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UNIVERSITY OF SOUTHAMPTON

FACULTY OF LAW, ARTS AND SOCIAL SCIENCES

SCHOOL OF EDUCATION

**How useful are bounded online chat rooms as a source
of pastoral support in a sixth-form college?**

by

Catherine Richards

Thesis for the degree of Doctor of Philosophy

2009

UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF LAW, ARTS AND SOCIAL SCIENCES

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Doctor of Philosophy

HOW USEFUL ARE BOUNDED ONLINE CHAT ROOMS AS A SOURCE OF PASTORAL
SUPPORT IN A SIXTH-FORM COLLEGE?

By Catherine Richards

Since the introduction of chat technology there has been resistance within education to fully engage with it partly due to policy making that has left teachers disempowered (UCLAN 2002:66). Unlike other innovative technologies, its use has been limited. Pastoral support has developed significantly in education but in some instances, like chat rooms, has been viewed with scepticism. One reason for this scepticism may be that a clear measurable link between support and achievement is not easily proven. However, there is widespread acceptance that academic success is not the only measure of intelligence (Gardner 2006) and that supporting and understanding how young people communicate with each other and feel supported is an important research area for development.

This research uses exploratory case study to consider the introduction of a bounded bespoke chat system into a sixth-form college. A range of sources are considered including semi-participant observation, chat transcripts and observational diaries. It is shown that the introduction of such a system can be managed effectively and be useful for students. The research reveals there are critical drivers for its successful introduction. The first relates to the role of the moderator, including perceptions about them and their impact on rules and boundaries for behaviour. The study shows that finding moderators with the appropriate level of skill is challenging. It also shows that students access support online in different ways compared to offline and that the use of topics can influence their behaviour. Anonymity, gender, the use of 'text speak' and participant consciousness all affect communication. Future research is proposed into the specific impact of the gender of the moderator on chat usage, the impact of an individual institutional culture on the willingness of learners to use chat, attitudes of stakeholders towards chat and the purpose of 'lurking' in bounded environments.

Key words: bounded chat rooms, pastoral support, moderator, 'text speak', gender, counselling, anonymity, participant consciousness, emoticon.

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Catherine Richards

March 2009

How useful are bounded online chat rooms as a source of pastoral support in a sixth-form college?

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Chapter 1 Introduction

The research reported in this thesis is of particular importance and interest to me from both a professional and personal perspective. I have been teaching for the past thirteen years and during this time, I have become particularly interested in the way that teachers are making greater use of online tools in the classroom. My career path has also led me towards a greater involvement in the pastoral care of students. I have been interested in the extent to which pastoral support can be offered in new and useful different ways. As a mother of three children, I have watched changes in the way my own children communicate and the way that they support their friends through chat rooms and other mechanisms online.

This study therefore combines two areas of study that I have been particularly interested in; the use of real-time (synchronous) communication, in this case online chat rooms, and pastoral support in a sixth-form college. In this chapter, I will discuss the research problem that I am investigating, the rationale for the study, the research questions that I will attempt to answer and the building of a conceptual framework. I propose that it is possible to offer pastoral support in a sixth-form college through a chat room but that the usefulness of that support is likely to be affected by the level and type of students present in that college, the policies of that institution and the technology that is available. Key terms that importantly define chat in context are given in Appendix 1.

The research problem

Young people have been effectively making more and more use of synchronous communication, and in particular chat, to communicate and exchange information over the past decade. This is because it allows them to have live and immediate exchanges with each other. In contrast, there has been some resistance in education in fully engaging with it. This has been partly due to policy making that has left teachers disempowered (UCLAN 2002:66). Therefore, unlike other innovative technologies, its use in education has been limited. Such limitations are significant at a time when government policy and therefore educational practice requires staff and students to have higher levels of digital literacy (DFES 2005 & 2006) and yet be cognizant of additional safety requirements (Every Child Matters 2004; Byron Review 2008) to safeguard young people online. In fact, the importance of safeguarding children online has been the subject of House of Commons Debate on cyber bullying (20 Feb 2008).

Whilst there has been a significant amount of research in public chat forums the research within restricted environments such as sixth-form colleges has been much more limited. Research in public chat rooms is conducted in an environment that is effectively open for any users. There have been safety concerns about the way that users operate in them and guidelines for e-safety developed for young people (BECTA 2005 & 2006). The Byron Review (Byron 2008) and its associated Action Plan (Byron 2008:10) highlight improvements needed to support vulnerable groups online. The Action Plan puts into place a clear strategy for the measurement of e-safety knowledge and skills of young people by Spring 2009. It also highlights that it is becoming more important to conduct further research into how the growing number of 'e-tools' can be used appropriately and effectively in education at a time when there is momentum building behind the Learner Voice and Personalised Learning. Young people are using new technologies including chat to communicate with each other yet we have limited knowledge or insight into how their voices are being heard. There is also limited knowledge of support methods, particularly pastoral support methods, and how they may be used and reshaped usefully online (Futurelab 2006:51). Online pastoral support offers a form of exchange and support that would benefit from further investigation. This is because it offers an alternative way of providing pastoral support by a tutor. This is particularly important as tutoring/pastoral support is often viewed negatively and has been suggested to be poor in one out of eight tutors in schools (Ofsted 1998).

This thesis' interest is in exploring online chat rooms for the purposes of providing pastoral support in a sixth-form college. This identifies three key problems for further investigation. Firstly, there is recognition amongst the wider community that young people are increasingly using online systems to communicate and that skill levels are significantly lower amongst the wider and educational communities. Secondly, there is a reluctance and concern about using chat rooms in educational settings due to concerns about e-safety. Finally, sixth-form colleges are looking for ways to increase support for students, the quality of support and to engage learners in this process by using methods that are most relevant to them rather than to the institutions themselves. This may be possible online.

The rationale for the study

Online chat became of interest to me whilst conducting research into its use in the sixth-form curriculum. Observing students, prior to my doctorate, taking part in chat forums and coding their discussions made me aware that chat could become a valued method of communication either in the classroom for teaching or for support purposes (Richards 2002). I noted, within my own research, that chat appeared to empower students who found interaction within class on a face to face basis difficult. It encouraged those who did not usually 'verbally speak' to interact more easily with their peers in online text, often producing significantly more comment than face to face (Richards 2002). Other researchers were finding that students and young people loved using chat (Preece 2000:163; Dickey 2003:117; Kreijns 2004:143) and therefore, my desire to know more about the behaviour of my own students combined with emerging interest from other researchers within the field made me want to learn more about ways chat could be used in the sixth-form college environment and the technology that could be used to make this happen.

A further reason for me wanting to carry out this research has been the privileged position that I am in as a member of the pastoral support team in a sixth-form college. Such access means I have a good understanding of the ways in which pastoral support works in a sixth-form college and can then combine it with the study of a system to support students in a safe, bounded way using 'bounded chat'. Bounded chat means using chat in a way that can only be accessed by college students from one institution and not the general public. Therefore, it presents new challenges and research ideas that help to build a richer body of knowledge within the field. Beetham (2005:85) identified that research priorities for e-learning include identifying how technologies can be exploited in different social settings and have positive impacts on motivation, individualisation, equality of opportunity and active participation. Conducting this research will help to investigate some of these areas and more fully investigate the pedagogical use of chat to highlight ways that can effectively support its use.

Pastoral support combines aspects of emotional literacy 'the ability to perceive emotions, to access and generate emotions so as to assist thought' (Salovey & Sluyter 1997:22) with welfare structures that are designed to develop the concepts, attitudes, facts and skills that are necessary for all individuals (Ribbins & Best 1985:36). Pastoral support provides opportunities to identify and respond to problems that an individual may be experiencing (Johnson 1985:100) in education. These include health, welfare, guidance,

counselling and support (Lang & Marland 1985:22) as well as other more academic issues such as examinations management or dealing with financial problems. Pastoral support has been linked to improved academic performance (Sharp 2001) and better social interaction for students with their peer group (Lanthier & Windham 2004; Weare 2004). Therefore, a source of pastoral support using online methods provides new knowledge in this area of research interest.

Pastoral support is a complex area to explore within the sixth-form environment as students can find it difficult to discuss their feelings with their teachers or peers and yet need an outlet in which to express them. It provides opportunities for young people to have the capacity to think for themselves in a responsible way (Lang & Marland 1985:135). Chat provides an alternative method of communication that can allow students to receive pastoral support in a safe, controlled and anonymous environment and gives them opportunities to experience new forms of human association and social organisation (Slevin 2002:85). Being able to investigate anonymity and the implications of anonymity within a bounded environment will bring new thoughts and ideas to the field of online support. Thus, using chat within a sixth-form environment provides an opportunity to provide personalised support in a new and innovative way.

The research questions and building of a conceptual framework

This study considers the implementation of chat as a source of pastoral support in a sixth-form environment. It is designed to give students an alternative method of communicating their personal issues in an environment that forms and dissolves as new users join or leave the session. This allows new thoughts, opinions and ideas to be shared and that no two chat sessions will be the same. The overarching research question that sets this research into context, the associated three areas of subordinate questions and the underarching question that draws all three subordinate questions together that are shown in Figure 1.

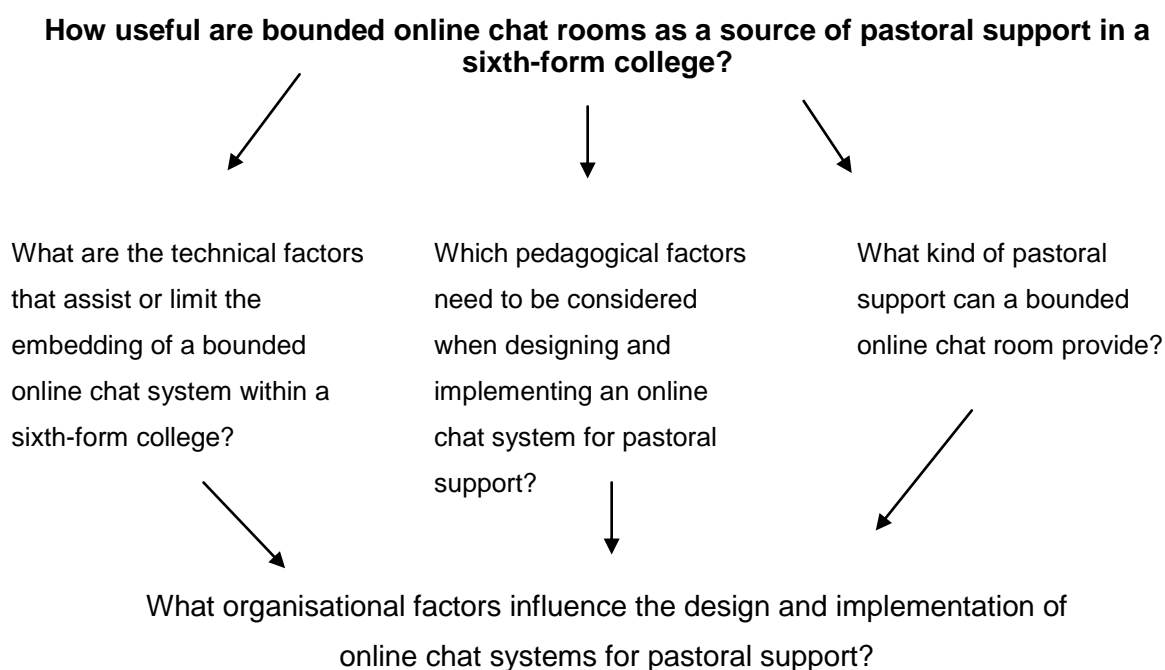


Figure 1 The relationship between the key research questions

In answering the underarching research question, I hope to be able to provide more guidance that is pragmatic for colleagues considering the implementation of such systems in their institutions. These research questions are the guiding influence throughout the research. They are used throughout the literature review, data collection, intervention and subsequent analysis and evaluation. They represent the key conceptual areas that are drawn from the research; technology, pedagogy, pastoral and organisation that are further explored in Chapter 2.

Summary

A summary outline of each chapter is provided to provide context to the thesis and final thoughts on the study.

Chapter 2 Literature Review

The literature review considers the technical, pedagogical and pastoral influences on the use of bounded chat rooms and the organisational factors that affect the design and implementation. Online bounded chat systems and their generic benefits and limitations are considered. The chapter considers the conceptual issues that are drawn from the literature; pastoral, pedagogy and technology. It also considers the underarching impact of the organisation and its influence. The technical issues that assist or limit the use of online chat systems in sixth-form colleges are considered.

Those that assist include safe access, timing and focus. Issues that limit include on-screen presentation and system access. These factors that have the potential to assist or limit are examined and depend on the context of the college.

The chapter then goes on to consider pedagogical issues that influence the design and implementation of an online chat system for pastoral support including its use in a number of different ways and the comparison of three key ways that online chat has been traditionally used. These are to provide an alternative method of communication for comparison purposes, to support the curriculum and to be used as an outlet for emotional support and social interaction. The research analysis highlights the differences and similarities in the use of online chat in these areas. Within this section of the literature review, attitudes towards chat are considered and there is a discussion of the issues relating to difficulties encountered when researching in this field including cultural and gender attitudes.

The literature presented considers the aspects of the study relating to pastoral support including the use of online chat for support. Literature on emotional literacy, emotional intelligence and pastoral care has been presented including examples of how it is being used within education and methods of coding feelings in order to demonstrate its role. The literature presented describes benefits associated with supporting emotional literacy and pastoral care and some of the ways that this can be done.

The chapter also considers the overall factors that influence the introduction of online chat systems for pastoral support by investigating those factors that are internal to the organisation for example its culture and teaching staff and also external factors such as government policy, parents and the media. The chapter ends by drawing the key concepts together to build the conceptual framework for the research.

Chapter 3 Research Design

This chapter considers the research design in detail including the rationale behind the use of case study. It considers why a case study methodological approach was felt to be most appropriate for this study. It considers how semi-participant observation and transcript analysis provide important research data that needs to be used to establish what is happening in this case. It also considers the impact of validity on the study and issues relating to triangulation of data in an anonymous environment.

Chapter 4 The case in context

This chapter provides a description of the college in context. It provides justification for why a bespoke chat system is used in this research and the influence that the system has on data collection and data sets. It examines the ethical issues that are critical for the implementation of a chat system into a sixth-form environment and discusses the notions of consent, security, disclosure and researcher integrity in the research process.

Chapter 5 Results

This chapter describes the results according to the key concepts of technology, pedagogy, pastoral and organisation. The results show that the IT infrastructure of a college, topics chosen and level of study all influence contributions. Gender, anonymity and the bounded features of the system impact on access and contributions. These are explored within this chapter. The influence of the moderator is also considered.

Chapter 6 Analysis and discussion of results

This chapter builds on the results and analysis of Chapter 5 by relating the findings to the relevant literature. There is discussion about the impact of anonymity on supportive chat and the extent and issues such as identification of participants through nicknames or real names being added on screen. Consideration is given to disinhibition theory that suggests students feel inhibited on-screen and therefore, are more likely to behave inappropriately. There is some debate about the different types of experimentation and their impact on policy making.

Chapter 7 Conclusions, limitations of the study and areas for further research

This chapter draws the key concepts of technology, pedagogy and pastoral together and demonstrates that the influence of the moderator is a critical driver for success within a bounded environment. The chapter explains that there is clear interest from students in using chat and differences in their use and behaviour according to their gender and ability.

Models of significant influences are presented including the role of the moderator, the interest of students, pastoral support issues and implications for college policy making. The limitations of the study are considered including the uniqueness of the case and the extent to which it can be applied to other institutions.

Finally, key areas for further research are provided. These include the impact of the moderator's gender on the use of online chat, the extent to which 'lurking' is useful for students accessing 'bounded' chat sessions, the impact of the culture of the organisation and attitudes of key stakeholders towards its use for supportive purposes.

This study has been a source of fascination to me throughout the five years of research. The results show that whilst chat continues to be used by young people as part of their social support structure, it has the capacity for self-referral engagement in educational environments. Controlling chat through positive engagement is still a fundamental principle that I continue to believe in and I believe is demonstrated within the results.

Catherine Richards

March 2009

Chapter 2 Literature Review

This study aims to examine both the restrictive nature of bounded chat systems together with pastoral support to provide an alternative method of support for students in a sixth-form college. I shall begin the chapter by considering the particular features that make chat different to other online systems including its often public nature, spontaneity, potential anonymity and communication structures. I shall argue that researchers to date have tended to focus on public online chat ‘conversations’ and that there are specific affordances and implications for educational institutions of using bounded chat systems. The literature demonstrates that there are different levels of boundedness and control mechanisms, for example moderation, that have implications for my study. The literature shows that whilst chat is commonly used in the public domain for supportive purposes there is more limited evidence of it being used within bounded environments and even more limited evidence of its use within education. I shall argue that introducing a bounded chat system into a sixth-form college will enhance our understanding of bounded chat systems and their usefulness for educationally supportive purposes. The literature is organised into the three key subordinate questions to outline the technical, pedagogical, pastoral factors that support or limit the embedding of a bounded online chat system in a sixth-form college. The implications of these different factors are drawn together to inform practice through the underarching question that considers the impact of organisation factors on the design and implementation. The chapter concludes by considering the implications of the presented research literature for my study.

