On Phenomenography and Researching Online Tutor Support

Philip A. Watland
Lancaster University
p.watland@lancaster.ac.uk

ABSTRACT

Rapid developments of affordable information and communication technologies are seen as assisting a shift in pedagogy attitudes from a teacher-centred/content orientation to a student-centred/learning orientation, and combined with the various forms of technology-mediated interaction, influencing the roles and experiences for both online tutors and students. Within this context, there have been calls from researchers (Gibson, 2003; McCartan, 2000) to address the need of understanding the student's perspective in technology-supported education settings.

This paper contributes to the debate on how to understand and research the described experiences students give to phenomenon and aims to present the potential contribution of the phenomenographic approach (Marton, 1981; Marton & Booth 1997) for researching networked management learning phenomena on a theoretical and empirical level by connecting this theoretical discussion with current research on students experiences of online tutor support. Discussion of the considerations of using a phenomenographic approach within the context of this research is highlighted in this paper.

Keywords

Networked management learning, phenomenography, online tutor support

INTRODUCTION

There is a growing body of theory and research from the student's perspective related to a number of areas of online learning, for example, student's expectations of the tutors role (Landen, 1997; Stevenson *et al.*, 1996), students expectations of learning online (Burge, 1994; Ortiz-Rodriguez *et al.*, 2005), experiences as an online student(s) (Howland and Moore, 2002; Mann, 2003), and student's experiences of online learning (Booth and Hulten, 2003). This research, from the student's perspective, can be generally seen as either being primarily interested in the meaning of individual's experiences and expectations from an orientation of what is similar and common or what is similar and different.

The first approach has a knowledge interest in describing the meaning of a phenomenon for a group of individuals in a given situation aiming to understand how a phenomenon appears to these individuals, what is the essence or commonality of meaning, seeking to provide a predictive or an explanatory theoretical relationship among the aspects that comprise a phenomenon. This approach sees the individual and the world as separate, a dualistic non-relational view where knowledge and meaning are shared among a group of individuals with less emphasis on individual experiences or variation in these individual experiences.

The second approach has a knowledge interest in describing the meanings of how a group of individuals experiences a phenomenon in a given situation aiming to understand how a phenomenon is experienced by these individuals, what is different and varies. This approach sees knowledge and meaning as varying among the group of individuals or within an individual and emphasises individual experiences and the variation in these experiences. This second approach sees the individual and the world as relational and non-dualistic, suggesting we cannot simultaneously see the world from the viewpoint of the individual who is in it, and the individual, from the viewpoint of the world.

Whilst not to discount that value of theory and research of the first approach, a "first order perspective", the potential contribution of a phenomenography approach is seen as providing a way of increasing our understanding of questions and statements raised by previous studies and reports (Grossman, 1992) precisely because a phenomenography approach takes a "second-order" perspective (Marton, 1981), by focusing on individuals experience of a phenomenon, such as online tutor support.

PHENOMENOGRAPHY OVERVIEW

Marton (1994:4424) describes phenomenography as "the empirical study of the limited number of qualitatively different ways in which various phenomena in and aspects of the world around us are conceptualised, understood, perceived, and apprehended." The phenomenographic approach can be described as follows:

1. Phenomenographic perspectives and assumptions can be generally described as an interpretative qualitative research approach, which rather than making statements about how a phenomenon appears to individuals, a "first order perspective", phenomenography's point of departure is to focus on how phenomenon is experienced by individuals, a "second or perspective".

2. This second order perspective is based on a relational epistemology and non-dualistic ontology. Phenomenography's point of departure, the object of a phenomenographic study, is not the individual who experiences a phenomenon; the individual is not the unit of analysis nor is the phenomenon. As Marton and Booth (1997:111) state, the "… unit of phenomenographic research is *a way of experiencing something* ... and the object of the research is the *variation* in ways of experiencing phenomena" (italics in original). Phenomenographic's point of departure is then not to focus on what is common but to focus on variation in terms of how a phenomena is experienced (its "structural" aspect), and what is experienced, its meaning (its "referential" aspect), how various aspects of a phenomena are discerned ("discernment"), and how a number of aspects can be discerned simultaneously ("simultaneity").

