similar to some of the methods we tried in our field courses and we wanted to compare the two to see if we could benefit in any way from the methods derived from reflexive archaeology. Reflexive archaeology shares some common ground with border pedagogy, i.e. the practice of critical reflection and documentation being perhaps the most important points. Our conclusion, however, is that reflexive archaeology is too detailed and time consuming for an undergraduate field course, with only one week out in the field. We therefore decided to focus on other methods which encourage communication, critical reflection and documentation but which needed less time.

RESULTS - Record material and less tangible results

Clearly our new won *consciousness about border pedagogy*; its practices and potential with regards to the integration of students in their learning processes has been an extremely beneficial development but our experiences and insights, as well as some drafts for potential methods in our context and to our assignment at the university, are the most obvious results. There are also several other *categories of results* which are records of different kinds like the minutes of the meetings, the log book in which all the events throughout the project period are noted, the student journals and working papers on action research, the information leaflet for the students, and the lists of pedagogical literature for both the students and teachers. We were also fortunate enough to be able to purchase and create a small pedagogical library of our own.

We would like to give a glimpse into the productive process we have been through. This is presented here in the form of a number of quotations from our abundant documentation material.

When we received the news that we were going to be granted funding for the project, the project group organized its first meeting in November 2002. In the log book we wrote;

"The first meeting took place on the 4th of November 2002. Minutes were taken." (Log book)[3]

Some more examples from the log book
"Information for the students is ready for distribution." (Log book primo March 2003)

"Documentation from the students' own work, along with their reflections on their learning process starts to arrive." (Log book October 2003)

Besides the immense number of less tangible but effectual side effects in our educational setting, the results of the project, generally speaking, consist of a wide range of record material and there is also reference material in Goodwin's documents. Furthermore we have quite recently started observing communication in the field and this primarily focuses upon the dynamics of verbal communication as well as body language; communication within student working groups, and between students and teachers. In our observation projects we tried methods suggested to us by the linguist *Charles Goodwin*, who works with, and films, archaeologists' ways of communication in the field, and from the archaeologist *Joan Gero* who studies gender in field archaeology (Gero 1985). We have also carried out some initial testing of these methods at the same as we started writing down our own observations about how the students teamed up and communicated during their field training. The results, so far,

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[3] All quotations from log book have been translated from Swedish by the authors.

show the most contrasting constellations, hierarchies and ways of communicating within the student working teams. An important aspect is the role of the body language in communication. The students realised that this was a means by which the teachers sanctioned the students' negotiations and choices about how to work in field situations (oral comm. by Annika Bünz, autumn 2005; cf. Goodwin's record material).

A notable result of the conscious and deliberate work within the learning environment is an elaborated proposal in written form, from the students, on how to organize an introductory day about teamwork for new students (A-course level). Teacher participation and peer teaching, along with a presentation of issues related to group dynamics, are components of this 'Opening Day', a day which also focuses on the experiences of higher level students. This provides us with insight into our attitudes towards learning, and gives us ideas about how we would like to approach and assist the long processes of turning students into growing professionals. Team work facilitates communication and the students' ability to formulate and verbalize their thoughts about archaeology and give us some insight into how they learn the subject. The opportunity to develop 'teaching teams' is a result stemming from the active work with student teams and from communicating about and throughout the tasks performed.

A general and important result is that we got a better grip of our D-course. We are conscious of the fact that most of the D- course level projects hold potential with regards to organising teamwork. The student groups have been active in meetings with the project group; they have been deliverers of concepts for student integrating strategies in undergraduate teaching. Furthermore some students joined us at two international conferences (EAA in Lyon and in Cork); one student co-authored an English article (Hjørungdal et al. 2006). Foreign colleagues were to some extent surprised that students were active in a conference setting like this but they were also encouraging. Responses from colleagues are also a kind of result and responses to our work have been forthcoming on different occasions, both inside and outside our setting.

THE PROJECT IN A WIDER DISCOURSE ON PEDAGOGY

We would like to say a few words more about how we record, disseminate and publish our action research and development work; about how we relate to the scholarship of education and to the pedagogical discourse of archaeology. Prior to this, however, we would like to attempt to situate the development project within our own local tradition in Gothenburg.

The context and setting of the pedagogical project

It might not be coincidental that the pedagogical project was initiated, designed, applied for, and carried out at the Department of Archaeology in Gothenburg. We think there are some connections in time and space to be aware of. There is actually a long tradition of critical reflection on teaching and learning, originating in the department's first professor, Carl-Axel Moberg, who early in his career trained as a museum pedagogue long before he held the chair at the university. Furthermore he was also widely recognized because of his radio programmes on archaeology. Since then there have been and still are many lecturers who have taken an interest in pedagogy and in the use of innovative and unconventional teaching methods. For example is it a well developed practice to teach issues on how to talk about archaeology and how to give oral presentations for student peers. Unfortunately the majority of our colleagues have not published work related to their pedagogical assessments or experiments carried out at the department throughout the years. However, fragments of work informed by innovative methods are presented in a couple of collections of papers written by students who have tried new methods in their learning processes (e.g. Cornell et al. eds. 1998). Amongst other things the students undertook the task of surveying and analysing established Scandinavian periodicals; by scrutinising the frequency of articles published by male and female archaeologists respectively; by analysing the languages of the articles in

chosen periodicals; by surveying which issues were treated by whom and there have been many other themes including dealing with the matter of cultural resource management. It is worth mentioning also that there has been some professional *feedback* on this collection of published student papers from Håkon Glørstad (2002) who analyses constructions of fields in archaeology, according to Pierre Bourdieu's notions of field. The fact that the students' work is found to be of relevance to Glørstad's substantial scholarly thesis offers another and different dimension to academic development work. This is clearly a good example of how students can be active and visible in their own education and it also shows that they can, with good supervision, define new fields of archaeological research on their own and produce work at a level of excellence as well.