2.1 Defining online bounded chat systems

Since its early beginnings, the introduction of Internet Relay Chat (IRC) in 1988, chat has grown and expanded worldwide. Chat is being used to support an ever-increasing number of users for different purposes. These may be social, professional or organisational (Fenichel 2004:14). It is a form of synchronous communication that often takes place in a many-to-one communication structure and in a ‘public forum’ (Appendix 1 defines terms in the wider chat context). ‘Public forum’ means that effectively almost any user on the network is able to access it and without restriction. Research in this field has been focussed on the use of public online chat and on its affordances rather than the impact of restrictive practice and its use within educational environments.

Studies refer to chat as 'conversation online' (Mühlpfordt et al 2005:460), 'talking with your fingers' (Harasim et al 1995:208) 'rapid written conversation' that is accomplished 'without speaking' (Merchant 2001:300; Driscoll 2002:329) or 'informal communication' (Clarke 2004:199) even though it involves no oral speech at all. It is this concept of being able to 'talk' online that makes chat an alternative form of communication that may be usefully applied within restrictive environments and be able to support students in different ways. (Schrodt & Turman 2005:180).

When chat takes place, it is a fast exchange of text between two or more users of a PC and keyboard using software. It allows real-time discussion, line by line, through reading and typing (Suguri et al 2000:1; Kovalchick et al 2004; Preece 2000:138; Baym 1998:43; Zack 2004:107). It is instantaneous, can be watched forming and thus is extremely powerful because it requires a real-time response to a message. It is this ability to combine the real time or synchronicity of speech with a permanent record of written text that makes it a unique and new method of human contact (Zhao 2006:462).

Chat is a relatively new method of communication so the norms and values that govern its usage are emerging which makes it difficult to provide a set of expectations for usage and behaviour within it (Lea et al 1992:93). It permits interpersonal anonymous contact in a way that was not previously possible. Chat is part of new social patterns developing through technological change that may be resisted as some prefer the status quo of maintaining communication channels that already exist rather than using new methods (Chakyo 2002:136). The literature highlights that the use of chat has implications for all aspects of online communication including those that are likely to take place in educational institutions.

Bounded online chat systems take the interactivity of chat but place it within a restrictive context by only allowing participants who are invited in to join the chat. Bounded means having limits or boundaries established (Wordreference.com). Having bounded access to an online system means that entry to the group is controlled (Shield, Atweh & Singh 2005:609). Therefore, bounded or closed chat rooms have entry restrictions or gatekeeping mechanisms such as identification codes or passwords. Online chat systems may be bounded through operation as they may only work within the systems of an organisation. This means they can be much more difficult to access from outside due to other security measure such as a firewall. The level of boundedness within an institution will depend on the level of restriction to enter the chat system and the risk to the group of others gaining access. For sixth-form colleges such risks are high due to the vulnerability and age of the students studying there.

The literature shows that there are two potential levels of boundedness that are significant for this study. Boundedness through membership of the institution and then of sessions themselves.

Generic benefits of using bounded online chat systems are drawn from the literature. The first benefit is that the parameters of behaviour and participation are more closely controlled and chosen by the institution. There is significant influence on an online system from the institution's culture and ethos which is likely to lead to higher levels of control and a knowledge amongst participants that they will be communicating with others from that institution rather than to anyone else (Wilson et al 2004:2). The strength of bounded communities comes from joint enterprise, shared repertoire and mutual engagement (Wenger 1998:78 in Figure 2). Boundedness therefore supports online chat systems by fostering cooperation in its widest sense as it creates a community with a shared purpose. This may be through offering support for issues through to the choice of subject area or types of discussion that take place in the system. Boundedness is significant for this study as restricting access to a community such as a sixth-form college means there will be two levels of restriction. The first level relates to access to the college per se and then a second level through the access of students to the system itself.

Key components of communities of practice Wenger (1998:78)

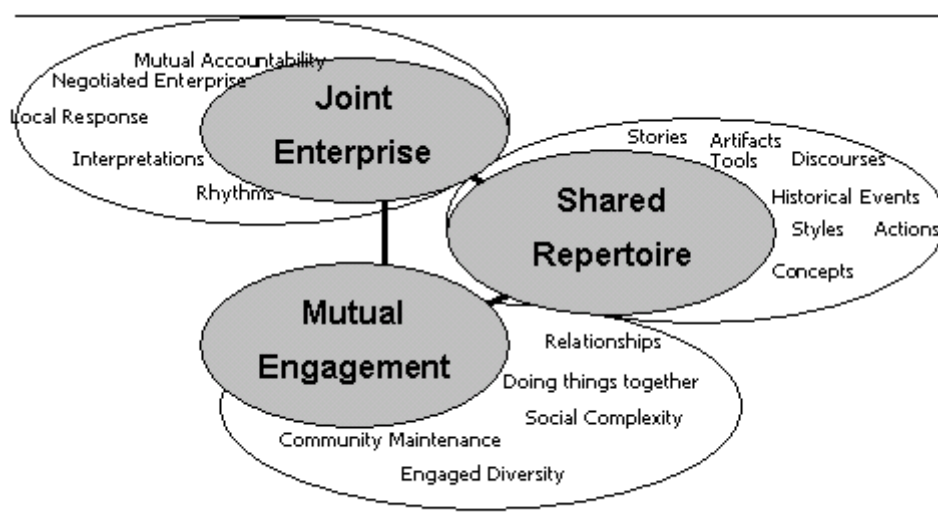


Figure 2 The key components including their constituent parts that form communities of practice according to Wenger.

Bounded online chat systems do, however, have limitations as they may restrict the choices of participants and their behaviour because sessions are more controlled or moderated. Hence, there are implications for institutions in terms of the accountability and responsibility (Hudson & Bruckman 2004:191) of students within such settings.

Bounded chat systems are also accused of limiting difficult experiences that users otherwise might encounter online for example contact with strangers or their ability to become 'social actors' (Valentine & Holloway 2001:386). The value of a bounded online chat system may also be more limiting if users do not perceive any added value from such a system within the existing infrastructure of the institution, that is to say that the system does not offer anything in addition to existing services or groups.

The implications for my study are explored in further detail and in particular, the consideration of factors that assist or limit the use of bounded online chat systems. They are organised into the four research question areas; technical, pedagogical, pastoral and organisational influences in line with research conceptual framework.

2.2 Technical factors

The technical factors that are examined in this section are broadly drawn from two areas of the literature. These are technical factors that directly affect the design and embedding of such systems into organisations and also the level of technical skill of participants. Therefore, issues that are considered to support such systems include safe access, timing, pitch and immediacy. Factors that limit such systems are considered and these include the use of the chat tools, message display, additional needs and time. Further factors are also included that have the potential to either assist or limit the embedding of a bounded chat system depending on the context including attitudes, moderation and reflection.

The literature on access has critical implications for my study and in particular for the building and maintenance of the chat system for this study. A safe system is one that only permits invited participants to access it and can block inappropriate visitors such as adults. This is particularly important with students under eighteen because of child protection policies and legislation that dictates that young people must be safeguarded online (Byron 2008:10). Unless a chat system can be run within a college's firewall, there is the potential that students may access inappropriate externally hosted online software and chat systems. Providing support for students without appropriate restriction could encourage students to break institutional policy rules.

The timing of chat sessions and the ability to reflect are both seen as important elements of an effective chat system. Ebersole (2000) deliberately kept discussion sessions short to make them effective and whilst this may have inadvertently affected the ability of students to reflect, it kept them on task.

The ability to think before taking part also depends on the skill level of the participants involved including their typing skills and previous experience. Users only need to wait the time it takes for them to compose a message and then press enter on their keyboard to see the message displayed which gives very fast feedback. The literature highlights the importance of the flow of messages for an effective system and they should be pitched at the appropriate level for the participants (Dickey 2003:112). Pitching messages within an institution is likely to be a challenge and may affect levels of participation as most sixth-form colleges include levels of learners from level one to at least level three and sometimes levels four or five. Text based communication can provide the opportunity for reflection and thinking due to explicitness of the text and time taken to produce it (Veerman et al 2000:270) but can also cause problems with the flow of messages leading to confusion. Lagging, the time between the enter key being pressed and the processing of the posting on-screen, may allow a limited amount of reflection to take place (Suler 2004:27). The extent to which students and staff in education view reflection influences whether chat may be viewed positively or negatively. Garrison & Anderson (2003:69) suggest that due to the rigour and reflection required for text based communication, discourse chat sessions must be focused and productive. Without this, a sense of community will not be able to develop as the group will breakdown socially. These issues have implications for the design and implementation of my study.

The affordance of any e-learning environment is immediacy and studies have shown its effect in two main ways; contribution expectations and control. Immediacy leads to increasing response expectations of teachers and learners as they can contribute when they want to within a discussion and do not have to wait for their turn (Maier et al 1998:12). The literature highlights duality in thinking when considering these contribution changes. Researchers (Vries et al 2005: 219) suggest an increase in the amount of teacher input and planning is required to successfully use the system. Whilst others (Paulson 2002:123) state that conversely chat can lead to time economies of scale as students receive immediate feedback and support simultaneously (Paulson 2002:123). Such duality has significant implications for staff workload. A further aspect of immediacy that is drawn from the literature is that of control of language and behaviour.

Limiting the use of inappropriate language or words within a system is necessary to help control behaviour. This is due to the immediacy of response and potential for other students in the group to witness such contributions (Grigsby 2001:85). Permitting bad language on-screen may be seen by some organisations as tantamount to the authorisation of such words and yet it may be impossible to remove them before they are on-screen (ibid) and therefore may have contributed to chat's limited usage within the educational setting. Immediacy and control therefore have significant implications for the design and implementation of the system that is to be used for this study and the expectations and control of behaviour within it.

The literature shows that the use of the chat tool itself may be a barrier to its application. Studies suggest that these difficulties develop as a result of message presentation. If participants are unable to follow messages appropriately and become confused, they are unlikely to make useful chat exchanges. Yet, it may not be possible to technically change how a message is presented. 'Conversation congestion' is found when messages overlap and become confusing (Miura & Shinohara 2005:96). Students not being able to follow the flow of messages, known as the thread, are likely to become confused (Burnett 2003:247; Johnson et al 2000). For some students such confusion is found to be appealing but for others it may be distressing and therefore, a barrier. The separation between production and subsequent presentation of the text in chat also potentially contributes to this confusion. This is because the user presses the send button as soon as they have finished, physically sending the message, and messages are displayed whole, rather than in small parts. The contributor, therefore, is unable to choose the exact position on-screen where the message is displayed (Mühlpfordt et al 2005:461). This means that message order can become out of synch and has led to claims that chat is confusing for users (Johnson et al 2000:3). The length of messages added is short and interwoven in other message threads. Maier & Warren (2000:126) suggest that it may only be possible to use 'short chat' and consequently no real in-depth analysis can take place. The issue of message production and presentation drawn from the literature is likely to affect this study as it suggests that the potential for confusion needs to be considered as part of the system design and support offered to students within it.

Levels of manual dexterity and additional learning needs may affect student participation rates and access. Those students who have dyslexia or other learning difficulties that prevent them reading or have difficulty with spelling are likely to find chat more challenging (Richards 2002). Those students who are more IT literate or have better manual dexterity or typing skills are likely to become more powerful than others in the group.

This may be in direct contrast to face to face discussion and needs careful management. Hiltz & Johnson (1990:739) suggest that the ability to use the technology also has an impact on user satisfaction. Their study found there was a direct relationship between the amount that participants like computers and their level of satisfaction with chat. This was found because participants joined chat with pre-judgements based on their own experiences.

Time is a further barrier to the use of chat by teachers. This is due to the need for them to spend time preparing lessons, supporting sessions or training in the use of technology. There is also the issue of time to design such systems in the first place. Additional time may not be available during working hours and thus teaching staff interested in working in this way have to do more work in their own time (Harasim et al 1995:234; Becker 1999).

Attitudes of students towards chat can also be considered in the wider context of communications technology per se. Technology is changing how students view themselves and each other throughout their lives within education and at home (Willson-Quayle:233). This has an implication for any bounded online chat system as the attitudes of students towards IT and in particular, chat systems may encourage or discourage its use within the educational environment.

Moderation is a critical issue that needs discussion from a technical perspective. Research evidence has shown that users of chat rooms with lower to medium moderation arrangements are associated with higher levels of self-harm and depressive symptoms but those that are more closely moderated can provide essential social support for otherwise isolated adolescents (Webb et al 2008:109). From a child protection perspective links need to be made to a nominated adult or IT technician during interactions to maintain some kind of order. This leads to time and training resource implications. There are also implications for the way that young people work in chat rooms within educational environments as a clear distinction needs to be made between the behaviour in moderated bounded systems and public chat systems including those available on social networking sites. The need for moderation in educational chat systems may mean that young people do not want to engage with them. Thus demonstrating significant differences between the potential for public and bounded pastoral support systems.

The technical implications drawn from the literature are significant for my study. They demonstrate issues that will be important for the design and implementation of the study. Key area such as resource implications and the potential for access difficulties will be used to inform the design and implementation of the system. The next area of significance for my study are the pedagogical factors and how they support or inhibit chat.

2.3 Pedagogical Factors

This section of the literature review considers chat from a pedagogical perspective. Its popularity and frequent use outside the classroom suggest chat is already being used in a variety of ways. Studies investigating chat for teaching and learning have found that it has a number of pedagogically sound features and that it is being used for a variety of different approaches. Chat is being used as part of experimentation, discussion and role-play. It is also being used to build supportive relationships, opportunities for cross-country and worldwide communication and constructivist learning. The literature suggests chat offers features that may support greater online social interactivity that can be applied in different contexts. Such features are particularly important for this study as they suggest social interaction and classroom support may be possible online. The literature suggests factors that may impact on the usefulness of chat such as experience, attitudes, gender, engagement and anonymity in the teaching and learning situation and in doing so highlights issues that should be considered for pastoral support. Moderation is also considered as the literature highlights that levels of moderation and the structure for moderation are likely to affect participation rates and behaviour online.

Popularity and frequency of use by young people are two factors that have helped to make chat popular inside and outside of the classroom. Chat has been found to be a popular medium with students and young people as large numbers of them access systems such as Yahoo Messenger or Internet Relay Chat (Grey 2001:79). 87% of US teenagers (Lehnhart et al 2005:2) and 57% of UK households have access to the Internet at home (Pollard 2006:1) therefore, giving access to chat services. Research in Australia (Johnson et al 2000) found that when students and staff (at Higher Education undergraduate level) had the choice of 11 different methods of communication, chat was the fifth most frequently used. 21% of 9-19 year olds in UK were using chat rooms in 2004 (Livingstone & Bober 2004:23). Therefore moving chat usage into the educational environment may be a natural progression. Studies show learners are more appreciative and socially interactive when using chat thus supporting learning to take place (Dickey 2003:117).

Even young students find chat exciting, for example US Elementary School students are excited to chat with students in other parts of the world (Grigsby 2001:85) or others can chat across geographical areas (Suguri et al 2000:1). Young people born between 1980 and 1994 so commonly use internet technologies including chat that they have now been referred to as 'digital natives' (Bennett, Maton & Kervin 2008:776). These young people do not see technology as something new or different but merely as part of their everyday lives. Popularity or level of usage are significant. If users keep returning to a system, it is likely that they are getting something out of that system whether that is educational or social and this is indicative of an effective system (Preece 2000:88; Harasim et al 1995:169). It is also suggested that sessions should be carried out at least twice per week (Kordaki 2005:4). The former excitement and growing acceptance of chat in every day life drawn from the literature suggests that the use of chat in this study may be able to provide an alternative to traditional methods of support.

Online chat is pedagogically sound because it is able to provide opportunities for a wide range of teaching approaches including experimentation, discussion, role-playing, support, self-help and construction of learning. It is possible to use chat at all levels of education from infants through to university level. Chat is commonly used in modern language teaching as a way of encouraging students to interact more with the chosen language and be less afraid to contribute. Students are able to keep pace with online conversation more easily than face to face conversation. It also provides a safe way for learning to take place with less fear of making a mistake (Freiermuth & Jarrell 2006:190; Lai & Zhao 2006:102; Hudson & Bruckman 2004:171). However, students who do not speak fluent English and are participating in sessions in English may find communicating in chat difficult. This is because they need to take additional time to consider their thoughts before they are able to transfer them to the chat tool (Maier et al 2000:103). The literature, however, also shows that conventional spelling and grammar are not used in chat and therefore chat may be able to support greater interactivity between students (Peris et al 2002:44) who otherwise may have concerns about their level and ability to write in English.