For illustrative purposes, if we consider the picture in Figure 1, we may experience this picture to be of two faces or a vase or a picture of both two faces and a vase, or perhaps something completely different, perhaps the face looks like someone you know, a variation in meaning and structure.

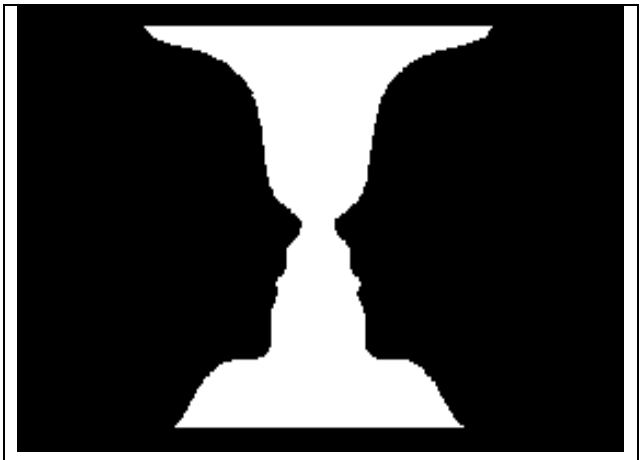

Figure 1: Two Faces and Vase

That we can experience two faces and/or a vase implies that we have determined the structural aspect of a "face" or a "vase" and its referential aspect, and assigning what the meaning "face" or "vase" means to us. Alternatively by referring and assigning what the meaning "face" or "vase" has for us we have determined the structure, we experience a "face" or "vase". As Marton and Booth (1997:87) articulate, "Structure presupposes meaning, and at the same time meaning presupposes structure. The two aspects, meaning and structure, are dialectically intertwined and occur simultaneously when we experience something."

Considering next discernment, in order to experience the faces or the vase as "faces" or a "vase", we discern the parts and the contours of the face; the nose, lips, and so forth and the relationship between these parts and the whole, as comprising a "face", or the contours of the vase as comprising a "vase" and not as a car or a dog or something else, in phenomenographic terminology, our internal horizon. We are able to experience explicitly what is the case by experiencing implicitly what is not the case. How we discern the faces and the vase also relates to the context we experience this picture in, in phenomenographic terminology, our external horizon. For example, we may, from our pervious experiences, experience the picture as a test or a game, a change in our external horizon, which may increase the likely hood of determining alternative structures and meaning.

The aim of this illustration is to also demonstrate that we may not be aware of the two faces or the vase simultaneously, our awareness is focused on either a face or the vase or perhaps the two faces or who the face reminds us of. One is in focus, while the other is ground, yet we maybe able to simultaneously see both in the sense that we see the two faces-vase picture as a picture. In practice, we may for example focus on one face and

then compare it to the other face to see if we experience a variation. Without variation we would not be able to discern the structure or the meaning of a phenomenon. For example, if both the faces and the vase were either black or white we would experience a completely black or white picture. Without variation in structure, the faces being black and the vase being white, we are not capable of experiencing the structure or meaning of the faces and the vase or if a completely black or white picture is of two faces and a vase or a car or a dog or something else.

A particular way of experiencing a phenomenon reflects a simultaneous awareness of certain aspects (the faces or the vase or both or perhaps something else) of a phenomenon. Different ways of experiencing reflects a simultaneous awareness of more or less or different aspects and dimensions of these aspects of the same phenomenon at a particular point in time. As Marton and Booth (1997:112) summarise.

> "A way of experiencing something" is a way of discerning something from, and relating it to, a context. The meaning of something for someone at a particular point in time corresponds to the pattern of parts or aspects that are discerned and are simultaneously objects of focal awareness.

