Working across Boundaries: Tutor Experiences of On-campus Networked Learning (blended with face-to-face teaching)

Gillian Roberts

Glasgow Caledonian University

g.m.Roberts@gcal.ac.uk

Abstract

This paper reports on research undertaken in one modern Scottish university (MSU) to identify university teachers' conceptions of and approaches to teaching campus-based students using C&ITs. 18 teachers from the business school were interviewed and their transcripts were analysed to identify their underlying conceptions and approaches to teaching generally. From this a theoretical sample of 7 teachers' transcripts representing the range of possible conceptions of teaching were analysed in detail using qualitative software to identify their conceptions of teaching using C&ITs specifically. In addition two focus group discussions were undertaken with two different teaching teams piloting the use of a managed learning environment where teachers were asked to reflect on this experience. Data was analysed and three findings are offered. Firstly a model of teachers' *conceptions* of teaching campus based students using C&ITs; secondly a model of teachers' *approaches* to teaching campus based students using C&ITs and thirdly the importance of the 'experience' of teaching using C&ITs in influencing the formation and development of teachers' conceptions of teaching using C&ITs.

KEY WORDS

Conceptions, approaches, experience teaching, phenomenographic

Literature

Previous research by), and and most recently By Kember & Gow (2000) has established close links between students' conceptions of learning, their approaches to study and to learning outcomes achieved. Also, that the relationship between teaching and learning has been established , , , .

This research focuses on an area where relatively little work has been done, the relationship between conceptions of teaching and approaches to teaching. Particular interest is paid to teachers' conceptions of and approaches to teaching using C&ITs. Previous research suggests that teachers' *approaches* to using C&ITs for teaching will be influenced by their *conceptions* of teaching using C&ITs.

The Nature of Conceptions

distinguish between '*concepts*' and '*conceptions*' with the latter carrying personal meaning. describes a conception as an aspect of an individual's behaviour in the world and his/her experience of it. For the purposes of this research the definition of conceptions adopted is that given by Pratt 1992:

'Conceptions are specific meanings attached to phenomena, which then mediate our response to situations involving those phenomena. We form conceptions of virtually every aspect of our perceived world, and in so doing, use those abstract representations to delimit something from, and relate it to, other aspects of our world. In effect, we view the world through the lenses of our conceptions, interpreting and acting in accordance with our understanding of the world' : 204)

The nature of approaches

analysed teaching approaches in terms of '*intentions*' and '*strategies*' and found that the majority of teachers adopted content-centred approaches i.e. the intention was to transfer information or concepts to students by teacher focused strategies. The minority adopted a student-focused approach with the intention of helping students develop or change their understanding of key ideas. A later quantitative study confirmed the original intention - strategy relationship.

Conceptions of teaching

following analysis of previous research findings proposed that there was broad agreement in the existence of two contrasting orientations to teaching. In examining these orientations more closely, further proposed that each orientation may be sub-divided into two conceptions, though the boundary between these is not clear cut. A fifth conception provides a link resulting in a model with a continuum of five conceptions of teaching and two polarised orientations to teaching.