Problem solving and discussion chats have been used in different levels of education covering many different subjects including computing, maths and physiology (Taradi et al 2005:36). It has also been used across geographical boundaries allowing students exchanging information to explore cultural differences and enhance understanding between communities (Yablon & Katz 2001:180). Dickey (2003:112) suggests chat can allow students to experience real world, real time situations with opportunities for feedback between teacher and learner.

This potential for communication across virtual boundaries has implications for this study as it suggests that it may be possible to provide and support students without having a physical presence.

Online chat offers opportunities for learning and teaching to take place in different ways and with students who may have been disengaged. Online group work offers opportunities for greater empowerment. This is because there is an increase in horizontal communication, known as peer-to-peer exchanges, and vertical communication decreases, known as teacher-student exchanges (Turnman 2005:121; Suler 2004:31). Chat can support distance learning as students discussing projects do not need to be in the same room. Chat has been shown to encourage students to participate who may otherwise have been disengaged (Hay 2003). For example, a basic writing skills student refusing to participate in the classroom may chat online without the pressure of face-to-face contact. The literature therefore shows that chat is able to offer choices that otherwise may not be possible in offline settings.

Chat supports learning being 'constructed' and has been linked to the concept of active learning. It is suggested that new generations of learners born in a technology-rich culture will learn differently than past generations with them being more active and experiential (Bennett, Maton & Kervin 2008:776). Chat supports this type of learning to give opportunities for exploration and manipulation. This allows learning to be constructed in a way that Sims (2002:138) believes to be an essential element of supportive communication in online learning. Chat is also being used to support learning experiences for example, Warwick University use it after lectures (Childs 2004:1). It is being used as part of eMentoring programmes offering curriculum support during exam periods and for revision (Douglas & Hynes 2005:3). Such studies only consider the use of chat for teaching and learning. Their findings, however, do suggest that exploration and manipulation may be possible for supportive purposes.

The literature highlights the impact of gender in the chat context. Colley (2003:674) suggests that gender impacts on computing experience. Boys, according to the study, show greater affinity to using computers for gaming whereas girls see them more as tools. McConnell (1994:75) conversely suggests that females during social use of Computer Mediated Communication (CMC) are more likely to be chattier than males and show a tendency to reveal more information. Herring (2001) believes that the lack of audio or visual clues in chat enables women to communicate on an equal basis and increases the number of female users. She also notes that exchanges tend to mirror the gender of the participants even when they are anonymous.

A further influence is the extent to which people like their group. The more satisfied they are with the group, the more satisfied they are with the system. Research (Hiltz & Johnson 1990:752) shows that females are generally more satisfied than males; younger and less well-educated people also have a tendency to be more satisfied. Gender differences are significant for this study as they are likely to affect the interest, perception, attitudes and participation levels of different groups towards online pastoral chat. Studies making use of chat-related technology such as Instant Messenger (IM) also inform the study. For example, during a study of IM in South-West English schools it was being used not only for social purposes but also to provide information about school tasks and work (Kent & Facer 2004:453). IM was found to be of particular usefulness for bullied students and in the development of support. The research considered the role of gender as more boys were found to be accessing the digital world than girls. The implication of this research is that male students are more likely to access support in a digital form than face-to-face and therefore, access should increase in a group that has traditionally found it difficult to ask for support (Biddulph & Blake 2001). In contrast, however, female students were more likely to be 'chatty' in mixed-sex situations and take more turns when talking than male students (McConnell 1994:75). The literature shows that gender is likely to affect the way that students access and communicate within the chat system and therefore is an area of particular interest for this study. Studies suggest that female students are more likely to add more 'chatty contributions' but are less likely to be attracted to the system in the first place. Such differences have implications for the way that the system is implemented, promoted and supported.

The literature on attitudes and experience of teachers shows that teachers of computing are more likely to adopt chat based systems with their own students due to their experience and understanding of the technology (Lawson & Comber 1999:44). This is significant when considering the type of teachers and students who are likely to have had contact with online chat systems and the extent to which they are adopted in sixth-form colleges. Teaching style preference affects the likelihood of a teacher using chat. Active learning teachers are more likely to participate and enjoy online discussion than those teachers who learn passively (Chang 2005) and therefore, are more likely to introduce chat discussion into their teaching or support structures. Research into attitudes and pedagogic beliefs (Lim & Chai 2008:825) substantiates this finding by suggesting that teachers may not be able to perceive the affordances of using computer based technologies unless they have experienced such constructivist learning themselves. However, positive interactions between teacher and learners in chat can increase the social presence of the teacher and the motivation of students as relationships change online (Brady & Bedient 2003:2). Online students may feel 'closer' to their teachers and

peer group than offline (Haythornthwaite 2005:16). 'Feeling closer' suggests that online chat may be useful for this study as it implies a form of support. The extent to which such support is useful is of significance for this study. The attitudes of teaching staff and management are largely influenced by their level of enthusiasm for IT and the curriculum area within which they are working. The introduction of any IT based system can be hindered or supported by existing staff depending on their level of enthusiasm for IT and the organisation's culture. Chat is complex and has several core elements that may be resisted by teaching staff; a change in the power status between teacher and student, a need for IT skills to be able to engage with it and the ability to understand 'text speak' language. Therefore, like any new technology without appropriate and adequate training its use may be subverted by staff if they are not ready to learn (Chang 2005). The interpretation of 'chat' is also important as the term may be seen to be more social rather than educational. This means that teaching staff may respond differently towards the use of the terms 'online' or 'synchronous communication' for this type of technology.

There are some concerns about engagement levels of students in chat and more passive or vicarious learning. Such learners are deemed to be 'lurking' (being present and watching but not actively participating) during chat sessions. There is acknowledgement that the experience can permit vicarious learning (MacDonald 2001:22) but this can be difficult to judge and therefore, teachers may find it difficult to make assessments or judgements about the level of learning taking place (Veerman et al 2000:272). New formative or summative assessment methods for chat activities may be appropriate. A verbatim transcript of a discussion that can be studied later is one such method of summative assessment (Harasim et al 1995:168). Authentication issues are an issue for assessment as participants are not visually present (Garrison & Anderson 2003:101). Such authentication issues may also have implications for this study as a system that is used for pastoral support will also need to take into account responses that are placed within it and by whom particularly due to the age and vulnerability of those involved.

Chat has a variety of social psychological effects that can make participants behave in ways that they may not have done in the face to face world and these have pedagogical consequences. These effects can be categorised into two main areas; feelings associated with a lack of social cues and social positives gained through feelings of 'togetherness' and support. The lack of social cues other than text can encourage participants to feel less uninhibited in online chat (Lea et al 1992:93). This may lead to participants feeling that the power of a moderator (or facilitator) is more limited and that they are able to say what they like. Teacher or moderator concerns are heightened in situations requiring control, if their own technological skill is limited and if they are unable

to follow what is happening. If teachers feel that they cannot control a situation, they may be negative towards it (Nash 1976:84). The extent to which teachers and students power share in online chat is significant for this study as participants who have access to faster technological links or have a fast typing speed may be able to have a greater influence over a session as they can contribute their ideas first (Franklin & Lowry 2001). Such power may not be restricted to teaching staff only. Studies show that feelings of 'togetherness and participation' are experienced. In Hay's study (2003) of distance learning students, they 'felt the weariness' and shared learning of each other despite it being late and night and them being in different locations. Such exchanges are not possible in other media. Therefore, chat is able to offer a different type of interactivity (Kreijns 2004:143). Such interactivity is linked to social and emotional factors present in online communication that may not be visible but are critical (Clouse & Evans 2003:184; Wosnitza & Volet 2005:450). The literature shows that there is increasing recognition that social collaboration is part of learning. It also illustrates that chat is able to offer collaboration without restrictions of time or location (Hedberg 2006:3). The social, as well as academic needs of learners need to be satisfied for learning to take place and chat is able to offer such support.

Online chat offers further pedagogical affordances and these are on-screen anonymity, access to other members of the college population who may not have been previously accessible and communication with students who have similar issues (Wright & Muhtaseb 2007:4). The provision of a wider support network is likely to reduce the pressure on family and friends of students requiring support.

Studies show that interest and subsequent participation rates increase when a moderator is present as this allows behaviour that distracts from the topic to be eliminated (Wise et al 2006). This suggests that there is a need for a moderator to be present if the focus of a topic is to be maintained and for control of behaviour. Rourke and Anderson (2002), however, suggest that the presence of an authoritarian 'leader' can inhibit the free exchange of views. Such inhibition could restrict the extent to which a chat system could be used in the pastoral support context. They suggest that by using a peer to lead the discussion power imbalances are removed. Issues such as child protection may become an issue in such scenarios as it is questionable whether one young person could be responsible for the online safety of another young person. If a young person is using a chat system at the age of eighteen they are outside the remit of child protection unless they are deemed to be a vulnerable young person, a sixteen or seventeen year old would always be subject to child protection procedures. Garrison & Anderson (2003:87) also suggest caution with the use of student moderators as they may lack the higher degree of expertise that is available when an adult moderator is present. This is particularly

important with the nature of the topics and the type of information that could be available in an anonymous on-screen forum. There are issues around the extent to which a peer moderator might be able to access information about another student and the type of 'contract' that they might need to sign up to. All members of staff are bound by contracts of employment but students do not automatically sign up as part of their enrolment process to support and care for other students as a matter of course. There is also a need to look after the needs and concerns of the moderators themselves. If the moderator is a student it may be more complicated to offer support such as counselling for the specific role of online moderator than it would be to offer employee support to a staff moderator.

This section of the literature review is suggesting that chat pedagogy is significant for this study because it provides an insight into some of the critical implications that need to be taken into account as part of the research design. Factors that significantly affect its use in education include the effect of gender on participation, attitudes of teaching staff towards it and the impact of anonymity. The literature suggests that chat is more likely to be accessed by male students but that female students are more likely to be 'chattier' online. Anonymity highlights the issues of designing a system that is both attractive to young people but also is able to verify who is accessing it. Moderation suggests that there is a tension between the need for 'control' and 'supervision' and that this may affect participation rates and behaviour within the system. These elements highlight complex implications for this study.

If an online chat system is able to provide support that is deemed to be useful there are structural implications for sixth-form colleges as support services may be offered in different ways and at different times. Further discussion of some of the emerging themes from the literature and their effects are drawn from issues relating to pastoral support.

2.4 Pastoral Support

The literature relating to pastoral support for students is considered in this section of the chapter. A number of studies have shown that online chat is being used for a wide spectrum of pastoral issues including emotional literacy, social interaction and practical support issues such as advice on housing or benefits. Studies (Freiermuth 2002; McAlister et al 2004; Suguri 2000; Rheingold 1994; Lanthier & Windham 2004; Chayko 2002) have investigated elements of chat including simulation, interaction, virtual community, gender and social bonds. It is argued that these studies have implications for

the way that pastoral support is viewed and offered. The benefits of providing online pastoral support are drawn from the literature including the use of chat as a discussion tool for 'sensitive subjects' and the way that chat offers relative anonymity in the pastoral context. 'Sensitive subjects' are those that may be more challenging to support such as such as bullying or issues related to sexual orientation. The literature highlights the different ways that chat can be used for one-to-one support as well as cross-college communication and interactivity. The literature also demonstrates the benefits of using pastoral support chat by concentrating on two key areas; the feeling of freedom of expression (including the ability to discuss sensitive subjects) and links to well-being from the support available through friendships. Researchers (Robinson & West 1992; Ferriter 1993; Suler 2004:24) suggest that friendships online can be as important as those available face to face. Reference is made to studies examining the use of Instant Messaging (IM) (Kent & Facer 2004) as parallels can be drawn between the technologies. This section of the literature review considers limitations placed on how chat can be used to provide pastoral support including the complexity of pastoral support in itself, the difficulty of measurement and subjectivity. Deindividuation and disinhibition theories are identified to explain some of the more challenging behaviours that may be exhibited in the chat context and their implications for this study.

Pastoral support, in the traditional sense, relates to social and emotional issues that affect students during their time in education. Pastoral support encompasses all aspects of work in education that are not strictly to do with teaching (Clemett & Pearce 1986:10) including influences such as drug use, loneliness, health or financial issues. These influences may become stronger and less controlled if unsupported, for example an increase in drug use due to loneliness. Self-help groups can be a good way of offering pastoral support between students (Medvene 1992:52) and this may be possible through online media such as chat. Pastoral support encompasses the concept of tutoring and can be offered on a tutor to tutee basis or through peer tutoring (Topping 1988:3). It is suggested that developing the skills of young people including essential human capacities such as concern for others and critical reflection will help them to make better choices about their future and consequently their health, social, employability, financial and welfare behaviour. These essential human capacities are important for pastoral support as they encompass feelings such as love, longing, concern for others and being aware of senses (Markham & Aveyard 2003:1210). The impact on individuals and communities of the way that pastoral support is offered and accepted suggests that there is the potential for loneliness to be reduced, self-esteem increased (Rae 2003:5) and improvements to performance. This can take place using methods that are not traditionally adopted for example online chat in the educational environment (Steiner 2002).

The literature suggests that pastoral support can be offered through problem solving and support seeking when problems can be reflected upon and taken forward (Salovey & Sluyter 1997:96). The emotional and social aspects of pastoral support have been found to be uniformly helpful to individuals (Dunkel-Schetter et al 1992:95) and just being there can provide comfort and support to others.

A number of studies have demonstrated the wide variety of ways in which chat can be used as a support mechanism including women suffering from breast cancer (Alpers et al 2005; Potts 2001:2), social adjustment for students at college (Lanthier & Windham 2004), as a discussion forum for sensitive subjects like sex, drugs or AIDS (Ingram et al 2000), as a form of 'virtual social structure' (Kent & Facer 2004:453), to strengthen off-line relationships (Eastin & LaRose 2005:979) and for private communication in work between colleagues and with customers (Cameron & Webster 2005:86). The supportive role of computer communication has been likened to being 'hugged by computer' (McConnell 1994:153). The freedom to express themselves within a safe and anonymous environment without constraint has also been cited as a powerful enabler for users to ask questions and receive advice (Freiermuth 2002: 90). Chat allows users to share emotions whilst constructing new knowledge and gaining access to a wider group of individuals with similar issues (McAlister 2004: 195, Suguri 2000:5, Rheingold 1994:58; Wright & Muhtseb 2007:4). Sharing emotions is particularly important when dealing with difficult or sensitive material. In the case of students they may feel freer to be their true selves online (Lanthier & Windham 2004:593) as they are less embarrassed to reveal sensitive or embarrassing information known as 'hyper-personal information' using computers rather than face to face including suicidal thoughts (Taylor et al, 2003:18; Preece 2000:154). A link has been found between a greater use of positive emotion words and health improvements (Alpers et al 2005: 195; Wright & Muhtaseb 2007:15). Internet usage is also associated with positive outcomes relating to psychological wellbeing and social involvement. People who are high in social anxiety are shown to have successful relationships online that are not of a lesser quality than those formed in traditional ways (Lanthier & Windham 2004:592). Loneliness in teens in the UK was found to reduce with an increase in the use of Instant Messaging or chat and linked to depression decreasing (Eastin & LaRose 2005:979; Berge & Collins 1995:5). Chat is increasingly being used to provide support services for students for example online counselling and due to it being a text-only medium can keep personal data to a minimum (Ingram et al 2000:27). Chat offers support in a creative and active way that is particularly important for adolescents (Geldard & Geldard 1999:74). Informal chat for students already takes place in 'virtual cafes' (Harasim et al 1995:128) or public forums including www.bebo.com and www.myspace.com. These social spaces (Cicognani 1998:17) allow participants to paste

information about themselves and communicate with others using chat. Young children are more willing to bring up problems such as drug addiction or abuse in online environments than they would be with an adult in authority (Harasim et al 1995: 265). Thus, chat can help reduce barriers to support. The literature demonstrates that online support is already available in open or public forums but there is little evidence of bounded online support in sixth-form colleges.

From both medical and therapy perspectives, online consultation is used by a variety of therapists for mental health issues (Taylor et al, 2003:20). In medical terms, patients that would not normally disclose information have been found to disclose more details using computer mediated communication than they would do face to face as they can maintain intimacy paradoxically at a distance (Robinson & West 1992; Ferriter 1993; Suler 2004:24). In a study of 1500 American youths, those with adolescent difficulties, such as depression, were more likely to have close online relationships. The Internet was providing an alternative to face to face social support and connection (Wolak et al 2003:116). Preece (2001:349) suggests that there is an insatiable need for people to communicate online and be able to divulge their emotional feelings through online communities as it is an outlet where users can 'pour out their hearts'. Dialogue can be supportive for those in distress at many different levels including at an informal level with friends, colleagues or others who have no formal training in this field (Cooper et al 1994:63). Online, this can take place using chat. According to psychologists, writing about emotional experiences can influence physiological and behavioural changes to improve school performance and reduce absenteeism (Sharp et al 2004:464). Sharp et al (2004) suggest that writing and typing are of equal benefit and therefore, chat can be an outlet for emotional writing. From an equal opportunities perspective it is suggested that such writing is able to transcend social class and ethnic boundaries (Sharp et al op cit) and due to the time taken between text being typed and its display on-screen, known as 'lagging', offers an opportunity for reflection (Suler 2004:27).