3. Further Marton and Booth (1997) argue there is a limited number of qualitatively different ways of experiencing a phenomenon. Their argument develops from two hypothetical scenarios. First, they suggest were individuals capable of being focally aware of all aspects there are to be aware of continually and if individuals made use this capability, everything would look the same to everyone all the time, there would be no variation. Specific interests, preferences, wishes, capabilities, or pervious experiences would no longer drive our ways of experiencing phenomenon. Secondly, they contend on the other hand, were the number of distinctive aspects that define a phenomenon infinite, individuals would experience each situation and each phenomenon differently every time, being unable to communicate, living in different worlds. Since we are able to communicate and experience a certain amount of sameness of the world, Marton and Booth (1997) argue that individuals are focally aware of only a limited number of aspects of a phenomenon at a time and that individuals are able to experience variation. That is, every phenomenon is experientially inexhaustible yet whatever phenomena we encounter, we experience it in a limited number of qualitatively different ways. We are aware of everything at the same time but not in the same way and we are not aware of everything at the same time in the same way. Thus, an individual's different ways of experiencing a phenomenon is distinguish by which distinctive aspects and different combinations of distinctive aspects, which are limited in number, an individual is focally aware of at a particular point in time. Phenomenography's point of departure is not to provide rich descriptions of phenomenon but to focus on the variation of individuals described experiences of phenomena, which in accepting the pervious discussion, will not than provide a complete final description of a phenomena. As Marton and Booth (1997:101) argue, "There is no way of arriving at a final description of anything, because a description relates what that thing is for someone, and thereby depicts is as seen through someone's pervious experiences." As Marton and Booth (1997:107) summarise:

> The main idea is that the limited number of qualitatively different ways in which something is experienced can be understood in terms of which constituent parts are discerned and appear simultaneously in people's awareness. A particular way of experiencing something reflects a simultaneous awareness of particular aspects of the phenomenon.

4. This implies a methodological model of inquiry that aims to develop descriptions in terms of qualities rather than quantities. As Marton (1981:181) notes "… to characterize how something is apprehended, thought about, or perceived is by definition a qualitative question." Svensson (1997:167) further describes:

> The emphasis on description is characteristic of phenomenography. This assumption about the importance of description is related to an understanding of knowledge as a matter of meaning and similarities and differences of meaning. It is also related to assumptions about generality of meaning across objects. The less generality of meanings that is assumed the more important becomes description of the individual case. In approaches starting with predefined categories or variables, generality of meaning is assumed. In phenomenography generality is something that is empirically explore.

5. Lastly, Marton and Booth (1997) contend there is a hierarchical relatedness of the qualitatively different ways of experiencing a particular phenomenon, where rather than aiming to establish a relationship between research outcomes and the phenomenon investigated, phenomenography's point of departure sees a relationship between the research outcomes themselves, as different ways of experiencing phenomenon reflects being simultaneously aware of different, and discerning variations of more or less distinctive aspects and dimensions of these aspects,

of the same phenomenon resulting in different levels of complexity, development or sophistication of describing the same phenomenon. In Marton and Booth's (1997:102) words:

> We find that in various situations people manage to different degrees to discern and keep all relevant aspects of the phenomenon and of the situation in focal awareness simultaneously. What happens is that single aspects are abstracted or separated out, while others are left undiscerned. Moreover, it is in terms of the very same limitation that is possible to make sense of the hierarchical ordering we find in the qualitatively different ways of experiencing something.

Phenomenographic's aim then is to describe the qualitative distinctive aspects of the different ways, the variation, in which individual's experience, interpret, understand, perceive or conceptualize a phenomenon generating a limited number of internally related, hierarchical categories that describe this variation rather than focusing on research outcomes that are not seen as having internal relationships.

THEORY AND RESEARCH INTO ONLINE TUTOR SUPPORT

To illustrate using an example of a distinctive element of networked management learning, online tutor support. The importance of tutor support in networked management learning is certainly not a new concept having been accepted as crucial to the educational process in other contexts for some time (Dewey, 1916; Rogers and Freiberg, 1951). The significance of tutor support to networked management learning is highlighted in the definition of networked management learning provided by Hodgson and Watland (2004:99):

> By networked management learning we mean learning by managers that is supported by ICT (information and communications technology) used to connect learners with, in particular, other people (learners, teachers/tutors, mentors, librarians, technical assistants, etc.) as well as to learning resources and information of various kinds and types.