Teaching orientations and conceptions (Kember & Kwan 2000)
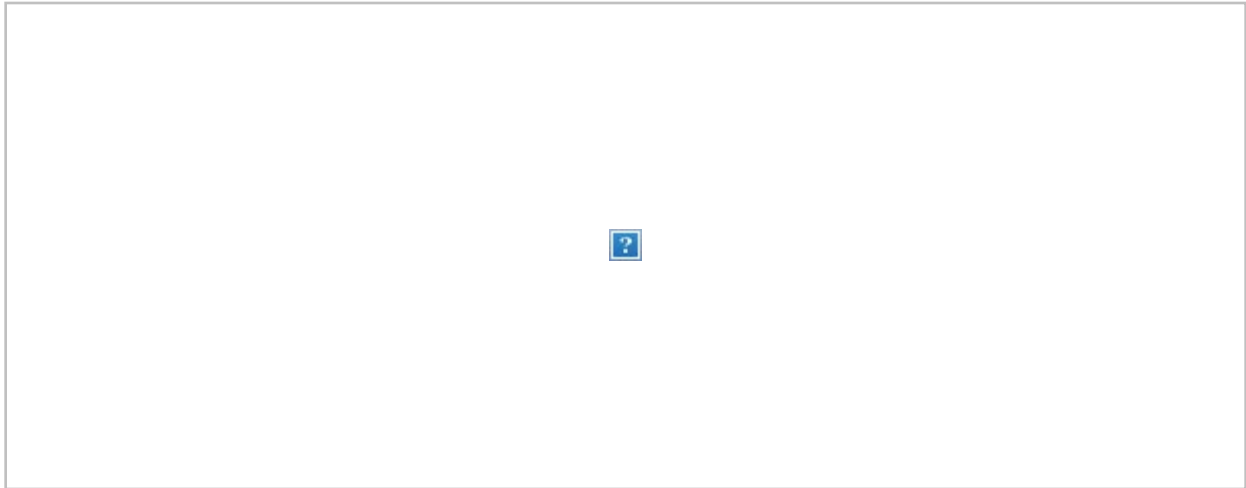
Methodology

My stance is interpretative and within this I am taking a phenomenographic approach. Phenomenography offers an alternative research approach for understanding teaching by focusing on the ways teachers are aware of, or experience, or describe their world . It is in analysing descriptions that I am seeking to identify and attribute conceptions and approaches. My approach recognises the selective process we as individuals adopt when talking about and describing phenomena. My interest is in what individuals choose to talk about, what they regard as being important, what they use as evidence, where they express their feelings etc. Initially a purposive sampling strategy was used with teaching *beliefs and experiences concerning the use of C&ITs for teaching and learning* guiding selection of teaching staff. Another aim of the purposive sampling strategy was to include teachers of different status, age, gender, business disciplinary background, and with different areas/levels of responsibility and lengths of teaching experience. As a result 18 university teachers were interviewed and transcripts analysed to identify their conceptions of teaching. From this, a theoretical sample of 7 teachers' transcripts representing the range of conceptions of teaching was analyzed in detail. In addition 2 focus groups were held with two teaching teams who were involved in piloting the use of a managed learning environment (Blackboard) in Semester A, session 2000/01.

Research problem and research questions

My research problem is the experience of university teachers in the Business School of MSU concerning the use of Chits for teaching and learning. My research questions are:

What are individual teacher's conceptions of teaching in higher education?

What are university teachers' approaches to teaching using Chits?

What are individual teacher's conceptions of teaching in higher education using Chits?

Is there a relationship between an individual's conception of teaching and his/her conception of teaching using Chits?

Is there a relationship between an individual's conception of teaching and his/her approach to teaching using Chits?

Dealing with transcripts

write a coding process or set of procedures that researchers use to interpret and organise data, which usually involves 'c*onceptualising and reducing data, elaborating categories in terms of their properties and dimensions.'* (p12)

Using my research questions I developed a template for *'conceptualising and reducing'* my data. In doing this c20 page verbatim transcripts were reduced to 4-5 page summaries, which enabled comparisons and conceptions and approaches to teaching to be identified. A theoretical sample of seven interviewees representing the full range of conceptions of teaching were selected for detailed analysis.

Findings

Modelling teachers' conceptions of teaching using C&ITs

The teachers in this study represent a range of conceptions of teaching and levels of enthusiasm for teaching using C&ITs. Most were using C&ITs to teach campus based students and used C&ITs in addition to face-to-face teaching. The survey and interviews have shown high use of primary courseware i.e. subject based information to support conceptualisation stages of learning (Mayes 1997). These were mainly the WWW or PowerPoint.