Overall studies from the literature demonstrate the complexity of pastoral support provision and the benefits of its availability. The implications for this research are that with such choice and variety already in practice, it is essential that there are clear guidelines for the system that is to be used in this study. Its purpose needs to be clear and understood by all stakeholders affected.

Unlike other forms of communication, chat is able to offer support without 'social clues'. Social clues come from non-verbal communication such as body language or from the way that people speak to each other including their accent and the pronunciation (Gajadhar & Green 2003:9). Chat is devoid of other social clues that may be used as part of communication for example physical appearance, change of tone in voice and clothing and this helps students to communicate more easily as social rules are suspended online (Freiermuth & Jarrell 2006:197). In early chat research, the lack of social clues was seen to be impersonal and unable to give social impressions to other participants. However it has been found in more recent studies that chat is able to encourage friendships and impressions even without these clues (Sherman 2003:2). Impressions do not necessarily have to be made in the physical sense but can be online. Numbers, letters and symbols are used to convey emotion including emoticons, virtual actions and acronyms for example 'LOL' meaning 'laughs out loud' (Shaw 1998:135; Marvin 1995; Haythornthwaite 2005:16; Rheingold 2000:183). It is this new form of social interactivity that makes the use of chat an important area for research. Users communicate effectively only using text and yet are able to offer support. Users and developers have enriched sociability by integrating their own form of social interaction. There has been criticism of chat as a tool for pastoral support as it only uses text as a communication channel. It is also argued that without the impact of other channels, communication will be less inhibited and less adapted, leading it to be more impersonal and lacking in the influence of social conventions (Sproull & Kiesler 1991:40). Further studies have enhanced this thinking by suggesting that chat systems can create a false sense of connectivity and intimacy that is indelible and inflexible (Friedman 1997:377; Kolko & Reid 1998:220). Deindividuation and disinhibition theories applied to computer mediated communication emphasise that anonymity and lack of social clues can lead to greater uninhibited behaviour as the individual starts to feel that they are part of the group. This is explained by the notion that their sense of self starts to be lost (Suler 2001; Spears & Lea 1992:38; Suler 2004:28; Miura & Shinohara 2005:96). It is also suggested that deindividuation theory can lead to an exaggeration of personal and social identities in text communication as participants have to make the most use of the information they can get and exaggerate it. For example, a participant being helpful may automatically be seen to be 'extremely helpful' (Sherman 2003:59). This is because there may be a false sense of connectivity and intimacy according to deindividuation and disinhibition theories. It comes from the interpretation in one's own mind of what is happening and therefore subjective thoughts of reality (Ma 1996:176). Although this feature of chat is highlighted negatively such interpretation may happen on or offline as it is about people interpreting the thoughts and feelings of others according to their own values and expectations.

The false sense of connectivity present online may be due to the blurring, in chat, between virtual reality and reality itself (Simovska & Jensen 2007:2). This is a phenomenon that also requires further research and investigation due to increasing levels of human computer interaction. These theories suggest it will be important to measure the outcomes of a pastoral support session as objectively as possible and to use other sources of information and data to support any findings. There needs to be an awareness within the research design and implementation that a false sense of connectivity may be present and therefore the pursuit of the truth is more difficult. There is a further argument, however, that has been previously explored and this is in relation to truth and the extent to which it needs to be actual or in one's mind. Such discussion is important for this study.

The measurement of outcomes is of significance for this study as there is a wide spectrum of thinking in relation to vicarious learning and measurement. In face to face classroom discussion, some people speak and some do not so there is always a limit to the communication (Morris et al 2002:40). In online pastoral support chat everyone must at least be reading what is happening on the screen to keep up. Therefore, communication takes place at many different levels including vicariously through the student presence rather than full participation. Giving students the opportunity to take part in this actively or vicariously (www.hants.org.uk/healthyschools/topicpages/emoplan.php) gives them the opportunity to develop and extend their emotional vocabulary and therefore receive pastoral support. Faupel (2002:103) suggests there are a number of key 'feeling words' that can be used as part of emotional literacy and therefore part of pastoral support. These words can help to demonstrate the extent to which an organisation is emotionally literate by their frequency. These words can be measured within a chat facility to monitor how many times they occur. Using chat to communicate gives students the opportunity to purely reflect on the statements that they have written and not be distracted by any other non-verbal communications as they must become both sender and receiver of messages to move towards emotional literacy (Koivusaari 2002:237; Steiner 2002). As emotional literacy is part of pastoral support this means that these words can be used as part of the overarching measurement of the extent to which pastoral support can be given and measured online.

When comparing electronic with face to face communication computer networks have a 'status equalisation effect'. This means that computer networks reduce social differences across boundaries and increase communication (Paccagnella 1997; Maier et al 1998:124). Reductions in social differences help chat take place as these social influences are not explicitly shown and users are free to enter and leave the online environment as they wish (Smith & Kollock 1999:15).

This also means that there is a higher likelihood of users meeting like-minded individuals with shared interests as they are self-selecting (Bell 2001:99). Chat is therefore more accessible to groups who may find it more difficult to be accepted, for example those with disabilities (Bishop et al 2000:1082). Online chat also allows participants to make connections that would be difficult for them offline, for example meeting new people or speaking aloud due to shyness. This leads to the suggestion that chat is more egalitarian in its approach and is likely to allow participants of a similar nature and with similar needs to interact (Kleine Staarman 2003:73; Salmon 2000:29; Wright & Muhtaseb 2007:4; Simovska & Jensen 2007:9). Users participate in chat sessions because they are looking for information but also desire social interaction to feel support, affirmation and affiliation (Sproull & Faraj 1997:38). Naturally shy or isolated people can take part in chat and be supported by 'social glue' but without feeling the psychological pressure of face to face contact and be able to concentrate on their inner feelings (Rogerson 1999; Suguri 2000:5; Fenichel 2004:4; Bellafiore et al 2004: 200). This social interaction and support with appropriate facilitation may lead to the provision of a system that is student-led and managed for peer-to-peer support (McConnell 1994:110). Although a chat system can provide an alternative method of support, the literature highlights that it is infrequently provided in sixth-form colleges.

Groups of users chatting online are frequently linked with the concept of online community as distinct group norms are established online. Online community is a generic term encompassing all aspects of online communication and therefore, chat based communication can be categorised by these terms (Preece 2001:348). As chat is real time it gives users immediate feedback and in doing so offers human connection even when someone is alone. Zhao (2006:472) calls this the concept of 'being alone together' and suggests that it can help combat loneliness. Students make reference to getting to know each other through chat by sharing stories to make sense of who the participants are (Robinson 2000:113). Chat is used to provide help for those who are ill, particularly if that illness is rare and sufferers are unable to meet face to face. Chat gives opportunities to share experiences and symptoms with non-medical staff (Potts 2001:2). Online community chats have become more popular for on-line support groups (Wright & Muhtaseb 2007:3). Television programmes are increasingly using chat to support post programme discussion or support. Therefore, not only is chat influencing social interactions that are taking place throughout the world but it is also shaping the way that people perceive what is meant by community. Feelings of community and the potential for links around the world has led to the suggestion that chat rooms have been used as part of the radicalisation of Muslims in the UK (BBC Radio 4 14 November 2006). Chat has also been linked to risk taking behaviour in the US (Beebe 2004:121).

The notion of community is applied to chat as many chat forums are made up of other specific groups of people according to their gender, social, political persuasion, hobbies or leisure activities (Islam 2006:73). The implication of this concept of community is that it may be possible to provide a pastoral support community within a bounded environment that is useful for students in a sixth-form college.

The extent to which the literature is able to provide guidance on pastoral referrals is also of importance to this study. It is suggested (Provis 1992:62; Salovey & Sluyter 1997:96) that referral to a system for support is far superior if it can be a self-referral system as this avoids bureaucracy and allows students to be more engaged. Jones (1984:35-36) suggests that students are often only referred to some kind of counselling or talking service once they are being disruptive in some way and that they are unlikely to reveal information to teachers unless they can help it as it may damage their image or reputation. Listening is much more difficult than assumed (Jones 1984:32) and therefore, a chat facility allows interaction to take place without any 'noise' to interrupt. Chat can therefore allow students to reveal information before they become disruptive in a safe way and on their terms. Using chat to provide self-referral or peer-to-peer systems gives students opportunities to engage in new methods of communication that may be more appropriate to their needs and in their own ways of thinking (Bannister 2002:50). This is in line with a further government drive in education to take into account learner views through Learner Voice Strategies that have been implemented into colleges from September 2007 (LSC 2007). The student voice and attitudes towards chat are extremely important as it is student interactivity that validates its use. Using support methods that fit with the way young people are thinking and that are relevant to them is likely to benefit any sort of support system (Geldard & Geldard 1999:63). The best way to engage students in pastoral support is through self-referral but often the very students who would benefit most from engaging with it are least likely to be willing. This means that attracting students to take part in such initiatives can be difficult. Pastoral support training is also difficult and complex to provide as it covers a wide range of issues that may be beyond the scope of one person. This means that providing the appropriate advice and suitably trained person is critical through clear referral mechanisms. Nueva School introduced the Self Science Project (Salovey & Sluyter 1997:121), the results of which demonstrate that students themselves have valuable insights and information to share. Thus a chat system may allow students to interact with each other and solve problems within a safe environment. This is particularly important as students who are likely to need the most emotional education may have maladaptive emotional responses and would not benefit from whole class discussion (Salovey & Sluyter 1997:22).

Social skills intervention as part of pastoral support can lead to a rise in social skills, greater peer acceptance and social skills enhancement (Salovey & Sluyter 1997:212; Rae 2003:8). Pastoral support in the chat context has the potential to encourage students to reflect on their emotional needs, feel supported and be able to interact better with their peer groups. Online relationships are of no lesser quality than those formed in traditional ways particularly if the student has high social anxiety and that whilst students do go online for academic purposes they also do it to enhance their social lives and may feel freer to be their true selves on the Internet (Lanthier & Windham 2004:593). Pastoral support, therefore, gives students the opportunity to express their emotional needs in a supported atmosphere, to reflect on them and then improve their own ability to deal with them whilst thinking about others. Having a facility within which a student can safely express those feelings may help to induce higher self-esteem (Weare 2004:25). Creativity, innovation and an increase in academic results can be linked to such development (Sharp 2001:4). A reduction in bullying and depression amongst students has also been demonstrated (Goleman 1996:244). Such benefits have led to an increasing emphasis on schools and colleges providing pastoral support for all young people as part of Every Child Matters (DFES 2004) and other government strategies (McLaughlin & Alexander 2005:3).

Antidote (2005:5) outline the importance of engaging in dialogue to express thoughts and feelings in order to create a safe environment in which development can take place. Weare (2004:25) also suggests that there may be methods other than traditional handwriting and talk that are able to enable feelings to be expressed. These include dance, drama or music and it is within this new experimental context that chat can be placed. Sharp et al (2004:464) develop this notion of expression further within the medium of chat by concluding that typing is both as valid and of equal benefit to writing in long hand. Allowing students to communicate in this way supports students to make behavioural changes that include improvements in work or school performance, reduced absenteeism and decreasing distress. This can be done through 'talking' using chat rather than a face to face discussion allowing them to open up their hearts (Steiner 2002).

Peer support schemes can allow young people to express an interest in helping others who may be anxious, stressed or unhappy by helping them to come up with creative solutions (Antidote 2003:3). New more technological methods of communication are already being used in this way for example email for the peer support of emotional and pastoral issues such as bullying (Cowie & Hutson 2007:12). Therefore, using chat is an extension of this work. It also centres on the idea that the teacher has a facilitative role and therefore, should not be allowed to dominate or sideline the process. Using chat for peer-to-peer support can provide a more satisfying experience for young people than

teacher-led interventions (McLaughlin & Alexander 2005:26) and therefore, any mechanisms that can allow such exchanges to take place should be further investigated. This type of support is offered in a number of different countries and facilitated by a teachers, facilitators and peers but none of these studies are drawn from UK sixth-form colleges or schools as it is difficult to conduct research in this context and medium (Buchanan 2000:185).

It has been suggested that online relationships within the chat environment empower people to speak more freely and openly about sensitive issues for example sexuality or illness (Freiermuth 2002:90; McAlister 2004:195; Suguri 2000:5; Rheingold 1994:58; Lanthier & Windham 2004:593; Wright & Muhtaseb 2007:4). This empowerment has taken different forms including from being part of a virtual community, becoming stronger through simulation, through changes in the way that people of different genders are able to operate and through online social bonds. Online relationships have also been shown to empower marginalised groups who may be unable to operate effectively in off-line communities and have allowed participants to reach unexpected depths of emotion in text form (Aurigi & Graham 1998:60; Barak & Block 2006:61; Rheingold 2000:8).

Chat has also been likened to a playground (Rheingold 2000:187) where different forms of communication and self-representation can be acted out. It can allow individuals to discuss common issues with others who would otherwise be unknown to them and can provide socio-economic support for example support for any issues that relate to social or economic well-being (Rice & Love 1987:91). This is particularly relevant to pastoral support as this type of support covers all aspects of support from emotional issues through to more practical support on issues such as advice on benefits. Communicating online allows users to make socio-mental bonds that inspire them to view others from different perspectives (Chayko 2002:2) thus allowing online empathy to be established. This is because bonds between users take place in the mind and not the body so can be legitimately made online (Chakyo 2002:4). The users that have been studied in these cases have shown that the behaviour of participants online can be completely different to their offline behaviour and therefore can provide social bonds that would otherwise not be available. Chat is being used to give students the confidence to obtain support in a virtual way. The mental images and bonds that can be formed online shape the views and ideas of those interacting in this way. It does not matter whether they are physically real or not as it is the concept of carrying round socio-mental space and therefore ideas in one's head that is important. The effect of this influence is no less real than if it were physically real (Chakyo 2002:35). A particular group where chat has been used is 'Sanctuary' that is a Multi-User Dimension (MUD) group.

Chat is used in this instance to provide support to those who have suffered abuse or illness in an anonymous environment (Moursund 1997:59; Wright & Muhtaseb 2007:4). Moursund found that most users were using the group for one or more of six key purposes; talking about problems, sharing experiences, information, positive feedback, motivational support, a sense of place and belongingness. It is suggested that mechanisms like Sanctuary provide support to those who need to guard against vulnerability and therefore, may not be able to get such support face to face due to being absorbed with busy modern lifestyles (Moursund 1997:73).

Studies demonstrate that providing pastoral support can be complicated. This is because it is not an exact science with clearly measurable and precise outcomes. The attitudes of students and staff towards it influence the degree to which it is embedded within an organisation and seen as useful. These attitudes are commonly negative due to the terminology involved and negative perceptions about it. Measuring outcomes is also difficult and in target driven institutions may make its introduction difficult or impossible. There is also the suggestion that offering online pastoral support may lead to disinhibited or deindividuated behaviour and both have implications for this study in terms of reacting to such communications and having appropriate procedures and policies in place. The measurement of successful pastoral support may be difficult to evidence or isolate from other factors. Students who are receiving appropriate pastoral support will be working well and therefore will not be presenting issues. Even if pastoral support is being embedded within learning and support it is rarely evidenced (Coppock 2007:417) and is often viewed as something 'in addition' rather than endemic. Issues, such as poor attendance, retention, achievement and therefore success, will only be evidenced when they are not working. The significance of these issues for my study is that there may be negativity towards the introduction of a chat system in the sixth-form college used in this case. This is likely to be from senior managers and staff if they feel clear outcomes cannot be measured.

Teaching staff attitudes towards pastoral support can limit its institutional effectiveness. Often areas of the supportive curriculum are approached with trepidation by staff due to a lack of understanding, limited training, feelings that it is not their responsibility and time constraints related to workload (Clemett & Pearce 1986:55). This leads teaching staff to feel unable to resolve the issues that are brought up and wanting to avoid them. The terminology used for pastoral support delivery, for example emotional literacy, emotional intelligence or pastoral care, is often different depending on where a teacher is working and the material that is being used to support it. This can lead to confusion and therefore, negativity towards its development (Coppock 2007:417).

Negativity towards pastoral support is a significant influence on this study. This is because this study seeks to combine two areas that are traditionally unpopular – chat and pastoral support.

