

But that didn't happen last semester: Explanations of the mediated environmental factors that affect online tutor capabilities

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The purpose of this study was to examine the online learning milieu to identify what capabilities are required of online tutors. To do this, it was necessary to determine what environmental factors affect online tutor capabilities and what the relationship was between the capabilities and the factors. This was accomplished by using an ethnographic approach of data collection to explore the perceptions of online tutors, students and unit coordinators in tertiary online learning environments.

This study identified critical online tutors sub-capabilities as well as thirteen environmental factors which have a mediated affected upon these sub-capabilities. The unearthed environmental factors emerged from the analysis of the collected data which allowed the relationship between the capabilities and factors to be investigated.

One of the major implications stemming from this research was the formation of a model of the mediated relationships between online tutor capabilities and environmental factors which affect them. This included the creation of a framework of capabilities and sub-capabilities specifically for online tutors and the identification and organisation of environmental factors which affect online tutor capabilities, which this paper will focus upon.

Keywords: distance education, tutor capabilities, online learning

Introduction

The Internet is influencing, some would say revolutionising, most aspects of our society, not just distance education (Howell, Williams, & Lindsay, 2003; Simonson, Smaldino, Albright, & Zvacek, 2003). As it has only been available to the public since the early 1990s, it is a new phenomenon and there will be attempts to impose older, more traditional approaches to control its use in education (Fraser, 1999). These older approaches are limited by earlier technologies and therefore many believe that to realise the benefits of the new technologies of the Internet educators need to start preparing to use them with new pedagogies (McDonald & Postle, 1999).

There has been a worldwide movement to implement these online education technologies in Universities (Oliver, 2001). In Australia, use of these technologies has coincided with the development of pedagogies to improve the merging of distance education and asynchronous, anywhere / anytime learning (Cashion & Palmieri, 2002; Harper, Hedberg, Bennett, & Lockyer, 2000). This has included measures such as employing instructional designers to create online courses or units and then employing tutors to implement the learning programs. As with any educational program, its success is largely dependent on its implementation (Clarke, Butler, Schmidt-Hansen, & Somerville, 2004; De Cubber, 2001; Levy, 2003; Volery, 2001).

While it is clear that online learning is expanding rapidly (Goodyear, Salmon, Spector, Steeples, & Tickner, 2001) research into the capabilities of online tutors have not kept pace (Reeves, 2003). This study addressed this gap in the literature on the topic of the capabilities required by online tutors by addressing the question of is "What are the relationships between text based online learning environment factors in tertiary education and the required capabilities of tutors as perceived by the stakeholders?" The focus on the role of an online tutor was one of improving clarity of educational roles and definitions. This decision removed the unit development and control of content roles often associated with teachers but often not the responsibility of university tutors in online classes with large enrolments.

Competencies is a term used throughout the literature to describe many different descriptors of tutors and their actions. A less frequently used term that is closely related to competencies is *capabilities*. This is a term which is used almost interchangeably with competencies by organisations such as IBSTPI (2003). This paper will use the term *capability* rather than competency due to the similar nature of the definitions and because of the preconceived values associated with each term. In his teaching experience, the author felt that competencies seems to imply negative questions about competence while *capabilities* seems to focus on the positive abilities of the tutors and what they are capable of achieving. For the purpose of this study, the term *capability* will be defined as follows: those knowledge, skills, and judgements that enable a tutor to perform his/her role. Also, the framework schema used for the online tutors in this paper is the one presented in Reid (2003). This schema has five capabilities which are: *Content Expertise, Course Management, Evaluation, Process Facilitation* and *Technical Knowledge*.

Data collection and analysis

Data collection

The research employed an ethnographic design with the major methods of data collection being interviews of 6 online tutors, 7 students and 4 unit coordinators in addition to electronic and face to face observation. A great deal of rich data was collected throughout this process. As this was an ethnographic study, the data that were collected was constantly being reviewed throughout the data collection phase of the study. The data collected in the earlier parts of the study were used to inform the data collection which occurred later in the process. The earlier data was constantly referred to in the creation of interview questions and observation points for later phases of data collection. This lead to all the previous collected data being the basis for the tutor interviews, which were the overriding sources of information for this study. Figure 1 shows the schedule of the data collection phases and what data sources were drawn on in each phase and how they were drawn on.