Conceptions of C&ITs for teaching & learning
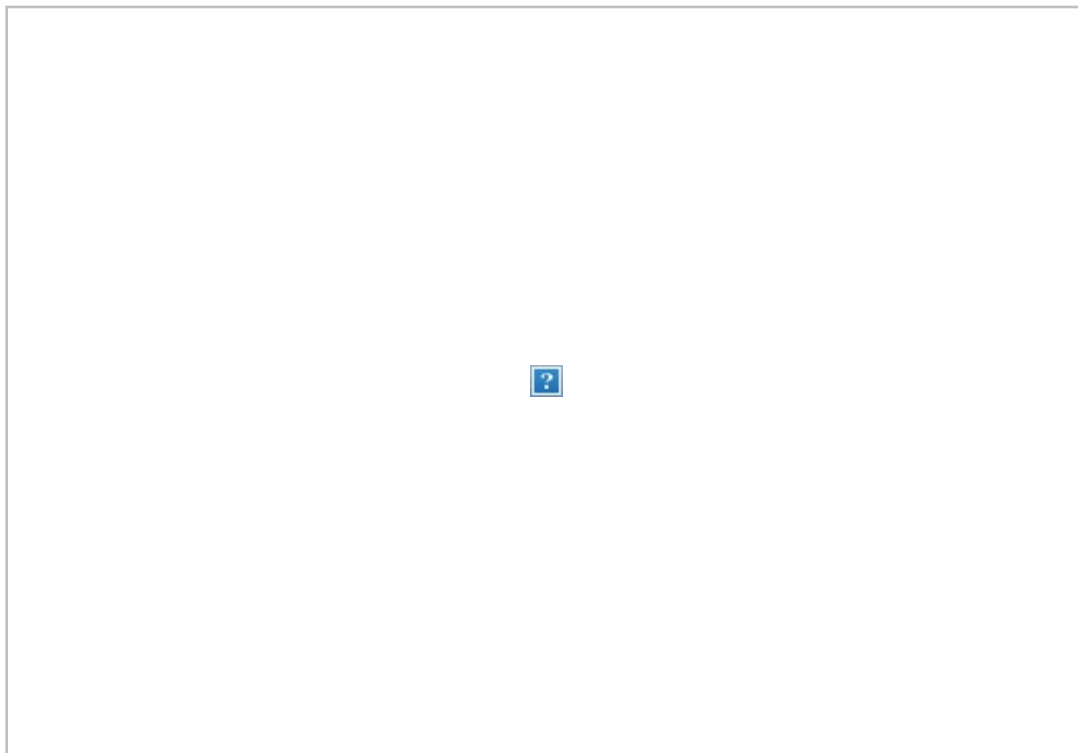
Apparent incremental development of teaching campus-based students using C&ITs

- *C&ITs used to present or access*

 subject resources - one way

- *C&ITs used interactively but*

individually

and independently to practice, develop or

test understanding - two way

- *C&ITs used interactively as part of*

  group class time dialogue, feedback and

  learning - multi-way

Some use was made of a variety of secondary courseware to support the construction stage of learning but this was much less frequent both in the survey and amongst interviewees. The secondary courseware was used for subject-based exercises such as practices and self assessments to enhance understanding and increase learning. In addition, there was evidence of more complex secondary courseware used in conjunction with communication media to achieve higher levels of understanding through analysis and decision making with dialogue and feedback being incorporated to test and develop further learning. All such uses were embedded in teaching and learning strategies where teaching was also undertaken on a face-to-face classroom basis where different forms of real time dialogue and learning were undertaken.

With the exception of PowerPoint, most of the primary and secondary courseware uses reported by interviewees in this study appear to have been used by staff and students out with timetabled class time e.g. WWW and self paced learning materials. In some instances communication and dialogue were explicitly integrated with the use of courseware and use was undertaken during timetabled classes with the teacher present and contributing. The model below aims to depict the current usage of C&ITs for teaching arising from the above analysis of respondents in this study. Most use is of primary courseware as sources of information.

Experiences of C&ITs and their influences on conceptions of teaching.