Chat can be a difficult area to access and particularly for pastoral support due to reasons of sensitivity. Many researchers have only been able to access data with the potential for high degrees of subjectivity, for example Merchant (2001) conducted research into the behaviour of six teenage girls in chat rooms and two of these teenagers were his own daughters. The potential for bias is higher in such studies as it more difficult and controversial to gain access for research purposes. The literature relating to access issues and bias is significant for this study due to the age of participants and my 'insider practitioner' position as researcher. This, however, is no different than any other reported study where data is presented from 'someone's point of view' (Becker 1967:245) but should be acknowledged.

Overall, there are a significant number of pastoral factors that are drawn from the literature and will impact on the design and implementation of the system. The key themes that are drawn from the literature relate to the empowerment and social bonds that young people are able to make using online chat. The variety of different topics for support and provision of online chat groups is extensive and continuing to increase in the public domain. The literature highlights some of the difficulties that are likely to impact on the study. Attitudes of teaching staff towards online chat and pastoral support tend to be more negative and this study seeks to combine the two together. This combination may result in resistance by colleagues at the sixth-form college where the system is being implemented. Therefore, there will need to be significant consultation and involvement with all relevant stakeholders. The chat system will need to be designed to encourage self-referral and a sense of supportive community but in doing so will also need to be safe and therefore conform to child protection legislation.

2.5 Organisational Factors

The literature relating to organisational factors illustrates some of the issues related to the introduction of online chat in a sixth-form college. Public perceptions, governmental influences and parental involvement are significant for the design and implementation of an online pastoral support system. The attitude of all college stakeholders towards such systems is critical as attitudes are likely to affect its potential use and policy making. Policy decisions need to be considered carefully in relation to investment in resources,

access and freedom for experimentation and the impact of the duty of care and child protection issues.

Public perceptions and safety concerns for young people impact on chat accessibility and have affected participation rates (Preece 2000:89). Safety issues have resulted in legislation in the US with Michael Fitzpatrick (2006) introducing the 'Deleting Online Predators Act of 2006' Bill in to Congress to ban all social chat forums in public funded areas such as schools and libraries. In the UK agencies such as BECTA (2005 & 2006), UCLAN (2002), and CEOP give guidelines that promote safety in public chatrooms but its use within education is limited. Chat is often perceived to be dangerous or as a recreational activity for minors that will detract from curriculum based learning and give access to inappropriate adults. Therefore, changing attitudes towards it is challenging but also necessary as part of the requirements of Every Child Matters (2004). Children and young people need to 'stay safe' online as well as offline. Attitudes of learners, educationalists, parents and legislators towards chat in the UK and US suggest that traditionally chat is seen as social and recreational. Therefore, there is an expectation that learners will view educational chat in the same way resulting in issues of control and off-task behaviour. This perceived lack of control and shift in the traditional powerbase between learner and educator has led to concerns and resistance to its use.

However, chat usage is expanding to support other media such as television and social networking. This is particularly evident amongst young people (Preece 2000:163) and suggests that it will become even more widely used in society. This is particularly evident with younger children getting involved in social networking through sites such as CBBC which is aimed at users of six years and over (Sigman 2009:15). Therefore, the establishment of boundaries for chat usage and policy making is important for educational establishments and other organisations to protect themselves against potential problems. Attitudes have also influenced the extent to which chat has been brought into education. Researchers acknowledge that whilst chat is valued as a tool for social interaction it is rarely applied within educational settings (Burnett 2003:253). Off-task behaviour can be an issue for chat (Ebersole 2000). Students may see the web as an entertainment vehicle that is exclusively social (Glantz & McNeese 2003:633; Ebersole 2000) and care should be taken when designing experiments in this medium to avoid an extension of this perception. Research data in some cases has been deliberately shortened to avoid off task behaviour (Ebersole 2000). This may influence results for example reducing the timing of sessions may mean that students would not have had time to exhibit any misbehaviour. One suggestion to avoid this is to use cached website access to allow students to experiment and demonstrate the extent to which they are off task.

Access is one of the biggest challenges for chat experimentation due to previous bad publicity. Panic about chat has been created amongst parents and professionals due to the supposition that predatory paedophiles are present in chat rooms (Buckingham et al 17October 2003) and possible biological implications of using social networking sites (Sigman 2009:16). Microsoft's decision to ban all open-access chat rooms further increased this problem. Projects such as those conducted by the London Institute of Education (Willett & Sefton-Green 2003) have found it challenging and have had to campaign against bad publicity to undertake research in this area. This is in spite of research aims to make chat safer for young people. Chat is often portrayed as something that cannot be controlled but making chat safer and more effective is necessary to educate new users in appropriate access protocols. Limited research has taken place using chat as so many institutions do not permit such activity. This has affected both the collection and quality of data available for study. Although chat is banned in many settings it can be used constructively when appropriate facilitation strategies are applied (Walker 2004:182). Such facilitation strategies include community governance (Preece 2000:95) where explicit instructions are given to guide people as to what they can and cannot do. Ideally they should not be over-prescriptive. Chat systems are in the vast majority of cases public so anyone can take part.

Control is a further key issue as colleges have a legal duty of care for students under the age of eighteen. It is necessary to prevent them from gaining access to inappropriate adults within the college environment. Negative images portrayed through the media about chat have a negative impact on its adoption. Chat has been linked to problems such as 'cyberbullying' 'e-bullying', online harassment and suicide amongst young people through social networking sites such as www.facebook.com (Campbell 2005:69; Britten & Savill 2008). Many of these sites also include chat facilities and thus links between these sites and chat tend to reinforce safety concerns about chat and the need for its control amongst young people. It is suggested that up to 34% of 12-15 year olds have experienced some form of cyberbullying (Balls 2007). Encouraging young people to use chat systems appropriately rather than inappropriately is a key objective of the Byron Review (2008). Using chat for pastoral support is one possible way of encouraging young people to use chat in more positive rather than negative ways.

The combined views of all stakeholders and the relative influence and interests of different groups is shown in the literature to be of significance for chat implementation. It is likely to be most effective when stakeholders feel they have contributed to its development and introduction (Nair et al 2005:485). The key stakeholders are the institution that is providing it, the users that interact with it and any other parties that may be affected by it for

example parents, support or teaching staff and the wider community as a whole. Their views and ideas about issues such as measurement of its use and resourcing affect the extent to which such systems are implemented. Chat's influence or success is difficult to measure specifically and stakeholders of a particular institution often want easily measurable results that can show a correlation between its use and increases in retention or results. This may not be possible. A simple cost/benefit analysis of chat may not adequately assess its potential and therefore, may deter colleges from adopting this type of system. This is because such systems are costly in the short term and it may take time for the effects of pastoral support to work. There is also the issue of teacher priorities. Chat may be seen as an option that is 'nice to have' rather than an essential part of the pastoral provision. This study combines chat with pastoral support and in doing so highlights whole college attitudes to both aspects of the study. Some teaching staff view their students on a purely academic basis (McGuinness 1982:21) and thus do not want to look more deeply into pastoral support issues. For others it is a lack of training or real investment in what is meant by pastoral care that can lead them into only wanting to invest their time and energies into the academic side of the curriculum (Clemett & Pearce 1986:55). From an organisational perspective such issues need to be highlighted and discussed before implementation. There are also organisational influences on chat that come from the government as the key stakeholder and provider of funding. In Further Education (FE) there is a drive towards raising standards as stated in the Government Whitepaper Raising Skills, Improving Life Chances (2006). This means there is a need to retain and support an increasing number of students who traditionally have not come into the FE sector. Chat is able to provide a new method of pastoral support and if it is able to increase the retention rate of students (those students who stay on courses from start to finish), colleges would be interested in offering it on a more widespread basis. The difficulty is proving the extent to which a chat facility has a direct influence over whether or not students stay on. Research taking place in schools is trying to ascertain whether chat can be used to increase achievement in schools by offering a facility during study leave (Douglas & Hynes 2005:14).

There are cultural implications for any organisation. It is a different way of working and therefore, a culture shift away from closely controlled and directed forums to one of relative freedom. This shift moves from a teacher-directed approach towards a more student-focussed approach to controlling behaviour (Nash 1976:94). Establishing the gap where chat sits as a method of support method fits is critical to the interest of colleges as it does not provide counselling or support in the traditional and known senses of the word but is able to offer support and some guidance in a new way that colleges need to understand. The age and vulnerability of young people within the FE sector also means there is a legal obligation to safeguard them. As there have been a number of cases

where teenagers have threatened suicide online and then gone through with it whilst in public forums, chat may be a cause for concern if uncontrolled (Britten & Savill 2008).

Policy decisions affect how chat is used. Some colleges and schools have blocked all use of chat as a result of concerns about safety and therefore, there is no access. One example is Tunbridge Wells Girl's Grammar School that does not permit access to any 'social networking websites' for example www.bebo.com. 'Social networking websites' allow communities of likeminded individuals to develop through web pages by sharing information through emails, chat, bulletin boards and so on (Wikipedia 2007). Norfolk County Council referred to chat as 'inappropriate' in 2005. Further examples of schools where chat is banned currently include Ursuline High School in Merton, London who state that the use of chat rooms is not allowed (Ursuline High School May 2007). Chat, by being associated with other activity that is not permitted for example the use of computer games within schools or college, is therefore banned (Glyn Technology School May 2007). Whilst schools and colleges may feel that they do not wish to use chat in their institutions, young people are increasing their online activity at home and it is becoming an important part of their social lives (Webb et al 2008:108). By banning chat, schools and colleges may make it more challenging for young people to be able to participate in such environments effectively as they may only have access to public forums with potential dangers such as access to inappropriate adults (op cit). However, by permitting chat schools and colleges need to be clear about the types of behaviour that are permissible within their institutions and this may include the need for clear guidelines and adaptations to technology that restrict poor behaviour.

The statement of clear policy objectives for the use of chat in education with purposeful guidelines is important as it eases any conflict or confusion that may arise when students consider its use. This is particularly important when making the distinction between home and educational use. BECTA (2006) issued guidelines to help teachers make appropriate use of chat within their teaching but traditionally it has been viewed as an essentially social environment (Taradi et al 2005:38). There is a recognition (UKLAN 2002:66) that some of the rules that relate to internet safety are too restrictive and controlling from a national perspective. It is purported that they may stifle the ability of colleges to work with young people and enhance their skills and knowledge about how to use such technologies in a safe way. This tendency towards restrictive controls also comes from the knowledge that in most educational environments IT administrators or managers are responsible for deciding on the level of access that is permitted rather than the teaching staff in classrooms (Levin & Arafeh 2002:15). There are also concerns about the reliability of access to different sources of information such as websites that may be stopped by blocking software (Gibson & Oberg 2004:577).

There are implications for other policies such as how the data will be used as part of data protection, how it will be treated and the limits of confidentiality including whether or not such data could or should be shared with parents. There may also be implications regarding the use of 'text speak' and its application in the wider context of the institution for example in written work, examinations or for other online resources.

Structures in an organisation influence the way that chat is offered. They shape choices such as whether it is cross-college or specific to an area or group of students. A unique feature of chat is that it does provide opportunities for whole college support systems that focus on the capacity for all students to self-refer and therefore, potentially improve the pastoral support for all, rather than a small number of students (Cooper et al 1994:172). The age and gender profile of staff in the organisation and staff training procedures also have structural implications. This is because they are likely to affect the attitudes of teachers and management towards chat. Traditionally males have been more likely to engage with such technologies (Colley 2003:674). Women, however, represented 55% of the teaching staff in 2004 (DFES 2006:32) and this percentage continues to increase. The number of teaching staff in the age group between 20 and 34 of 20% has traditionally been lower than employees in other professional occupations (op cit:33) and therefore, may influence the extent to which teachers and management have experience of new technologies. The younger a teacher is, the more likely they are to use internet technologies themselves and with their students (Becker 1999). Chat's adoption may be influenced by this profile as teachers and managers may resist chat due to their lack of knowledge and therefore, understanding of it. However, EU and Commonwealth migration is leading to qualified teachers bringing skills to the UK from outside and is likely to impact on attitudes in the future. In terms of staff training and development, tutors may have very little or no use of IT in their subject areas compared to their tutees who may have a diverse range of experience of such technology. Specialist tutors, tutor groups or a self-referral system may need to be in operation to provide equal access to a chat system and counter this potential difference in knowledge and understanding.

2.6 Towards a conceptual framework

The literature informing this study emphasises that chat usage is uncommon in teaching and learning in post-16 education and is rarely applied for supportive purposes even though it represents a new form of human contact (Zhao 2006:462). Therefore, I present the argument that combining bounded chat systems with pastoral support will bring new knowledge to the field of online support and the assessment of its usefulness.

The literature has drawn together a number of key implications for my study. The adoption of chat technology is taking place at significant levels in the UK for a variety of purposes outside the classroom. For current and future generations of 'digital natives' (Bennett et al 2008:776) new and different ways of providing support in sixth-form colleges should be considered. Bounded online chat systems offer the potential to give young people the chance to experiment in safer and more controlled environments without experiencing risks that they may encounter online. The literature (Byron 2008) highlights that there are significant implications for the sixth-form college being used for this case study as a result of their duty of care for students. I propose that boundedness is likely to impact at two levels in this study; college student access only and then entry access for a sub-set group of college students. The literature directs attention to the need for bounded systems to have technical features relating to immediacy, safety, security and control. The length and timing of sessions during the week (at least two per week Kordaki 2005:4) are significant. The literature also highlights that these factors should be reflected in the system design and implementation.

Gender (Colley 2003:674; McConnell 1994:75; Herring 2001), experience, attitudes, engagement, anonymity and moderation are all likely to have significant influence on my study. They are likely to affect the usefulness, design and results of the implemented system. Studies show that time (Harasim et al 1995:234; Becker 1999) and interest of teaching staff affects chat adoption rates in educational institutions. They also show that for many teaching staff it is difficult to engage with such systems as they have limited knowledge of such systems. Chat systems are outside of their pedagogical beliefs (Lim & Chai 2008:825). The literature demonstrates that my own learning style has had an impact on my own research interest in this topic area. I prefer an active learning style and therefore I am more attracted to engage with support systems like chat (Chang 2005). I therefore need to recognise this within the study to ensure that I represent what is the truth and avoid bias. There will be further discussion of this issue in Chapter 3 when the research design is considered.

Studies suggest that chat systems are able to offer peer-to-peer interactions that are more satisfying (Turnman 2005:121; Suler 2004:31; Mclaughlin & Alexander 2005:26) than traditional pastoral support as students feel socially connected through chat. These findings strengthen the argument for the introduction of an online chat system for pastoral support with the number of sessions taking place twice per week (Kordaki 2005:4). The literature highlights that the introduction of an online pastoral support system is likely to permit higher levels of self-referral (Provis1992:62) and that it is increasingly being used for different types of support including online counselling. These influences are grouped

as pedagogical in nature as they highlight that the way chat is offered and to whom impacts on likely levels and attitudes towards support in this way.

The literature highlights key organisational issues that are likely to affect this study. In particular some of the difficulties relate to engaging appropriate students needing support, measuring support outcomes and the false sense of connectivity that may come from any online communication as virtual and reality blend (Simovska & Jensen 2007:2). Studies show that from an organisational perspective it is better to involve as many stakeholders as possible in order that the system is accepted (Nair et al 2005:485). This means that during the design and implementation phases of the study I am expecting to involve as many of the stakeholders as is practically possible and there are resourcing issues associated with this consultation. A number of studies have shown that some stakeholders withhold or block access to online systems like chat. For this study to be successful there needs to be the full co-operation of all relevant stakeholders with appropriate guidelines and investment. The literature highlights implications for control and the norms and values that different educational institutions hold in general but also in specific relation to the use of online systems. Studies (Rourke & Anderson 2002; Wise et al 2006; Garrison & Anderson 2003:87) consider the different roles that chat may offer and its potential for this study. A further important implication of these studies is the finding that moderation is a complex issue that may restrict or support free text within the online chat system. These studies show that not having a moderator may mean that off-task behaviour cannot be controlled and yet the presence of a moderator may negatively affect student views. Garrison & Anderson's study (2003) also highlights that even the use of a student moderator is not without issue. Therefore, these studies emphasise that moderation is likely to have a significant influence on the study and its impact should be fully explored.

The literature relating to online chat shows there is the potential for this study to add to the body of existing knowledge by offering an alternative method of support in a sixth-form college and considering its usefulness for students in a specific college environment. I am expecting to show that chat usage is possible for supportive purposes as it is already being used within teaching and learning in schools and colleges and this is an extension of its use. Therefore I suggest that it is possible to introduce such a system into a sixth-form college and that it will be used through a form of self-referral by students.

The literature highlights that there are three key concepts that are important for the implementation of bounded online chat systems for supportive purposes and these are;

technology, pedagogy and pastoral. It also the importance of 'organisation' that the concepts are drawn together and influenced by its impact.