Table 1: Schedule of data collection

Phases	Unit coordinators	Online unit stakeholders	
		Students	Tutors
1 Pre-Unit	None collected	Pre-unit online survey to all students	Pre- Unit online Survey to all tutors
2 During Unit	Interview all, items based on data from the literature and analysis of data collected in phase 1	Electronic observation	Electronic observation, Face to face observation
3 Unit Wrap up	None collected	Post-unit online survey to all students	Post-unit online survey to all tutors
4 Post-Unit	None collected	Interview sample of students, items based on analysis of data collected in phases 1, 2, and 3	Interview all tutors, items based on analysis of data collected in phases 1, 2, and 3

Online tutors were the focus of this study so the decision was made to use the data gleaned from the online tutor interviews as the central emphasis of the analysis, with the unit coordinator and student interview data being considered secondary sources of information. Then the findings of the data analysis were successfully triangulated with the secondary sources of information collected in this study, as well as with the supplementary sources of data.

Introductory analysis

As the online tutor interviews were analysed, it became apparent that each tutor had themes of ideas running throughout their interview. Each interview was then analysed independent of the other five and the themes within the interview were defined and temporarily labelled based on the content area of the

themes. Examples of the temporary labels included: *Online Presence / Charisma*, *Time Management*, *Tutor as guide*, and *Facilitator*.

The most commented on themes in each of the six tutors' interviews were compiled together resulting in thirty nine total themes on a spreadsheet arranged according to the name of the tutor. The themes were then categorised independent of the tutors, across all the tutor interviews. Based on the content of each theme and the way the individual tutor presented their thoughts, eleven categories were evident in the themes. The categories were: *Communication Issues - student / tutor*; *Community*; *Delivery*; *Design*; *Institutional issues*; *Pedagogy*; *Student Attributes*; *Student Responsibility*; *Technical Issues*; *Tutor Attributes*; and *Tutor Experience*.

Organisation of themes

The tutor interviews were analysed a second time with the knowledge that there were a number of themes running throughout the interviews. Building from the previous analysis allowed for a deeper focus on concepts that were basic underlying beliefs in the tutors' practice. Examples of this included the ability to use technology that was rarely specified by tutors, as it was simply included as they gave examples from their units.

The standard definitions for the eleven categories was a necessary step for the organisation of the themes evident in the interviews as there were several interviews which had comments which were seemingly covered by a number of first review tutor themes. One tutor's first review had themes which differentiated between *the tutor as guide* and *student motivator* as well as *content facilitator* and *content expert*. The process of creating the definitions provided a structure for clarity of thought the researcher used to differentiate between similar concepts.

The collection and analysis of the definitions for the interview themes shows that the creation of the definitions was not a quick process, rather it was methodical and well thought out. Some of the categorisations in the interviews were very obvious after all the data was examined, such as *Technical Issues* and *Communication – Student / Tutor*. Other categorisations required much more thought as the tutors did not seem to have put as much thought into things like *Design / Pedagogy* and *Student Expectations*. Since the tutors in this study did not have any input to the design of the unit before they started tutoring and many of the tutors were not trained educators, it was understandable that the design of the unit was not foremost on their list of concerns to discuss. Also, since the tutors did not have any input into who was permitted to enrol in the unit, they had a many things to say about the students and their expectations.

Clarification of themes

By the end of the second review of the tutor interviews, the eleven definitions of interview categories had definitions and it became obvious that there was more grouping needed to achieve a quality list of categories. A number of categories from the original eleven were merged or reworked, such as the *Design* and *Pedagogy* categories. There were other changes including the *Delivery* category was examined and reworked leaving its contents to better fit into the new *Technical Milieu*, *Facilitation of Learning* and *Content Milieu* categories.

The reworking of the categories which were identified as factors which affect online tutor capabilities resulted in a framework consisting of thirteen environmental factors to replace the original interview theme categories from the earlier reviews of the data. The themes were identified as factors which affect online tutor capabilities because there were several categories which had little to do with the online tutor and their abilities, such as *Student Expectations* and *Student Responsibilities*. After examining the factors in relation to the literature, there were a number of consistencies with the themes and the factors which affected online tutor capabilities according to the literature.