Use of Blackboard was piloted at two different levels, undergraduate and postgraduate, and with full time and part time students. The dominant reasons for, and benefits perceived by introducing the use of an MLE tended to focus on the 'managed' rather than 'learning' aspects of the MLE. The approach taken by both teaching teams had been to use Blackboard as a complement to face-to-face teaching, which had not been reduced or changed to any great extent. The use of Blackboard was thus additional as well as complementary. This lack of change in timetabled teaching was due to the pilot nature of use, to concerns that the technical infrastructure in the university could not support more committed use and possibly because teaching teams were not sure how to use an MLE effectively for teaching and learning. The experiences of these teaching teams was one of considerable difficulties - particularly concerning technical and administrative support - yet despite these, the overall conclusion in both pilots was for continued use and further development arising from the perceived benefits. These benefits were personal in terms of the managerial benefits the MLE offered re access, market competition, student monitoring etc. In terms of teaching and learning benefits strong positive feedback and support from students regarding existing and continued use and for the further development of Blackboard suggested the MLE met the learning needs of students in some significant ways also. Student feedback in particular appears to have had greatest impact reinforcing for some teachers' their existing beliefs about teaching using C&ITs and causing others to reconsider if not change their beliefs.

The evidence in this study perhaps unsurprisingly indicates that positive experiences are likely to lead to spreading, continuing and increasing use of C&ITs for teaching. A personal sense of achievement at using online teaching and learning is reported which can be reinforced by positive student feedback. Reflection is a necessary precursor for change and reflecting on such experiences is likely to influence if, why and how an MLE will be used. Further, such reflections are likely to be influenced by existing conceptions of teaching, which in turn are likely to be informed by the formation of conceptions of teaching using C&ITs arising from that

experience.

Positive experiences	Versus	Negative experiences
are likely to lead to favourable dispositions towards teaching using C&ITs	V	are likely to lead ts unfavourable dispositions towards teaching using C&ITs
Benefits of teaching using C&ITs are motivational. They out weigh difficulties	V	Benefits are not perceived, or are not sufficient, to be motivational. Difficulties remain as barriers to use
Positive student feedback (demand) is likely to reinforce positivity and continued use	V	Negative student feedback (demand) is likely to reinforce negativity and deter (further) use
Perception that students want to, like to and will use C&ITs, for learning likely to reinforce continued development and use	V	Perception that students prefer F2F, don't like, and won't use C&ITs for learning, likely to reinforce negativity and deter (further) use
Easy to use C&ITs are likely to reinforce positivity spreading, use	V	Difficult to use C&ITs are likely to reinforce negativity and deter continuing and increasing use
Positive perception and uptake of CPD in teaching using C&ITs is likely to reinforce use, development and change	V	Negative perception of CPD in teaching using C&ITs is likely to reinforce non or minimum use with little or no change

A prime objective of this analysis was to explore whether approaches to teaching influence conceptions of teaching i.e. a two way rather than unidirectional relationship. argued that institutional factors such as large classes, team teaching, heavy workloads and in this case perhaps teaching using C&ITs, are likely to change teachers approaches to teaching but not their 'deep seated beliefs' or conceptions of teaching. But if approaches to or experiences of teaching do not influence conceptions of teaching how can they be formed and how can they develop? In one of the focus groups teaching teams had adopted a new and different approach to teaching incorporating the use of an MLE, but had also continued with traditional approaches in terms of class timetabled approaches. They were self critical and questioning of this and conveyed an expectation that teaching using an MLE should be different but weren't sure what this meant. Their overall positive experience suggests they will make some changes to their approach in future, but this may not in itself alter their conceptions of teaching i.e. an MLE can be used for subject transmission as well as learning facilitation.

Discussion

Approaches to teaching using C&ITs

My research has shown greatest use being made of C&ITs for the conceptualisation stage of teaching and learning with very much less use of C&ITs for the construction stage of teaching and learning. Least use is made of C&ITs for the dialogue stage of teaching and learning. Further, given this study has been concerned with mainly campus based use of C&ITs, it might be hoped that the construction and dialogue stages of learning are undertaken in class based teaching. However, resource pressures on higher education are showing that it is precisely these aspects of teaching and learning that are being reduced. Far from 'closing the gap' and compensating for the reduction in small group work as envisaged by [Dearing, 1997 #138] current evidence suggests C&ITs are being used mainly to support and augment existing emphasis on lectures and the "delivery' of subject content.