At the Gothenburg department this kind of attitude to learning has in many ways been present for quite a long time because it has continued to be handed down by Moberg's successors. By instigating this recent pedagogical development project we therefore did not invent an entirely new discourse. The 2003-2005 project is, to some extent, better defined as our current strategy to maintain high standards and it also represents a contemporary way of carrying on the critical discourse on archaeological education. The important difference between earlier endeavours and this development project is that we have started *to learn a pedagogical language* which strongly supports and affects further analysis and assessment work. Strategies of quality assessment and pedagogical development might therefore also change in the future and find other and different designs appropriate to future projects.

Dissemination and future encounters
In the process of spreading information about our specific project on the matter of student integrating methods we first disseminated methods, like the use of journals, to other and more writing desk linked courses. Other strategies that we followed include participation at conferences, home and abroad, twice as coordinators of sessions and with brief survey articles as well as one problematizing paper in English (Hjørungdal et al. 2006). Presentations of the pedagogical work received positive response. Colleagues find it quite remarkable because it is far from common practice to work on pedagogy in tertiary education in archaeology. All development of critical pedagogical strategies and devices could be dealt with by the European Association of Archaeologists because they work with archaeological training in field archaeology and other vital aspects (EAA homepage; cf. CD on Archaeological training). This would at the very least entail a quality improvement strategy aiming to reduce the culture clashes often experienced between critical academic and instrumentalist field archaeology respectively (cf. Aitchison 2004).

The discourse on pedagogy in tertiary education is rather new and limited in archaeology, although it is certainly making progress and it is a growing field with potential too. Most papers published say something about student integrating methods but some of them also take up practices of presentation. As such we find that we are among the representatives of a rather unique standard and wish to keep this up as well as develop into still better and still more critical learners and knowers of learning processes in professional archaeology.

On this point it is currently general practice among many of our peers to connect to the discourse on Scholarship of Teaching. This developing discourse is about how learning and knowledge of teaching in academia can be both demonstrated and assessed. The specific scholarship advocated here is conceived of as a process of reflection on experience-based knowledge together with research-based knowledge of teaching (Kreber & Cranton 2000).

The general consequence of the 'Scholarship of Teaching' is that the academic teacher will have to document, and often publish, her or his assessment work. Presently there seems to be something of a paradoxical situation, as instrumentalism seems to go hand in hand with expectations of high quality standards and development work in academia. The development

of the 'Scholarship of Teaching' is expanding and it puts demands on the individual academic teacher to work with assessment and quality on a permanent base. The question is if there are enough resources available for the individual department to be able to live up to the expected standards. It is also an important factor that the Bologna process is to be implemented within a few years, at the same time as the universities' economical situation seems to remain unstable (cf. Hamilakis 2004).

One explicit strategy aiming to keep up with high educational standards is simply to apply for more money from the research councils and similar authorities. A good idea would have been pursue collaboration with other universities, especially abroad, and with colleagues who have published their methods of student integrating practices and other types of assessment work on the academic education of archaeologists.

CONCLUSIONS

Pedagogical tools have been identified, critically evaluated, developed and extended through the development project presented. One important conclusion to the further development of border pedagogy is that it is worth while expanding the use of student journals. For geographer Ian Cook, as referred to above, it took a number of years of trial-and error to arrive at a well developed and well working concept of how to use and implement aspects of border pedagogy. We feel that Cook's account of the journals is in many respects similar to our own process of learning and developing pedagogies. Border pedagogies are remote from the pedagogies we became acquainted with throughout our own training many years ago.

What has been new to us is the knowledge of the potential of extensive use of student journals and the opportunity to evaluate and integrate experiences from this and from other student activating methods of learning. This was due to the fact that the financial prerequisites suddenly were there with the project. An invaluable factor throughout these three years has been the opportunity to learn pedagogical terms and methods and discuss a wide range of pedagogical issues and strategies. A more tangible result which developed out of this is the explicit pedagogical conversation in our daily setting. Through the implementation of tools for professional evaluation, like the SWOT analysis and assessment, we have also learned something about what needs to be improved, in particular with regards to finding better strategies for students to accept the extensive and systematic use of journals and also with regards to finding strategies that allow us to implement them strictly, including scheduling the use of journals.

Are there other methods that work as well as the student journals when it comes to student integration? One method worth exploring further is that of peer teaching. One reason for this is the positive response to this from some of the students. Classroom research too, is another effective way of hearing the students' voices and their opinions about specific issues.

We would therefore not favour the use of student journals at the expenses of other, complementary methods. A complementary use of several methods which would allow student voices develop would be preferred by us.

Our project started with a small grain and developed into a fruitful discourse on pedagogy in archaeological tertiary education which benefited our entire learning environment.

We discovered that the pedagogies developed for field courses in undergraduate studies were interesting, not only to theoretical indoor courses, but to the tertiary education of archaeologists at many levels. Furthermore it is our wish that development work on this project's standards were an integrated and undeviating part of all tertiary educational work. At present quality work is still optional to individual university teachers but the changing learning environment seems to make this work obligatory. One of the strategies we will continue with, in order to keep up educational assessment, is simply to apply for more

funding. The present structures do not, however, make room for the extra work load needed to keep up the standards wanted by university teachers. One imperative issue to the ongoing discourse is the development and implementation of pedagogical leadership at the departments and in the different faculties because it would be the Head of the department or another accomplished person in charge of pedagogical leadership who would have the responsibility if quality development was to become an ongoing project and as such the department would have to integrate this into its budget to cover the development work. This strategy would provide structure to the quality work and be an alternative to the present optional basis which is far from adequate if quality assessment and expansion are expected to continue.

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