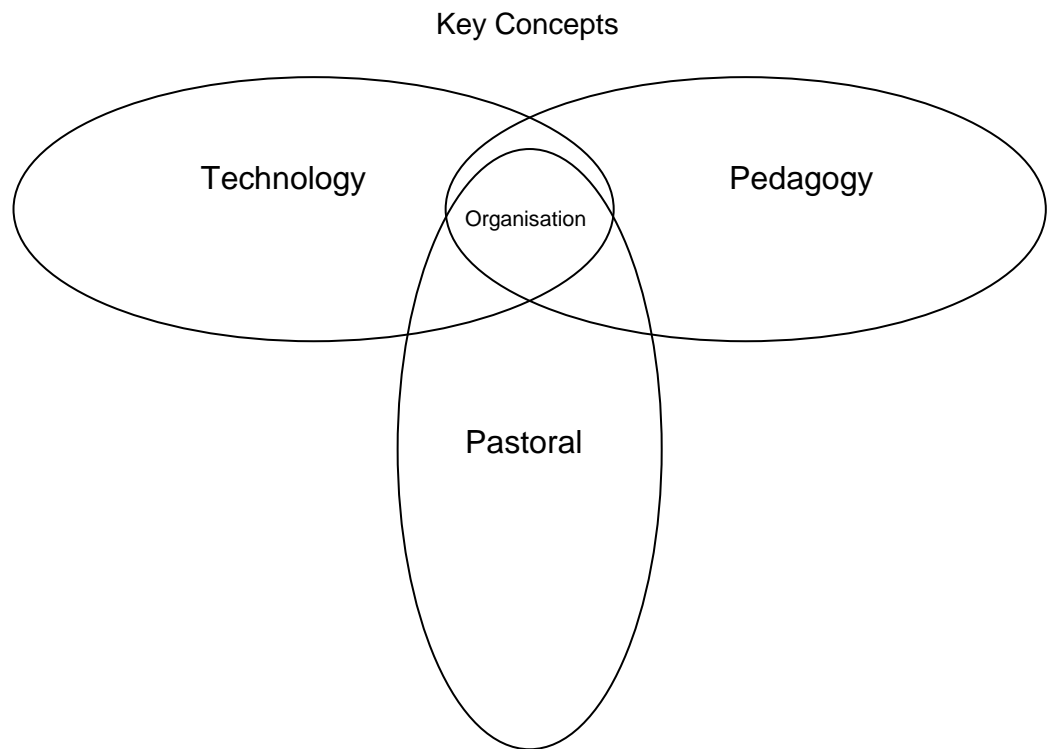


Figure 3 The key concepts of pastoral, technology and pedagogy are drawn together with implications for the organisation

In the next chapter, I will be building on the findings of the literature review and discussing the rationale for my research design.

Chapter 3 Research design

This chapter describes the research design including the rationale and methods that I am using to inform that design. Those methodological approaches that were discounted during the planning stages are also outlined. I begin by re-examining the research questions and philosophical assumptions underlying the research including ontological and epistemological perspectives. I then consider the use of quantitative and qualitative research methodologies for the research before presenting a justification of why case study is the most suitable methodological approach.

Research methods that may be used to support case study are considered including the use of the chat interface as a vehicle for participant observation and transcript analysis according to case study principles. Consideration of other sources of data that enhance the richness of the case are also given. The chapter is divided into seven key sections;

- 3.1 Research questions
- 3.2 Philosophical research assumptions
- 3.3 A consideration of quantitative and qualitative methodological approaches for this research
- 3.4 Case study as the methodological approach
- 3.5 The research methods
- 3.6 Theoretical development, reliability and validity
- 3.7 Summary implications for the study

A summary of the research design process is outlined in Figure 4.

The consideration of research methodologies and processes

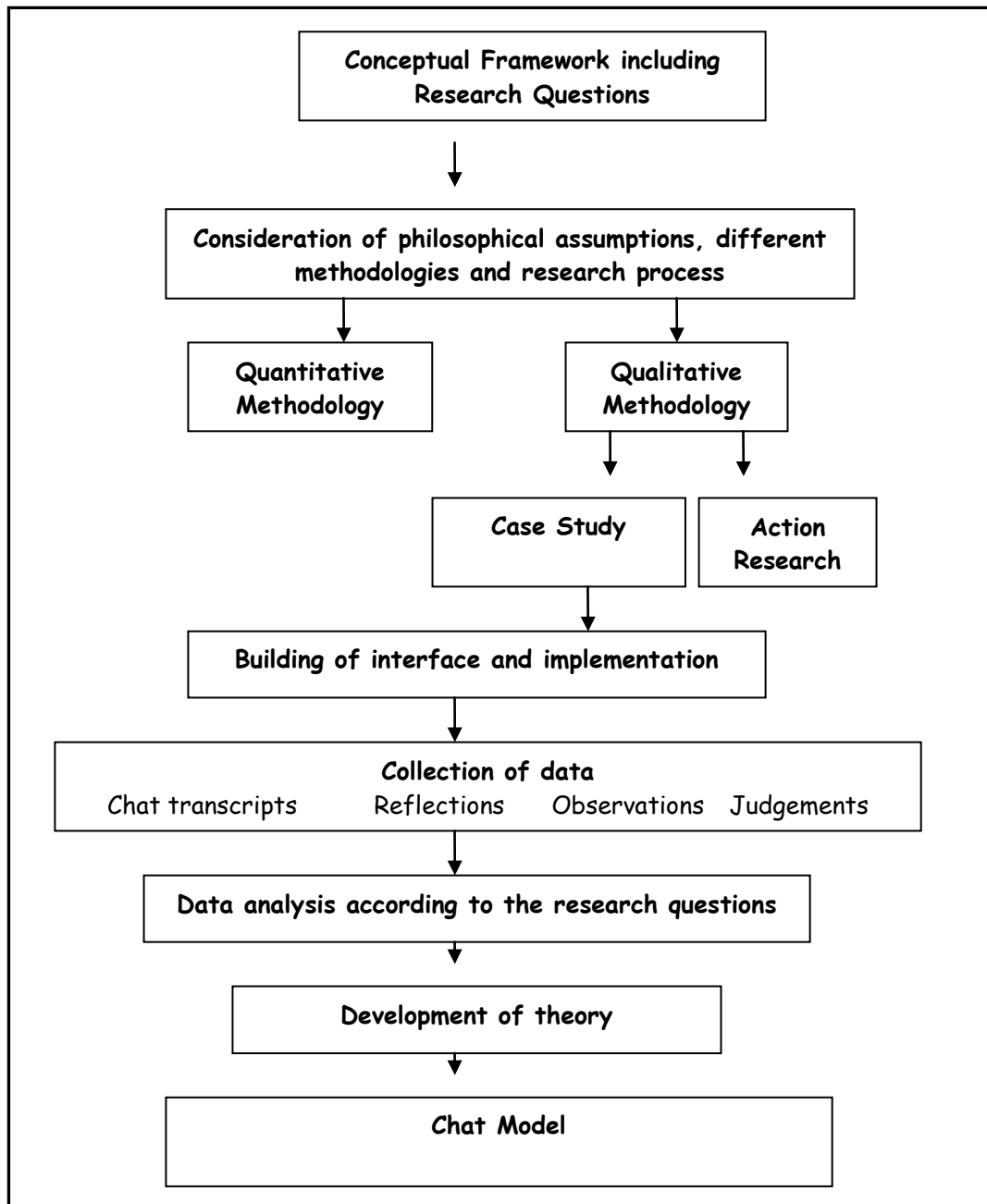
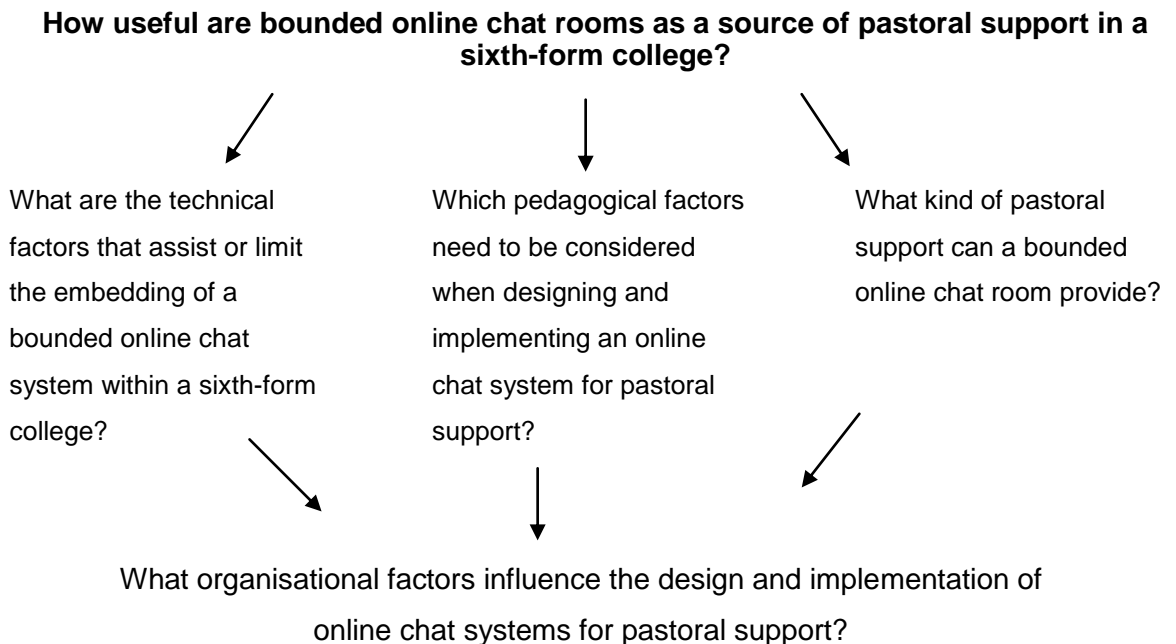


Figure 4 The design process highlights the different methodological approaches that were considered and the process for development of theory

3.1 Research Questions

The overarching research question and subordinate questions that have been developed as part of the research conceptual framework consider the usefulness of pastoral support in a sixth-form college.



As a result of carrying out this work I am also aiming to answer the underarching question of ***What organisational factors influence the design and implementation of online chat systems for pastoral support?*** In doing so, I hope to provide pragmatic guidance to colleagues considering the implementation of such a system in their institutions.

Full consideration of the pursuit of truth in relation to these questions and the most appropriate methods in which to carry out this research are outlined in this chapter.

3.2 Philosophical research assumptions

In order to examine what is meant by the real or absolute 'truth' in this study it is necessary to examine the role of the researcher and the representation of data. This is because to accurately reflect what is happening within this study there needs to be an accurate presentation of an independent reality (Smith & Hodgkinson, 2005:916). Using case study within a bounded environment means that the research is carried out in a way that would not be possible for an outsider to do. This is because as a researcher I am

both working and conducting research in the case study college. It also means that I have a higher level of understanding of the organisational culture, the stakeholders and IT systems in operation. It is unlikely that an outsider would be able to access students and the management information systems of a college in this way due to child and data protection issues. The conceptual idea and resources to support the system's introduction are also more likely to be accepted by stakeholders when presented by a member of staff rather than an external researcher. Therefore there needs to be acknowledgement of the influence of the 'insider practitioner'. The 'insider practitioner' is an individual who is both researching and working in the organisation (Anderson & Herr 1999:18). In this research the influence of 'insider practitioner' is significant as the methods used to collect data need to be rigorous enough to assess the real truth but at the same time must work within the limits of the institution being studied. There may be conflict between what the study presents and what the institution actually wants revealed in terms of the way its students conduct themselves. As the study takes place within such an environment I need, as the researcher, to be conscious about being honest about any claims that are made taking into account my own subjectivity (Kincheloe & McLaren 2005:327).

As a researcher there are also a number of assumptions that I have to consider when judging the very nature of the enquiry itself. The key perspectives involved are ontological, epistemological including an examination of human nature (Sudweeks & Simoff 1999:30) and 'insider practitioner'. From an ontological perspective subjectivity is seen to be both important to acknowledge and a rich source of reflection and investigation. I am able to use my experience of working and researching in the organisation to take understanding of the use of chat for support to a higher and richer level. The online chat system uses live participation and the use of transcripts to draw thought and meaning together. From an epistemological perspective this is critical as it centres on the need to feel something to be able to truly experience it and thus reinforces the need for me to be both moderator and researcher.

3.2.1 Ontology

Ontological assumptions, according to Cohen et al (2003), at extremes judge whether or not social reality is external or internal to an individual and whether or not reality is already available or created by an individual's mind (Cohen et al 2003:6). Ontological assumptions make specific links or connections between social and physical realities as they influence each other (Sudweeks & Simoff 1999 op cit). It distinguishes objectivity versus subjectivity. Individuals who only see the world as external to themselves and

therefore, not created by an individual's mind would be seen to be objective and at the other extreme reality already created in an individual's mind would be subjective.

I suggest that as a researcher in the chat environment my methods legitimately evolve from a subjective approach. This is because they are only seen to be useful for pastoral support if they are perceived and created to be as such by those involved. The fact that knowledge is external or 'out there' has little meaning for this research as it is about the individual perceptions of those involved that require investigation rather than the presence of the knowledge itself.

By taking this approach it is essential that both formal and anecdotal evidence is used to build theory because it allows subjective and objective data to be combined and compared. Subjective experiences that I interpret as researcher, the experiences of students and other stakeholders can build a relevant, balanced and fulsome picture of what is happening within this field and why it is happening. Basing the evidence on hard external objective data alone in this research field could mean that information is lost. This is because additional thoughts, reflections and meaning can help to determine real understanding and consequently theory. This does not mean, however, that quantitative evidence that is collected through the research process is discounted as this can provide additional insight into the study and can be examined in more detail from a qualitative point of view (Neumann 1996:322). Such an interpretive approach can be applied and theory be generated (Cassell & Symon 1994:2).

3.2.2 Epistemology

From an epistemological perspective there is a distinction between whether or not knowledge is something that can be acquired or needs to be personally experienced. (Cohen et al 2003:6). My own perspective with regard to epistemology is that knowledge is personal and subjective and the extent of its worth to participants and the researcher is unique to each individual. This thinking builds on the ontological approach that has already been outlined. Taking individual unique perceptions and using them to try to identify any similarities or guidelines is what takes those unique experiences and draws them together to influence policy making or future use. A personal and subjective approach acknowledges the role of 'insider practitioner' when conducting this research and the research questions involved. This will be explored more fully in the next section as it acknowledges my own subjectivity within the research and in doing so provides additional insight that would not otherwise be made available or considered within a purely objectivist approach. It highlights the supposition that all knowledge is subjective as it is

framed by the personal reference that the researcher has about the world around them and therefore in this context total objectivity in the real sense of the world cannot exist (Morgan & Smircich 1980:493).

Research in an area like synchronous communication is about thoughts, feelings and individual experiences which should be seen as a rich source of research data. This means that the shared experience and synergy of individuals interacting on screen needs to be acknowledged as part of an inner reality that is not out there to be studied and captured as positivism would dictate (Denzin and Lincoln, 2005:11). It is contained within and therefore, needs to be collected as such through the participation and exploration from within the group's shared experience. This means that due to the potential limited number of participants during the course of the research (eight chat participants per session and twelve interviewees to inform the design) there is likely to be a high level of subjectivity and this is acknowledged. The interpretation of quantitative data supports this subjective approach and provides more depth to the study which is particularly important for a case study approach.

3.2.3 'Insider Practitioner'

Synchronous communication can be difficult to research due to problems of access, difficulties persuading parents and colleagues that it is a valid method of communication and media headlines that have made links between it and inappropriate relationships between adults and children. It is therefore, essential that methods used by insider practitioners can be rigorously applied to conduct exploratory work in this field. This is to ensure that the personal insights, feelings and human perspective applied to chat can be fully explored (Neuman 2006:152). Insider practitioners need to be used due to the age and potential vulnerability of those involved as this study is designed to examine the use of chat as a support mechanism for the 16-18 age group and therefore, requires a high level of trust from both the young people and organisation involved. It is unlikely that such a level of trust would be given unless an insider approach was to be adopted and gives a unique opportunity to document hidden transcripts within institutions such as colleges (Anderson & Herr 1999:18).

As a member of the management team and researcher within the college I am an 'insider practitioner' so it is necessary to acknowledge the potential conflict that may exist when considering the validation of results. Whilst the legitimacy of my position as researcher can be gained through my management position in the organisation and the senior management who are supporting the use of the chat system, rigorous standards need to

be applied for validation to avoid a 'false positive' result. For example, from a political perspective it is desirable to increase the use of IT support systems for sixth-form students. There is also a trend towards greater use of online technology in teaching and learning (Byron 2008) as well as support. Case studies that consider the usefulness of chat for supportive purposes may indicate whether or not chat is a suitable method but at the same time senior management and colleagues may look for a positive result to show that 'chat can be used...' rather than 'chat cannot be used'. This potential for bias needs to be recognised and methods for validating results be seen to adequately legitimise those results whether positive or negative.