Defining of environmental factors

Through triangulation, the factors were also found to be consistent throughout the other sources of information collected during this study, most noticeably in the online student interviews and the online unit coordinator interviews. The environmental factors are:

Table 2: Environmental factors which affect the capabilities of online tutors

Category	Definition
Community	How the learning community (or lack thereof) created by the design of the unit, the actions of the tutors and the actions of the students operates.
Content Milieu	How the educational material was presented, accessed, interacted with, and used in the unit.
Design / Pedagogy	How the pedagogy involved with the design and presentation of the unit affects the students and tutors.
Facilitation of Learning	How the tutor used their understanding of the learning process to assist students without direct instruction.
Institutional Milieu	How the unit is affected by the policies, procedures and beliefs of the offering institution.
Interaction student / tutor	How the tutor and student interact in all situations, at a distance, in person, individually and in a group, and facilitated by technology.
Management of Teaching Processes	How time management, marking, preparation time, and other non-instructional teaching processes affected the unit.
Student Expectations	How what students expected and believed affected the unit.
Student Responsibility	How what students were responsible for according to the tutor, the unit designer and the university affected the unit.
Subject Epistemology	How the tutor showed an expertise in the content subject area.
Technical Milieu	How learning to use technology, potential access problems, how to use technology in a proper pedagogic manner, and other facets of technology usage affected the unit.
Tutor Experience	How the experience (or lack thereof) the tutor had with tutoring online affected the unit.
Tutor Personality	How the tutor as a person dealing with emotions, behaviours and personality affected the unit.

Mediation of online tutor capabilities

As the next step, it was necessary to determine the mediated relationship between these environmental factors and the tutor capabilities. The online tutor interacted with the students through online learning environment technologies. As this interaction took place, it became apparent that the capabilities of the tutor had a relationship with the factors that emerged from the environment. The learning environment in which the relationships took place had a mediating effect on these relationships. There was no direct link between the factors and the categories, as the learning environment mediated the relationships between the factors and the capabilities. It is this mediated relationship that is at the centre of the entire study. This process was achieved by a comparison of the thirteen factors and the five capabilities identified in Reid (2003).

There is no simple statement which will encapsulate the relationships between the factors and the capabilities presented in this paper. Each factor affects the capabilities to a greater or lesser extent, depending on the situation. The situation in each unit demonstrated that the learning environment mediated the relationship between the factors and the capabilities. Each situation was very complex involving many factors therefore the mediation involved was complex also, especially between the strengths of the mediated relationships between each factor and each capability. This led to the creation of a model of the mediated relationships between online tutor capabilities and the environmental factors that affect them. This model is presented in Figure 2.

There were different strengths of mediated relationships between each factor and capability. Examples of this include the strong mediated relationship between the capability Technical Knowledge and the factor Technical Milieu. This was a strong relationship throughout all the interviews and observations. Another example is the much weaker mediated relationship between the capability Evaluation and the factor