Further, technology-mediated interaction and collaboration are consistently described as the distinguishing aspects of education at a distance and networked learning educational approaches, and particular of interest, due in part to the separation of student and online tutor in time and/or place, online tutor support interaction (for example, Garrison & Archer, 2000; Hodgson and Watland, 2004). As Garrison (1993:13), highlighting the aspect of tutor support interaction and its centrality in education posits, "Education is a process most simply characterized as interaction between teacher and student for the purpose of identifying, understanding, and confirming worthwhile knowledge." Yet theory and research on tutor support has been primarily from the tutors perspective with description and prescription, often in the form of "how to do it" guidance for online tutors in an effort to perhaps create "tutor-proof" instructional methods, outweighing empirical enquiry. Recently Alexander (2001:241) writes, "Much of the literature on e-learning is merely a description what the teacher could do or has done online, while the student experience of those activities goes largely undocumented."

Garrison's (1993) "identifying, understanding, and confirming worthwhile knowledge" is seen as highlighting the aspect of the student's experience of learning. However, there has been little research of tutor support from the students' perspective that investigates the variation of students described experiences of tutor support and in particular, their experiences of tutor support interaction and their experience learning. Indeed, there are very few publications specifically reporting on the student's experience of online tutor support and what theory and research into online tutor support that has been reported is typically as one element of an overall study. Taken together the majority of theory and research from the student's perspective that reflects elements of online tutor support, not surprisingly, can be seen as having a knowledge interest in educational dimensions, for example, learning outcomes (Burge, 1994), the educational quantity, quality, and form of interactions (Bibeau., 2001; Ortiz-Rodriguez *et al.*, 2005), and student needs and satisfaction of various aspects of online learning (Arbaugh, 2001; Carswell *et al.*, 2000, Conrad, 2002; Stevenson *et al.*, 1996), focusing on what is similar and common, aiming to conceptualise the phenomenon of tutor support from these knowledge interests.

Researching Online Tutor Support

This illustrative study investigated the student's experience of the phenomenon of tutor support in a Canadian University (CU) online executive MBA program that provides asynchronous text based interaction between tutors and students (pseudonyms are used for named place and participants). Similar to Marton and Booth (1997), this research focus is on two crucial related aspects of online tutor support previously discussed: 1) the interaction between student and online tutor and 2) its influence on the students' experience of learning. These two aspects, interaction and experience of learning, form the definition of online tutor support used in this study:

> Online tutor support is any interaction between student and tutor, which influences the student's experience of learning.

Context

Within the CU online MBA program environment, students communicate and interact by participating in interactive discussion databases (sometimes referred to as "bulletin boards", "forums", or "conferences") developed for each course in assigned study groups of eight to 15 students from different work backgrounds. The students primarily come from across Canada, averaged nine years of management experience and their average age is 40. Of the student body, 29 per cent are women. A typical course is eight weeks in duration and usually has eight lessons, one per week, which may include reading assignments, participating in interactive discussion databases, and reviewing reference sources. Each course module has three online tutor support interaction situations. These are:

1. Discussion Databases: There are two discussion databases, a "Reflective Question" database where specific questions related to the course material are posted and students reflect, respond, comment or counter respond on topics or comments from other students and the tutor, creating a "threaded conversation chain". The second database is designed for "Case Study" discussions where students analyse and discuss case studies as a group.

2. Marking of Assignments and Comments: Students are also assessed on their participation in the activities in each of the two databases mentioned.

3. Individual Support: Individual students in need of specific help can use the "Ask the Tutor" database, through one-to-one e-mail and by telephone if necessary.

At the time of the interviews, to graduate from the program, students were required to complete twelve course modules, two comprehensive examinations, one applied project, attend a weeklong summer school and two "theme based" weekend schools. The comprehensive exams cover all study material up to the end of either Phase One or Phase Two. Once Phase One is completed, in addition to Phase Two courses, students may take Phase Three electives and begin their Applied Project (dissertation).

Method

The predominant method of data collection used in phenomenography is the individual interview. In this study, the students' experiences of online tutor support were investigated through semi-structured individual interviews conducted by telephone with 32 students, 16 female and 16 male students across each of the three phases of CU's MBA program with each interview lasting approximately one-hour and were tape-recorded for transcription at a later date.

Following the phenomenography approach, the qualitatively different ways students experienced tutor support described in the interviews were characterised in terms of 'categories of description'. Categories of description were described in the form "something (x) is seen as something (y)", and are supported by quotations from the transcripts (Lybeck *et al.*, 1988:101). Noting the complexity of the empirical data obtained from the combined interviews from the group of 32 students and the nature of phenomenography inquiry results in finding a single quotation, which summarises the complete integrated fundamental nature of a category of description, in most instances, difficult; however, due to space limitations, a single exemplar quotation has been provided.