3.3 A consideration of quantitative and qualitative methodological approaches for this research

This section explains why I have chosen an overarching qualitative methodological approach for this study. I provide an analysis of quantitative methodology per se including content analysis and survey as quantitative methods. I assert that case study is the justified approach for this research as it supports the rich description of the experience and usefulness of providing a chat system for pastoral support. The inclusion and importance of quantitative and qualitative data within this case study is also justified as both sources of data enrich the study and provide a more detailed approach to the case.

3.3.1 Quantitative research

Quantitative research methodologies have been traditionally viewed as the more scientific method of studying social phenomena as a hypothesis is outlined, a population chosen and then a sample taken before testing and coding (Alasuutari 2004:603). The pure application of research methods using quantitative methodology, for example experiment, focus on the measurement of an outcome happening. Experiment was considered in the very early planning stages of the research design as it has been successfully applied to measure content and make comparisons with other methods of communication (Mishne 2005; Danet 1995; Johnsen 2007). Consideration was given to using an experiment to compare support available in public chat rooms with support available in college to develop theory about how students behave within bounded environments. This experimental method was rejected because it requires an objectivist approach that is in line with quantitative methodological ideas. It does not take into account the more complex feelings that are associated with pastoral support and the need to introduce the feelings and ideas that I can gain through the use of subjective reasoning. I also feel that

some of the richness of the data regarding the wider influences around the system and within it may be lost.

Content analysis is another quantitative method that measures the frequency and type of information that is posted or placed within a website. (Neuman 2006:322). Messages are coded according to the type of information that is placed there and statistics are examined to categorise whether postings are for social or question seeking purposes (Weisskirch & Milburn 2003:218). A purely quantitative research approach for this study is not appropriate as it goes beyond hypothesising and measuring outcomes and through its movement towards a more subjective epistemological approach seeks to understand and draw meaning beyond statistical measurement.

The use of survey as a quantitative technique was considered. As the sole data method of collection this is rejected because students need to interact with a chat system in order to be able to give their opinions and feelings about whether chat is useful and this is very difficult without having experience of this particular system. Only students accessing a system could be surveyed and therefore, the identification of those students may become an ethical issue due to the anonymous and confidential way that the system operates. Students may also not wish others to know they are accessing it and therefore, give misleading or false answers to such a survey. It is important for this study that interactions are considered as they happen within the online system rather than only as reflections after the event. This is because interpretation of events is so important at the time and it is likely that in an online chat environment participants will say things that they would not say to their closest friends (Horn 1998:195). By adding a further research collection method for the data this richness may be lost.

Whilst an overall quantitative methodological approach is discounted for this study quantitative research methods are not discounted as they are able to add to the richness of the case being studied. This is because quantitative data combined with a case study can provide in-depth information about participants that will enrich the data for example demographic information (Mann & Stewart 2000:67). Such data is able to provide detailed information to strengthen and support the qualitative findings and the pursuit of the truth.

3.3.2 Qualitative research

Qualitative research is able to provide a more personal point of view or first hand experience compared to statistical analysis (Seale et al 2004:3; Laws & McLeod 2004:2) which has led to the suggestion that it can provide more genuine understanding.

Qualitative research methods provide researchers with richer data and a greater understanding of the wider context of what is happening compared to quantitative methods as these only measure interactions rather than explain them (Darlington et al 2002:6; Strauss & Corbin 1998:11).

Qualitative research is important for the purposes of collecting data in education as it is part of naturalistic enquiry to illuminate a specific context and expand understanding of the processes and constructed realities that are already known (Erlandson et al 1993:45). Using a qualitative methodological approach overall, does not prevent quantitative data being used to complement the approach. This is important as it complements other findings that may come from a variety of different forms (Neuman 2006:181).

The research questions posed in this work consider the issues regarding the usefulness of online chat as a method of pastoral support in a sixth-form college. The research questions seek to consider the usefulness for educationalists of using chat in this way but also take into account organisational influences that impact on the use of online chat. This means that a level of understanding and judgement needs to be examined in the chat exchanges and in the wider context of the college including its support structures. The chat transcripts can be measured using discourse or conversational analysis. It is important to attempt to understand how and why those exchanges take place and the implications of such interactions for pastoral support.

In essence, an overall qualitative approach is important for this study as it seeks to obtain detailed information about feelings, thought processes and emotions that could not be extracted through other purely quantitative methods (Strauss & Corbin 1998:11). It is important for this study as it seeks to provide a richer and more detailed picture of what is happening in the online chat environment and the extent to which it is useful for supportive purposes.

Action research was considered for this research as it investigates self-reflecting enquiry (Kemmis 1993:177). Action research allows practitioners to plan, implement and then reflect on the change in practice in their institution. As the chat system is designed and then implemented it could be argued that this is action research but this suggestion is felt to be weaker as the essence of the research is about how chat can be used as a further source of support rather than the process of actually designing and implementing the system for this to happen. There was also not a presenting 'problem' that required an intervention to take place and then a change be reflected upon. This research considers

the usefulness of online chat in its fullest sense and therefore requires the more detailed level of intervention that case study is able to draw in to the research. Action research centres more on the quality of information and effectiveness of the intervention rather than the consideration of the support aspect of the research (Fryer & Feather 1994:230). Whilst action research may have been able to instigate rapid change in the organisation (Waterman et al 2001:29) this is not part of the research design as change is a by-product of the research rather than the purpose of why it is happening. The design and implementation of the system are used for the collection of research data rather than as a key part of the research process in itself. A further reason for not using action research as a methodology is that action researchers may try to equalise the power relationship between themselves and their research subjects (Neuman 2006:28) and in this study this is impossible as the researcher is an 'insider practitioner' and part of the management team running the college. Therefore the associated status that goes with that inside knowledge and the richness of experience and data is most effectively considered through case study.

3.4 Case study as the methodological approach

A case study approach seeks to interpret, consider and analyse in a highly detailed way what is happening to an individual or organisation. It is usually a single case that describes what has happened in that instance and demonstrates its importance (Gerring 2007:76). Case studies take into account a lot of detail about the complexities of a particular institution and penetrate into situations that may not be possible in other ways (Gillham 2008:1; Cohen et al 2007:253). Case study is highly effective when it is impossible to separate the variables of the case from its context (Yin 2003a:4). It provides a detailed consideration of contextual factors that may not be relevant for other methodological approaches (George & Bennett 2005:19). A case study approach is thought to be appropriate for this research as it takes place in a single college environment using a specific chat system. Key aspects of case study approaches are considered in this part of the research design including the nature of case study, the extent to which it may be termed scientific, the implications of a holistic approach, reflections and access for study.

Yin (2003a:5) describes three different forms of case study; exploratory, explanatory and descriptive. Each considers different perspectives applied to case study. Exploratory seeks to discover theory from the case by looking at its raw form. Explanatory seeks to find causal links between variables. According to Yin, descriptive starts with a descriptive theory and then using pattern matching considers cause and effect. Case study is also

defined into three further categories (Stake 1995:3); intrinsic, instrumental and collective. Intrinsic is when the researcher has an interest in the case and wants to learn about that particular case. Instrumental is when the researcher seeks to understand something else other than the particular case through its study. Collective is where groups of cases are studied.

Case study can, if procedures are developed and applied appropriately, be as rigorous as any other method of investigation. It allows qualitative and quantitative data to join and examines relationships between them. If specific reference is made to the context being explored and explicit research questions are outlined, case study can emulate a scientific approach (Yin 2003a xvii). Essentially, it is a different approach that is not scientifically flawed but is a different type of strategy in its own right (Robson 2002:180).

Using a case study approach gives the opportunity to conduct a holistic in-depth investigation (Tellis 1997; Stake 2003:141) that seeks to understand perceptions of events (Cohen et al 2007:253). Due to its richness of depth and contextual-dependent knowledge (Flyvbjerg 2001:70), it allows issues to arise or be outlined that would not be discovered through superficial research (Denscombe 2003:31). A case study can be used to analyse data and tell the 'story' in one institution (Merriam 2002:8). It is also useful for studying educational innovations and informing policy (Merriam 1988:33). Using case study allows behaviour, thoughts and feelings to be considered in context (Gillham 2008:11) and this yields more insight into the case (Merriam 1988:30). However, case study may be criticised if generalisations drawn from its findings are unfounded (Denscombe 2003:39). The holistic and in-depth nature of the study can also make conducting case studies extremely time consuming and can lead to research questions being left inadequately answered or not answered at all (Darke et al 1998:274). The desire to provide rich depth to a study may also lead to difficulties when establishing the boundaries of the case as it may be difficult to decide which case information should be included or excluded (Denscombe 2003:39). Boundaries are particularly important if the case is innovative as there may be some areas not considered in the research design. Information that is significant during the study's development may consequently need further exploration.

This tension between holistic principles and the expanding level of depth and volume of data are significant for this study as they highlight the importance of the conceptual framework and research questions. Case study is able to accept answers or suppositions that were not considered to be within the conceptual framework and in doing so allows for new theory to develop (George & Bennett 2005:21). 'Novel theory' is more likely to be

developed due to the insight that comes from case study. Emergent theory can be tested and the potential closeness of a researcher in a case study means they are able to gain further insights into it (Eisenhardt 1989:546-547). Case study allows research to be carried out with an open mind as far as possible and thus gives opportunities and potential for unfamiliar results or understanding (Gillham 2008:18). Therefore, the richness and flexibility of case study can support new thinking and insights being developed.

Case study seeks to explain why outcomes happen rather than just find outcomes (Denscombe 2003:30). These are important areas for this study as it seeks to offer pragmatic advice for colleagues who are considering implementing such systems in their institutions.

Case studies are considered to be good for reflection on personal experience and empathetic representation (Stake 2003:156, 149). Therefore when a researcher is an 'insider practitioner' using a case study approach allows in-depth understanding and meaning to come from the specific organisation and those involved within it (Merriam 1998:19). One method of investigating this meaning is to use semi-participant observation (Swain 2006:201) which is the use of participant and non-participant observation during a study. Semi-participant observation can provide opportunities for a researcher to become aware of both the formal and informal reality of what is happening in a specific organisation by gaining more developed understanding through tacit knowledge (Gillham 2008:28, 31). The sensitivities of the study may also require innovative approaches to the conduct, analysis and reporting of a study (Braud & Anderson 1998:180) that may not be possible with other approaches. Such a richness of personal experience may however lead to a greater potential for bias (Yin 1994:11). This is because case study may be affected by the personal meaning of what is happening and there is a risk that the researcher may add, subtract, invent or shape knowledge to make it personally useful (Stake 2003:146). It is therefore important to ensure that the research methods adopted for case study research seek to enhance reliability and validity. The researcher's characteristics, background and interpretation of events may influence results (Darke et al 1998:278). Researchers should ensure that bias does not change the results or impact of the study (Darke et al 1998:286) and so the researcher's background and motivations need to be part of the description of the case study evaluation. The potential for bias needs to be acknowledged in this case and research methods used to minimise or highlight its effects. This is particularly important as the software being used to conduct the research is bespoke and therefore, bounded in its design (Laws & McLeod 2004:5). Studying such an individual case is not seeking to prove something but provides an opportunity to learn (Flyvbjerg 2001:73). This means that the sensitivity and integrity of

the researcher have a significant influence on the findings (Merriam 1988:34). It is important to note that a case study methodology is not the only method that needs to take into account bias and researcher sensitivity. They are likely to be present in other research methodologies and approaches (Yin 1994:10) and these methods are not seen as any less important as a result. Indeed, it is the very basis of critical argument as to whether any study can be completely objective. I therefore suggest that from an ontological perspective, a subjective approach using case study is appropriate for this research. I assert that awareness of the level of subjectivity and its acknowledgement have implications for this study but do not detract from the potential value, richness and depth of the research.

A case study approach can be developed through convenience (Denscombe 2003:34). This is particularly important if suitable cases are difficult to find (Darke et al 1998:274). Choosing cases in this way acknowledges the benefits and understanding drawn from a particular institution or system that otherwise would not be accessible. The primary purpose of case study is the opportunity to learn (Stake 2003:153) and encourage greater understanding. However, there is a tension between the need to use a convenient case and the extent to which controls are imposed. Case study may work best when researchers are under not pressure to impose control (Denscombe 2003:38) and yet due to the nature and difficulty of accessing some areas and situations this may not be possible. For example those involving young or vulnerable people may only be granted access with a relatively high level of control.

Case study is particularly suitable for this research as it provides access to students and data that otherwise may not be possible. This is because I am both the researcher and semi-participant observer. I am able to gain access to resources including time and technological systems that are unlikely to be available to an external researcher. By having insider knowledge, I am able to study formal and informal realities happening in the organisation and offer more in-depth understanding of this case. This would be more challenging for an external researcher. Whilst the potential for bias is considered and discussed as part of the research design, this study will be a case within a case as the students will be self-selecting from the whole student body (Stake 2003:153). This reduces the likelihood of sample bias due to researcher choice, but does illustrate that the contextual nature of the sample will be of important significance (Denscombe 2003:58). I argue that this approach benefits from a high level of contextualisation that is only possible with an exploratory case study approach. It gives opportunities for detailed consideration of the types of student who access such systems and their participation

rates. Such specific and detailed information provides a higher level of understanding for colleagues as it acknowledges the impact of the context and specific institutional nuances.

Case study is also particularly important for this research as it is not seeking to make generalisations or prove an existing theory about the use of chat for pastoral support. It is bringing understanding to what is happening. It is motivated by the need to identify the usefulness for this sixth-form college (Chima 2005:18). However, there is the potential to highlight issues that may be relevant to other colleges who are considering the introduction of online pastoral support and provide pragmatic advice for them to consider before introduction. Case study is also particularly important for this research as it is able to overcome some of the difficulties associated with trying to access students using chat software in sixth-form colleges. This is because many institutions limit or ban access thus emphasising the importance of the single case (Yin 1984:43). This study is possible due to the researcher's working role within the sixth-form college (Denscombe 2003:34). As a result of this 'convenient access', control is an issue for the research as there is a tension between the level of control that the institution expects due to its policies and procedures, and the need for natural observation. This issue is acknowledged, and its effects will be considered. I suggest that the control needed due to the age and potential vulnerability of the participants does not detract from the level of understanding that will be gained from this case. In fact, it seeks to inform understanding of tensions between controlled and naturalistic observation in bounded environments and the extent to which online pastoral systems may be considered useful.

The literature relating to methodological approaches highlights two key implications for this study; the importance of research design and the need for a conceptual framework. I assert that case study is the most appropriate methodological approach for this study as it provides opportunities for a higher level of contextual understanding and depth. By using case study the richness of the context and data are able to provide insight into the effect of the culture, systems and staffing on how the system is used and the issues that may result from it.

Using the definitions of case study according to Yin (2003a:5) the use of a single system within one institution is exploratory case study. Therefore the results of this case should develop new theory by recognising what makes this specific sixth-form college unique and the impact of support in this case. It is likely that further studies focussing on specific aspects of the results may need to be instigated due to its exploratory nature. This case is categorised as being exploratory because it seeks to make judgements and understand what is happening in this case (Stake 1995:3; Guba & Lincoln 1981:376). Therefore, it is

important to understand the uniqueness of the case. In doing so, it will add to the body of knowledge regarding the use of chat due to its differences and individuality. The research methods that will be used to support this case study approach need to be carefully considered and are now discussed in the section that follows.

3.5 The research methods

I have asserted that case study is the most appropriate methodological approach for this study as it seeks to explore the usefulness of online bounded pastoral support in a specific environment. As it is a single case, a number of different research methods offer greater insight (McQueen & Knussen 2002:36). The methods used to support this approach should aim to encourage naturalistic enquiry. This means that any intervention should try to replicate what would be happening if it was not being formally observed. To provide the richness and depth of investigation needed for this study there are two main methods that will be used to collect data for analysis. These are observation and transcript analysis of online text exchanges. Reflections and judgements during chat sessions and the analysis of the transcripts after sessions provide rich data to support emergent theoretical development. Therefore, a reflections diary and email will be used to support understanding.