Modelling teachers' conceptions of teaching using C&ITs

Three different conceptions of teaching using C&ITs are presented namely, teaching using C&ITs:

as sources of information - access or presentation

for individual self paced learning & self assessment - practice, drills, problem solving exercises

for group work involving analysis, decision making and dialogue

In addition, in campus based teaching all of the above were used in combination with some form of real time dialogue and learning.

C&ITs used as sources of subject information

My research showed the WWW to be most widely used and here motivation was for staff to learn - to update their own knowledge of subject information for teaching. The next most common use of C&ITs was to direct students to relevant web sites for subject resources. Most teachers were using primary courseware for the conceptualisation stage of Mayes' learning cycle. This implies a conception of C&ITs as sources of subject information which can be used to achieve some form of interaction between the learner's existing knowledge and new information. The learner may be the teacher preparing to teach or the student being taught. This conception may view teaching and learning using C&ITs as an individual and independent or directed activity. Teachers' motivations for using C&ITs are therefore governed by these subject focused features and perceived benefits of C&ITs. The strategies of teachers with this motivation for using C&ITs may be identified from their descriptions of uses to 'present', 'clarify', 'elaborate', 'illustrate' etc indicative of a subject focused approach and consistent with the process models proposed by and .

C&ITs used for individual and independent self-paced learning

There was less use by teachers in this study of C&ITs for task based learning contributing to Mayes' construction stage of learning. Nevertheless some teachers did use C&ITs as tools which could enable subject analysis or subject drills which could be performed, practised, and assessed resulting in learning. These may be activities done in students' own time capitalising on the place, pace and time flexibilities of C&ITs. They were used individually and independently of other learners or the teacher. The motivation for use may have arisen from resource constraints reducing opportunities for face-to-face teaching and/or by a more student-centred, learning focused orientation to teaching. The strategies for using C&ITs may be identified from teachers' descriptions of uses to 'engage by practice', 'apply', 'consolidate', 'challenge' etc indicative of the process models referred to above.

C&ITs used for group analysis, decision making and dialogue

Some teachers' motivations for teaching using C&ITs stemmed from a recognition that C&ITs are a part of life and work in general and as such should be used in a teaching and learning context. A simple conception of this view may be that they are modern day tools and as such should be used because of the benefits e.g. of convenience, flexible access etc they bring. Others may have a more complex conception of C&ITs as learning environments, which enable learning relationships to be established and developed. As electronic media these environments can capture the otherwise transitory interactions of teacher and students. In addition, C&ITs can be used to extend the parameters of the learning environment (not just to distributed learners) but by drawing in external professionals and allowing access to the larger communities of practice. The dialogue stage of Mayes' learning cycle may be evident in the strategies of teachers adopting this conception of C&ITs. Social and interpersonal dimensions of learning and the creation and maintenance of learning relationships are given prominence in the use of C&ITs for group work. Descriptions of approaches to using C&ITs from teachers with this conception relate to real world situations and real world access to achieve relevance, stimulate students' motivation and enhance learning. In this approach to teaching using C&ITs the teacher is neither 'sage on the stage' nor 'guide on the side' but a legitimate 'full' participant in this community of learning.

The teachers in this study were teaching using C&ITs with campus based students i.e. even the part time MBA students though off campus for the majority of the week did return to the physical campus for teaching in timetabled classes. Two additional conceptions of teaching using C&ITs have been generated from the literature these are teaching using C&ITs:

for real time dialogue & learning

for asynchronistic dialogue and reflective learning

This gives a model of five distinctive conceptions of conceptions of teaching using C&ITs.