The analysis followed an iterative approach beginning by developing initial categories of description, searching for both similarity and differences. The interview data corpus was then re-examined to determine if the categories of description were suitably descriptive and reflective of the interview data. This process of revision and review of the data continued until it seemed that the categories of description were consistent. As Marton (1986:43) describes "definitions for categories are tested against the data, adjusted, retested, and adjusted again. There is, however, a decreasing rate of change, and eventually the whole system of meanings is stabilized."

The categories of description of ways of experiencing online tutor support, constituted from the analysis of the 32 transcripts, are seen as logically related to each other in terms of the influence on the students' experience of learning as it relates to online tutor support interaction. The interaction between student and online tutor in obtaining or receiving online tutor support may or may not explicitly involve the students' described experience of learning suggesting that the experience of learning is not figural in the students awareness. The influence of the students' experience of learning, in a phenomenographic approach, is not judged as to its usefulness in their learning (although this seems to be evident from some of their descriptions of their experience) but the described influence of this interaction on their experience of learning (Säljö 1988).

Categories of Description

Five categories of descriptions were identified. These categories of description are seen as logically related to each other from the least to most dramatic awareness of the aspects of online tutor support interaction and its influence on the students' experience of learning.

Category A: "Online Tutor Support is seen as Uninvolved", represents the most limited awareness of interaction and its influence on the students' experience of learning and involves little to no reciprocal events and virtually no awareness of interaction influencing the students' experience of learning; the students are aware of "what is not the case". "Terna" describes her experience: *"My thoughts are I'm not getting the benefit of their [the online tutors] expertise. Why do you have an online tutor if they're not going to teach? Teaching to me is a verb, there's an action associated with it ... now, in their defence [some online tutors] they'd start by saying, and these are all fairly experienced online tutors so you know, far be it from me to question the merit of what they're saying, but they would start off by saying, you know, this is my introduction and just to let you know that I find my involvement might hamper the discussion so I tend to stay uninvolved. And they would make that disclaimer at the beginning, so you would usually have a sense that they're not going to jump into the conversation. But I still feel that you're missing out on an excellent resource by them not doing that." (Terna, paragraphs 47-49).*

Category B: "Online Tutor Support is seen as Confirming", there is a higher awareness of interaction and its influence on experience of learning than in Category A. Yet interaction seems to be more as "transacting business" than a dialogue with reciprocal events seen as resulting as a reaction to actions by the students. Whilst more figural in the students awareness than in Category A, interaction influencing the students' experience of learning is not seen to be dramatic and more as confirming and shaping the students understanding, essentially reinforcing the self-learning of the students. "Louise" describes her experience: *"That's [assignment feedback] been very good across the board. I have found it very valuable feedback and not just 'here's your mark, thanks a lot'. Very good constructive kind of criticism and that's been very useful for me, so definitely. And it's funny, I really do feel, I can now sort of monitor myself and how well or bad I've done, 'cause I know sort of what's required of a good essay or a bad essay, or research paper or a literary review. So I'm at that point now which is great, 'cause I couldn't do that before, I didn't know what was good from bad. But I think that the feedback from the online tutors on these assignments has been very helpful for me." (Louise, paragraph 85).*

Category C: "Online Tutor Support is seen as Elaborating" where categories A and B are dominated by a lack of reciprocal actions by either the students or online tutors, online tutor support experienced as "Elaborating" represents a transition category between categories A and B and the last two categories, D and E. In category C, there seems to be more of genuine discussion equality in participation between student and online tutor. In contrast to categories A and B, sustained interaction occurs, but compared to categories D and E, interaction is lacking in vigour or sharpness. "Don" describes his experience: *"There was a online tutor that would come in and say now that you've brought this [in a discussion database] up you might be interested in the article in such and such, in the [names a new paper], or so and so has talked about this in his theory on such and such. And um the name of his book and you know give references and stuff. So not only would he indicate that he was monitoring the conversation, because there's no way that he could have predicted where we would have gone with it, but he was also very knowledgeable about the area and provided us with background and stuff like that." (Don, paragraphs 222-228).*

Categories D and E are seen to stand in contrast to the previous categories as interaction is seen as a highly significant aspect of students' awareness and is described as having a major influence on their experience of learning, whereas in the first two categories, interaction is seen as having a minor influence.