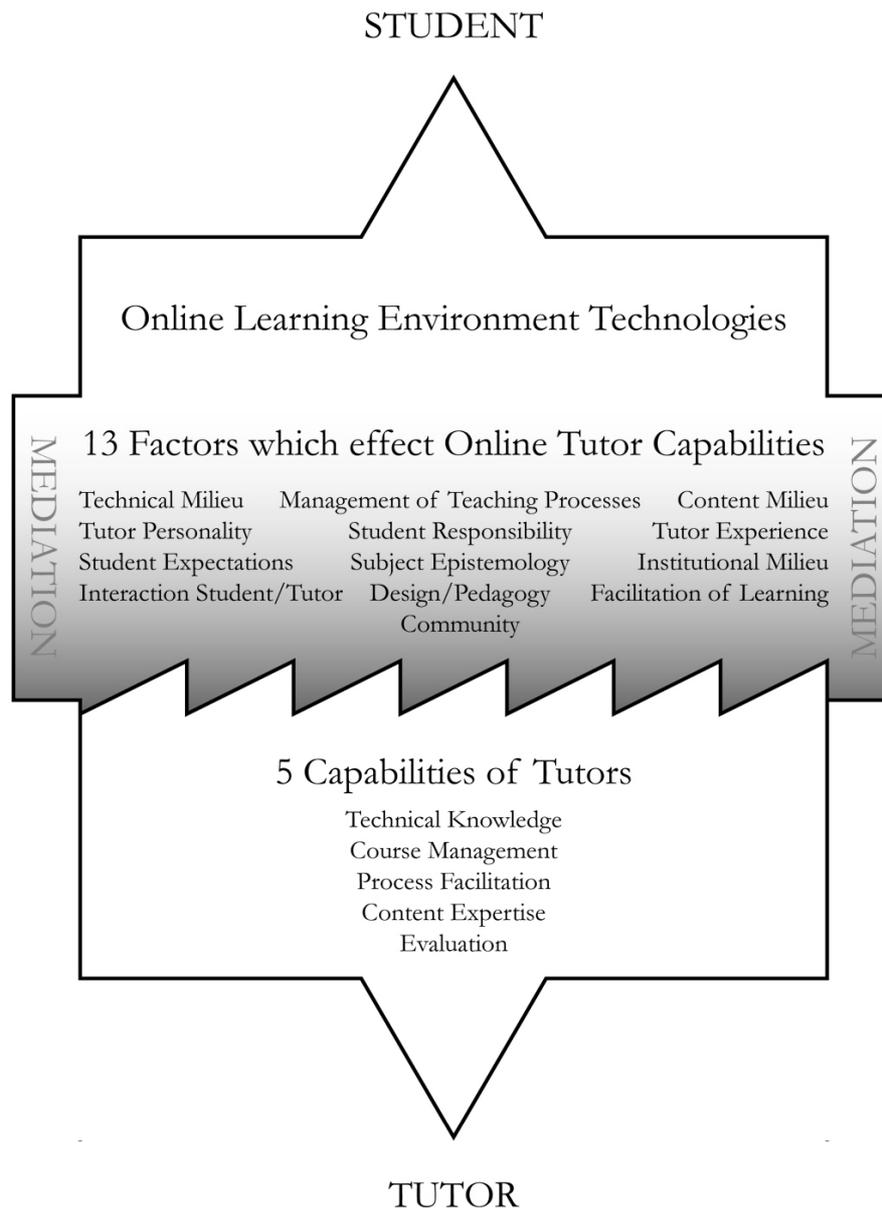


Figure 2: The Reid / Newhouse model of the mediated relationships between online tutor capabilities and the environmental factors which affect them

Technical Milieu. There was a relationship between the two but it did not have the consistent connection throughout the data sources.

In the various units studied, environmental factors played a variety of roles. Some factors were prominent in particular units and negligible in others. Other factors affected the units in very different ways. For example, prominent factors in *Unit B* dealt with included *community*, *interaction student/tutor* and *student expectations*. The tutor in *Unit A* dealt with prominent factors including *community*, *interaction student/tutor*, *design / pedagogy* and *student expectations*. While they both dealt with similar factors, they needed vastly different capabilities because of the nature of their learning environments. The tutor in *Unit B* wanted more community creation and public interaction between students and tutors while the tutor in *Unit A* talked about being overwhelmed by the amount of public interaction her community entailed. These were two facets of the same factors. These examples are illustrative of the way each factor acted uniquely in each learning environment in the study. This uniqueness of performance caused the factors to

have varying relationships with the capabilities as the nature of the factors was dependent upon the learning environment they acted within.

Implications for practice

From this study come a number of implications for practice. A major implication is the importance of the interaction between the students and the tutor. This interaction runs throughout the following recommendations.

The clarity of the communication from the tutor was vital for the success of the unit. When students were able to easily understand what the tutor was trying to communicate, it reduced the workload, frustration and isolation in the unit. Timeliness of feedback was vital to engaging students in the online education process. If students do not engage with the process within the first two weeks, they were more likely to withdraw feeling a great deal of frustration.

Another aspect of successful communication was managing the implementation of strategies to clarify people's roles and responsibilities. One participant who made the comment, "Don't introduce uncertainty to the unit" stressed this. Especially important was the clear definition of student responsibilities compared to their expectations. Clarity included putting strategies in place to handle the routines and workings of the unit include giving scheduled times that email would be answered and planning for the future. Careful planning and being aware of what the students require reduces potential problems.

Students desire to have a person to communicate with throughout the semester so this person needs to keep the interaction with students as clear and open as possible. Students in this study wanted to feel as if the tutor cared for them as a person. This interpersonal caring moderated the negative comments made by students when they discussed problems in the units.

Good technical knowledge was not optional in online tutoring. Tutors were the first people contacted by students when technical problems arose. Tutors needed to be able to answer student questions as often as possible without making mistakes which needed to be corrected later.

Online tutors need to be aware that online students are not the same as face to face students, both demographically and expectation-wise. Given that the interactions in online education are more one to one than one to many, this empowers students compared to face to face education. Many units are designed based on constructivist principles of learning so these students are looking for guidance rather than a teacher. The expectations of these students were potentially very surprising if the tutor was not prepared for them.

Tutors also need to be prepared for the workload which accompanies online education which was described by one participant as "black hole of work." Not only is it much greater, it is quite different from face to face tutoring. Communicating with students requires a great deal of typing which takes many people longer than simply speaking. Also, the one to one relationships with students is much more time consuming than the one to many relationship in face to face tutoring.

Conclusion

This paper identified and organised the environmental factors that affect online tutor capabilities. This included the formation of a paradigm of the mediated relationships between online tutor capabilities and environmental factors which affect them. The paper also addressed the lack of depth in the literature regarding online tutors, their capabilities and the environmental factors which affect those capabilities.

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