Mapping C&ITs onto Kember's (1997) model of conceptions of teaching

By drawing together the two models above into one it is possible to see the relationship I am proposing between conceptions of teaching , approaches to teaching and my developed model of conceptions of teaching using C&ITs. Missing are the dimensions of

teaching using C&ITs I identified from my analysis of teachers' approaches to teaching using C&ITs. I suggested the motivational dimension, the reason for teachers to teach campus based students using C&ITs, was driven by whether teachers wanted to:

Teach more or different things that they were not able to teach before? I.e. the additionality debate.

Teach differently in terms of time, place and pace separation and feedback i.e. the substitution debate

The literature suggests that to this might be added (though in a broader interpretation three and four may be subsumed into one and two respectively).

3 Teach the same or different things better because they can access more or different or better resources than before thus enhancing learning? i.e. the quality enhancing debate.

Teach differently, i.e. sufficiently different to constitute a new pedagogy?

Modelling experience of teaching using C&ITs

I have avoided use of teaching using C&ITs as being complementary since this description can cover almost all types of motivations for teaching using C&ITs particularly when this is undertaken with campus based teaching as well. I have argued that conceptions of teaching using C&ITs are formed and developed through experience of teaching using C&ITs and that that experience is influenced by contextual factors as well as existing conceptions of teaching. As a result a relationship between conceptions of teaching, approaches to teaching using C&ITs and conceptions of teaching using C&ITs is to be expected. Similarly, contextual factors in influencing approaches and generating reflection on approaches and experiences may also have some influence on the formation and development of conceptions. I have suggested earlier that teachers' motivations for using C&ITs is linked to perceived benefits in terms of resource saving (substitutional) or teaching enhancement (additionality). In addition I have suggested that positive experiences of teaching using C&ITs are likely to sustain continued use of C&ITs for teaching. Further I have suggested that positive experiences can result from students' feedback on teaching using C&ITs. (There was recognition also that demand from students for greater use of C&ITs in teaching and learning will create pressures for increased teaching using C&ITs.) I have also argued that team teaching may through collective reflection on practice, influence approaches to teaching using C&ITs. However, does all of this also influence teachers' conceptions of teaching using C&ITs? It may be reasonable to speculate that in time positive experiences leading to increased and more diversified teaching using C&ITs can contribute to the development of more sophisticated conceptions of teaching using C&ITs.

Recommendations for future research

My research has been small scale and no attempt is made to generalise. Rather some issues have been raised and some models are proposed which aim to reflect the current state of university teachers' experiences of using C&ITs for teaching and learning. I hope this may contribute to increased understanding and stimulate and influence the direction of future, possibly larger scale studies.

Dearing (1997) in recommending the increased use of C&ITs in higher education sought an alternative to the trend in higher education for increased reliance on lectures and reduced emphasis on small group teaching. It would seem C&ITs are still not bridging this gap and research into how C&ITs may be used to help close this gap will be valuable. In this regard further exploration of teachers' beliefs concerning the role of lectures in higher education is likely to be a useful starting point.

Teachers are motivated to use C&ITs if they believe there are benefits arising from their use. In this study, benefits of or motivations for teachers' approaches to using C&ITs with campus based students were categorised as 'substitutional' or 'additional.' Further, larger scale research into teachers' motivations for using C&ITs would be useful to confirm or develop understanding of why teachers do and therefore should or could use C&ITs for teaching.

Teachers' conceptions of teaching can be reflected in their conceptions of teaching using C&ITs but that there are barriers (perceived or actual) which appear to prevent some teachers implementing the same sophistication of teaching conception using C&ITs as they do when not using C&ITs. It would appear that C&ITs contribute to but do not achieve in their own right as sophisticated conceptions of teaching. Further exploration of this would also be useful. Having said that for some teachers with basic conceptions of teaching, teaching using C&ITs may contribute to developing and changing their conceptions to a more advanced level. Exploration of this might also be fruitful.

References

Dearing, Report. 1997. Appendix 2: New approaches to teaching: comparing cost structures of teaching methods.

London: National Committee of Inquiry into Higher Education.