Category D: "Online Tutor Support is seen as Encouraging", the personal and encouraging nature of the interaction seems to heightened its awareness. The experience of learning is seen as becoming a major aspect in the students' awareness and plays a significant part in defining the students' experience of online tutor support. "Kevin" describes his experience: *"The, I'm going to say the second course I did, the [names course module], was the absolute best. In addition to letting you know where you were at, there was also emails that were sent by this online tutor and those emails I found were absolutely instrumental because I was, I was really struggling with it the first three weeks, really struggling with the course and I was putting huge amounts of work in, probably 60 hours in addition to my 40-50 hours at the office, it was just stupid. And it was really through his emails of encouragement that allowed me to get through those first few weeks 'cause he recognised it and it was excellent. Just the little comments, not as much in the actual, I don't think there was so much in the chat area [discussion databases] as there actually were emails sent to me, but you just knew that the online tutor was in there." (Kevin, paragraph 18).*

Category E: ”Online Tutor Support is seen as Confrontational”, the awareness of the interaction appears to be even more acute and as have a greater influence on the students' experience of learning than in Category D. Whilst Category D represents a significant awareness of interaction and experience of learning, in Category E the sharpness and aggressive nature of the interaction and its influence on the students' experience of learning appears to become a dominating factor and aligned with a strong affective component. “Terna” describes her experience: *“In my very first course, my [names the course] course, my online tutor I found to be really ineffective at providing feedback – to the point that you were almost afraid to post because her responses would be public in the [discussion] database in terms of “there's no value to this posting”, “don't waste peoples time” etc. And I don't mean just directed at me, but at others as well.” (Terna, paragraphs 69-71).*

Outcome Space

The outcome space is interpreted as consisting of the five logically related qualitatively different ways of experiencing the phenomenon of online tutor support arranged in increasing complexity of online tutor support interaction and its influence on the students' experience of learning as illustrated in Table 1. Category A at the top of the table is less complex with less influence of the students' experience of learning than categories lower in the table. Category E at the bottom of the table is more complex with more influence of the students' experience of learning.

Table1: Outcome Space of Online Tutor Support

(Referential Aspect) Meaning	(Structural Aspect) - Discerning and being focally aware of, and the relationships between:
Category A: Online Tutor Support is seen as Uninvolved.	1) The aspect of interaction as having a dimension of variation of limited participation and actions resulting in *little to no reciprocal events* and 2) the aspect of experience of learning interpreted as having a dimension of variation of *no significant influence* for students.
Category B: Online Tutor Support is seen as Confirming.	1) The aspect of interaction as having a dimension of variation of reciprocal events resulting from a *reaction* to explicit or implicit actions by the students and 2) the aspect of experience of learning interpreted as having a dimension of variation of an *extending influence* for students.
Category C: Online Tutor Support is seen as Elaborating.	1) The aspect of interaction as having a dimension of variation of actions by both students and online tutors of dialogue and participation with a number of *reciprocal events* and 2) the aspect of experience of learning interpreted as having a dimension of variation of a *significant influence* for students.
Category D: Online Tutor Support is seen as Encouraging.	1) The aspect of interaction as having a dimension of variation of *reciprocal events* with actions initiated by the online tutors and 2) the aspect of experience of learning interpreted as having a dimension of variation of a *encouraging influence* for students.
Category E: Online Tutor Support is seen as Confrontational.	1) The aspect of interaction having a dimension of variation of actions by the online tutors which were seen as hindering further actions by students resulting in *limiting reciprocal events* and 2) the aspect of experience of learning interpreted as having a dimension of variation of *negative influence* for students.

CONCLUSION

Researching using a phenomenographic approach is seen as one way to contribute to our understand of the described experiences students give to the phenomenon of online tutor support and as an example of researching networked management learning phenomena. As Säljö (1988:35) argues, “Access to *the learner's perspective* on the activities of teaching and learning is essential for understanding educational phenomena - and for improving education” (emphasis in original).

REFERENCES

Alexander, S. (2001). E-Learning developments and experiences. *Education and Training, 43*(4/5), 240-248.

Arbaugh, J. B. (2001). How instructor immediacy behaviours affect student satisfaction and learning in web-based courses. *Business Communication Quarterly, 64*(4), 42-54.

Bibeau, S. (2001). Social presence, isolation, and connectedness in online teaching and learning. *Journal of Instruction Delivery Systems, 15*(3), 35-39.

Booth, S., & Hulten, M. (2003). Opening dimensions of variation: An empirical study of learning in a Web-based discussion. *Instructional Science, 31*, 65-86.

Burge, E. (1994). Learning in computer conferenced contexts: The learners' perspective. *Journal of Distance Education, IX*(1), 19-43.

Carswell, L., Thomas, P., Price, B., & Richards, M. (2000). Distance education via the Internet: The student experience. *British Journal of Educational Technology, 31*(1), 29-46.

Conrad, D. (2002). Engagement, excitement, anxiety, and fear: Learners' experiences of starting an online course. *The American Journal of Distance Education, 16*(4), 205-226.

Dewey, J. (1916). *Democracy and education*. New York: Macmillan.

Garrison, D. R. (1993). A cognitive constructivist view of distance education: An analysis of teaching-learning assumptions. *Distance Education, 14*(2), 199-211.

Garrison, D. R., & Archer, W. (2000). *A Transactional Perspective on Teaching and Learning: A Framework for Adult and Higher Education*. New York: Pergamon.

Gibson, C. (2003). Learners and Learning: The Need for Theory. In M. Moore & W. Anderson (Eds.), *Handbook of Distance Education*. (pp. 147-160) Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc.

Grossman, P. L. (1992). Why models matter: An alternate view on professional growth in teaching. *Review of Educational Research, 62*(2), 171-179.

Hodgson, V., & Watland, P. (2004). Researching networked management learning. *Management Learning, 35*(2), 99-116.

Howland, J., & Moore, J. (2002). Student perceptions as distance learners in inter-based courses. *Distance Education, 23*(2), 183-195.

Landen, M. (1997). The role of technology in education and training. *Industrial and Commercial Training, 29*(7), 230-235.

Lybeck, L., Marton, F., Stromdahl, H., & Tullberg, A. (1988). The phenomenography of the mole concept in chemistry. In P. Ramsden (Ed.), *Improving Learning: New Perspectives*. London: Kogan Page.

Mann, S. (2003). A personal inquiry into an experience of adult learning on-line. *Instructional Science, 31*, 111-125.

Marton, F. (1981). Phenomenography: Describing conceptions of the world around us. *Instructional Science, 10*, 177-200.

Marton, F. (1986). Phenomenography: A Research Approach to Investigating Different Understandings of Reality. *Journal of Thought, 21,* 28-49.

Marton, F. (1994). Phenomenography. In T. Husén & T. N. Postlethwaite (Eds.), *The International Encyclopedia of Education*. (Vol. 8, pp. 4424-4429): Pergamon.

Marton, F., & Booth, S. (1997). *Learning and Awareness*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

McCartan, A. (2000). Use of IT in a postgraduate distance learning course: Part 1: Students' experiences. *Innovations in Education and Teaching International, 37*(3), 181-191.

Ortiz-Rodrigues, M., Telg, R., Irani, T., Roberts, T., & Rhoades, E. (2005). College students' perceptions of quality in distance education: The importance of communications. *The Quarterly Review of Distance Education, 6*(2), 97-105.

Rogers, C., & Freiberg, H. (1994). *Freedom to Learn* (3rd ed.). New Jersey: Prentice Hall.

Säljö, R. (1988). Learning in Educational Settings: Methods of Inquiry. In P. Ramsden (Ed.), *Improving Learning: New Perspectives*. (pp. 32-48) New York: Kogan Page.

Stevenson, K., Sander, P., & Naylor, P. (1996). Students perceptions of the tutor role in distance learning. *Open Learning, 11*(1), 22-30.

Svensson, L. (1997). Theoretical foundations of phenomenography. *Higher Education Research & Development, 16*(2), 159-171.