Observation is significant for this study as it takes place in the chat interface. This means that the observation is recorded in two ways; through note taking and through direct transcript recording. Extensive data should be available to use for analysis. Observation tends to be conducted in two main ways; non-participant observation and participant observation. Non-participant observation is the more naturalistic approach as it seeks to observe what is happening without influence. It is most useful to have a single observer watching what is happening so that there can be consistency (Yin 2003:93). Participant observation is when a role is assumed by the researcher and interactions take place between the observer and other participants (Yin 2003:94). Both types of observation are influenced by the 'observer effect' (Denscombe 2003:39). This means that participants behave differently if they know a study is taking place and therefore interactions may not truly represent reality. This effect, however, is not isolated to case study research and steps can be put into place to minimise it for example anonymity. The extent to which the observer effect will actually influence participants also depends on the implementation of the methods. There is evidence that research methods conducted using online tools may change the dynamics of this effect. This is because observation online may be less obtrusive and have reduced social pressure (Kraut et al 2003:15).

The choice of whether to use participant or non-participant observation appears to be simplistic but in reality it represents a spectrum of choices depending on the case being studied, the need for control and the consequences of any behaviour by those involved in the case. Non-participant observation, in its simplest form, does not permit any formal interactions to take place regardless of what the participants do. This means that even if there are concerns about something that is happening, there should be no challenge or difference made. In this case, this would permit young people in the sixth-form college to behave in any way they choose without consequence for the researcher. Participant observation at the other extreme of the spectrum means that the observer becomes part of the group (McQueen & Knussen 2002:23). This means that they are treated as a member of the group and potential equal.

The implication of the tension between participation and non-participation in this case is that the researcher, as a member of the sixth-form college where the study is taking place, needs to ensure that college policies and procedures are followed and yet also allow the students to behave in as natural a way as possible. The online and dynamic features of the system may change the way that young people behave in the system and controls must be in place to deal with any poor behaviour. In effect, the researcher needs to be present online to record and note what is happening but may have to participate if there is any behaviour that is outside college policy expectations. Balancing these two aspects means that a semi-participant observation approach may be the most suitable. This is because it is able to offer flexible and opportunistic moments for interaction (Punch 2004:100). Semi-participant observation provides opportunities to portray a range of roles from passive observer through to fully active participant (Swain 2006:201). The flexibility that is offered using semi-participant observation also means that opportunities for testing theory and challenging understanding should be possible during the study. The role of the semi-participant observer also acknowledges some of the difficulties that can be present in case studies such as the different roles that the researcher might need to play. The implication for this study is that as researcher I may need to be an active participant, passive participant, leader and/or moderator depending on the session that is taking place. The variety of potential research roles needs acknowledgement. It highlights some of the inherent difficulties in this study as the system will offer pastoral support online and therefore there are likely to be issues related to on-screen presence and anonymity. Due to its exploratory nature, there is an expectation that such issues will be explored in as much detail as possible.

Semi-participant observation offers greater understanding and subjective judgement about what is happening. It is able to offer insight that otherwise may not be captured or noticed

(Gillham 2008:20). Using an 'insider practitioner', for semi-participant observation is even more powerful as there is already understanding of the institutions norms and values that are acknowledged through the use of this method (Jackson 1983:40; Nandhakumar 1997:213). Unlike traditional semi-participant observation the role of the researcher is not to actively take part in activities that place them as an equal but as a moderator and therefore, to some extent participating at what could be termed 'at a distance'. Throughout the data collection period, the researcher will act as a 'covert researcher' (van Deventer 2007:1) they are not covert in terms of their presence but merely of their identity. This is possible when researching online in an anonymous system and allows a closeness to the interaction as well as aspects of covert research. This means the researcher can really investigate what is happening without feeling compromised by their own identity. It also avoids a closer examination of the researcher's professional performance and identity that may be threatening in the culture of the college (Stenhouse 1993:229). This is particularly important as I am a member of the college's management team responsible for the provision and delivery of pastoral support. Using the researcher role in this way also helps to maintain a 'dual identity' (Nandhakumar 1997:217) more easily than a traditional face to face participant observer. Unlike more traditional forms of participant observation, online observation is automatically recorded so the level of note taking that is required is less as full transcripts are available. In offline environments breaks in observation to make notes may disrupt the flow (Punch 2004:98). A criticism of all participant observation, however, is that it is not used within a formal design structure (Bositis 1998:333). In this research design this is not the case as it fits within the methodological structure and supports the uniqueness and exploratory nature of the case. In this study all levels of participant observation are automatically recorded.

Using transcript analysis and semi-participant observation together allows other evidence to be considered in a richer and more in-depth way for example anecdotal conversations, feelings and judgments felt by the researcher during the chat sessions can all be taken into account. Transcript analysis is suitable for this research as it fits with a case study approach. The transcripts of chat sessions are not 'objective facts' but can explain actions (Charmaz 2006:35). Transcript analysis is the systematic collection and analysis of data (Cohen, 2000:298) using coding whereby each sentence is examined and meaning derived from what is actually being said and what is set out to be achieved as a result of what has been said. Transcript analysis requires a detailed interpretation of the text and allocation of codes and meaning to the text.

The process of applying transcript analysis is possible in a variety of different ways thus leading to potential differences of interpretation. It can take place by looking at the stress

placed on particular words and sentences in order to make sense of them (McShane 2000:7). By doing this McShane (2000:7) categorises text according to statement types for example conflict, resolution or key points. Darhower (2002:261) measures the extent to which off-task discussion takes place in relation to the given topic for that session.

The number of off-task utterances (after five consecutive instances unrelated to the task) is measured as a percentage of the total for that session. Walker (2004:173) analyses chat sessions by using the DISCOUNT coding system to divide the narrative into different sub-categories including 'inform opinion, inform fact, challenge, counter and encourage'. The narrative is then coded using these responses to work out the extent to which students used the different sub-categories in a chat session. By categorising different sections and responses within the chat, Walker is able to measure the use of the chat for different types of activities within a session. A chronological comparison of different coding methods is provided to consider the development of such methods. A comparison of the different methods available is shown in Figure 4.

The fitness for purpose of a chat system can be judged through coding systems that analyse narrative content and evaluate it. Researchers in the field of online chat use suitable measures for evaluation and these need to be different to those used in other narrative environments (Beningo & Trentin 2000:262). A narrative environment is a written environment where a story is being told. The challenge in chat is to take text produced by 'online conversation' and then use it to be able to explain what has happened. As chat is devoid of other clues such as visual or social links there is complete reliance on text-coding and this is a challenge for interpretation.

Online discussions recorded automatically in chat sessions can be used for review later (Harasim et al 1995:168). It is critical that rules and boundaries are clearly given outlining who might access online chat transcripts and for what purpose. Whilst online chat may not be able to be coded in exactly the same way as the transcribed spoken word due to its distinct nature, there are some similarities that can be used for analysis. Investigations place emphasis on words in chat logs including the use of punctuation, capital letters and the use of emoticons. 'Emoticons' are faces smiling, winking etc that are able to indicate feelings and emotions (Suler 2004:39). Measuring these new distinct types of communication requires investigation into the way that emotions are expressed within chat and exploration of chat acronyms such as LOL (laughs out loud) to explain a situation. Measurement is also possible using transcript analysis by measuring content according to the type of words used online.

A comparison of different narrative coding methods

Authors	Method	Examples or additional information
McShane (2000)	Stress place on different words according to statement types	Conflict Resolution Key Point
Darhower (2002)	Measurement of on and off task behaviour to measure the extent to which it is being used for a legitimate purpose	On task Off task (5 consecutive utterances off task)
Hein (1996) and Faupel (2002)	A number of words have been identified as demonstrating emotional literacy by both Hein and Faupel. Measuring the extent to which these words are used within the narrative provides an assessment of the extent to which emotionally literate narrative is taking place.	(Hein 1996) Dehumanized Disrespected Embarrassed Humiliated (Faupel 2002) Empty Energetic Envious Evasive
Burnett (2003)	Burnett considers the organisational strategies needed to maintain effective discussion. These should be used by the moderator or tutor to maintain communication flows	Directing Selecting Summarising and re-directing Summarising and waiting Maintaining multiple strands
Walker (2004)	DISCOUNT coding system used to categorise words according to their purpose	Inform opinion Inform fact Challenge Counter Encourage
Alpers et al (2005)	Using Linguistic Inquiry Word Count (LIWC) software, words of a category are counted within the narrative; these are known as content words. The number of words are counted using the LIWC software and reported back	Words are categorised according to positive feelings for example optimism, negative emotions e.g. anger, cognitive mechanisms (thinking and reasoning), social issues and body

Figure 5 Comparison of different narrative coding methods over time and according to different methods

It is likely that words used in a pastoral online chat environment will have socio-emotional content. Rice & Love (1987:93) suggest that socio-emotional content is portrayed in communications that show solidarity, tension relief, agreement, antagonism, tension and disagreement. By measuring the number of sentences with socio-emotional content shown as a percentage of the number of sentences in total, they are able to measure outcomes. Alpers et al (2005) use Linguistic Inquiry and Word Count (LIWC) software to analyse text produced in an online breast cancer support group. The research makes a link between the use of more positive emotion words in exchanges and health improvements. Text exchange analysis is used for measurement as no other clues such as verbal or body language are available.

LIWC software is used to determine the percentage of positive words in the online exchanges (content) and then to compare them to newspaper articles about breast cancer (construct) (2005:364-365). Text based coding using emotional words is also used by Hein (1996) and Faupel (2002) to measure the extent to which emotional feelings are being demonstrated (see Appendix 14).

The research methods chosen to support the case study methodological approach seek to make best use of the quantity and quality of the recorded material produced in the chat sessions through transcript analysis. They also provide opportunities to use a spectrum of activity from non-participant through to full participant observation whilst automatically recording the activity. It is suggested that a semi-participant approach may be the most successful. Previous studies show that the potential spectrum from fully participant observer through to non-participant observer is likely to affect the way that students behave in the chat sessions. Transcript analysis highlights some of the key differences and issues that I will need to take into account when coding the narrative produced. Two key important differences that are significant for this study are that the transcript needs to be coded differently from traditional texts and therefore should take into account other forms of communication such as emoticons and acronyms. The text may also not be able to be interpreted in its literal form due to the online nature of its structure. This means that that other sources of data such as the reflections diary and emails should enhance the data and build theory.

3.6 Theoretical development, reliability and validity

The building of theory comes from the initial conceptual framework and research questions that have already been outlined. The richness of the case that is gained from contextual results and the tendency statements that emphasise any differences or support the original guiding theory (Chima 2005:10) will be used to reinforce understanding and allow subjectivist interpretation to build theory.

By using different data sources and coding using Nvivo software, theory will be drawn from the data that either supports or is in conflict with the original guiding theory and research questions. By using case study I will be working inductively (Gillham 2008:12). Case study allows me to identify the variables that I want to measure, as outlined in my research questions, and refine concepts that are drawn from them in this particular context (George & Bennett 2005:20).

Case study theory is drawn from being able to plot the thinking that comes from the rich and detailed set of data and therefore by reviewing and summarising the chat transcript analysis, semi-participant observation, emails and reflections it is possible to progress thinking. The thinking is organised by using the subordinate questions to structure the collection of data and analysis. This is an important aspect of the conceptual framework. Having the research questions outlined as part of the case study helps to organise the case and avoid it being overloaded with data (Eisenhardt 2002:11).

As part of theory development there is the need to verify that the meaning and conclusions that are being drawn from the data are actually valid and therefore, need to be tested for their validity (Miles & Huberman, 1994:11). The data will be carefully analysed to consider the full richness of the data. This will be able to happen in several different forms but the main ones are considering concepts guided by the research questions or going back to the chat transcripts to analyse the data again for different purposes. By following this process the guiding theory can be considered in full. Internal validity (Chima 2005:16) allows me to consider how the data being collected fits with my guiding theory and therefore be able to make sense of how everything fits together. As an 'insider practitioner' a higher level of detail and understanding of the culture and ethos of the college should be available to me.

It is not possible to fully triangulate the chat transcripts with thoughts and comments from the users. This is because the system is anonymous and therefore, seeking confirmation students will identify them in some way, either by email or in person and this goes against the research purpose when attempting to confirm such validity. Student identification could lead to adverse consequences for the respondent as it would be a form of disclosure which should not be attributable to a named individual (Oliver 2003:32). Asking students per se to comment on its content would also not be appropriate as respondents may or may not have taken part in the chat and therefore, their views and opinions will be affected by this. However this is a less formal form of triangulation that is drawn from the use of reflections, notes and semi-participant observations made during the sessions.

Anderson & Herr (1999) suggest that there are five main methods of assessing validity for the insider practitioner; outcome validity, process validity, democratic validity, catalytic validity and dialogic validity. Outcome validity 'is the extent to which actions occur that lead to a resolution of the problem that led to the study' (Anderson & Herr 1999:16). In this case, the usefulness of a bounded chat system for pastoral support. This validity is also dependent on 'process validity'. This is the validity of the process itself leading to resolution of the problem. The issue here is the difficulty of proving a false truth. If the

outcome is perceived to be valid it is likely that the process would also be seen to be valid even if it were flawed. Triangulation can be used to minimise the likelihood of such a false truth being presented as it presents the same information from different perspectives (Neuman 2006:149). Democratic validity is the process of involving all key stakeholders in the research to ascertain whether or not they reflect all perspectives under investigation. In this research it is the intention during preliminary studies and throughout the research process to involve as many key stakeholders as possible but it will not be possible to go back to those participants who were active in the system to avoid identifying them. Catalytic validity is the reflection of the practitioner's own change throughout the research in accepting changes in thinking. The last type of validity is that of dialogic validity and that is the need to enter dialogue with other practitioners and researchers in order to receive peer review. This is critical in order to give weight to policy guidelines or changes that may be drawn from the research.

The chat transcripts will also be examined using face validity (Neuman 2006:192) to look at aspects of this data from other perspectives. This means examining the chat transcripts at face value whilst also using other sources of data including emails and reflections as part of theoretical development. As it is suggested (Mathison 1988:17) that triangulation may produce inconsistent or contradictory data, a holistic approach rather than a technological solution for validity is more appropriate. However, where possible information from reflections and judgements by the researcher, emails received and notes taken will be used to build a richer picture of the case.

3.7 Summary

I propose that using case study as the overarching methodological approach is the most appropriate method for this research as it seeks to provide a rich and in-depth study of bespoke software in a particular institution. I also suggest this research design is based on exploratory case study (Yin 2003a:5). Darke et al (1998:274) suggest that case study may be applied for convenience or for cases that would otherwise not be accessible. This case offers an opportunity to investigate and learn more about chat within a pastoral environment that may not be possible in other institutions.

The literature highlights that quantitative and qualitative research methods can guide case study theory (Chima 2005:10) and this is particularly important for holistic in-depth investigation (Tellis 1997). Therefore, it is appropriate to use transcript analysis and semi-participant observation together to support the approach. The application of narrative coding methods to online transcripts highlights the unique features of chat language and

text including emoticons and acronyms that will need coding and the potential issues around 'literal translation'. Using transcript analysis provides structure and the opportunity to apply coding to a fast moving and changing method of communication.

I have shown in the research design that online semi-participant observation in this case is able to bring new knowledge to the participant observation paradigm. This is because it is possible to 'observe' and 'participate' at a distance due to anonymity features in the system and the physical separation of participants. I propose that the highly detailed knowledge that I can bring to this research as an insider practitioner, and in particular understanding of the cultural norms and values of the institution, outweighs the potential for bias. This is because as an insider I am able to acknowledge the subtle nuances that make this institution different to others. I suggest that it would be more challenging for an outsider to fully explore those formal and informal realities.

I propose that using transcript analysis with semi-participant observation adds rigour to the research. This is because participant observation has been criticised in the past for not using a formal design structure (Bositis 1998:333). Using the two methods together will add structure and method to the process but should not be allowed to stifle the ability to allow 'novel theory' to develop (George & Bennett 2005:21) or to explain why outcomes are happening (Denscombe 2003:30).

Face validity and internal validity of the case are essential parts of the research design. They are particularly important, as the more formal application of triangulation will not be used due to the need for anonymity and protection of participants. However, reflections and semi-participant observation do provide the opportunity to develop a higher level of understanding of what is happening and why. This is a necessary element of an exploratory case study approach.

The next chapter considers the case in context by providing a rich description of the college context, an evaluation of the bespoke system, influences on the data including data sets and ethical considerations of using a chat system in this context. Using a case study approach means that the development and introduction of the system is of particular significance due to its exploratory nature.

Chapter 4 The case in context

A rich and detailed description of the context of the study is an essential part of a case study methodological approach. This chapter starts by giving background detail of the college where the research is taking place to put it in to context in terms of curriculum, organisation, policy and procedures.

The chapter then goes on to consider why a bespoke system is necessary for this study. An evaluation of the final design before full implementation highlights subtle key changes drawn from the design phases. These aspects are significant for this study as they demonstrate the importance of having a system that fits with existing college practice rather than being 'best fit'. The fully detailed design of the bespoke system including the user needs analysis and design stages are outlined in Appendices 3 and 4.

The next stage of the chapter considers the influences on data collection and the data sets in context. These are particularly relevant for a case study approach as they highlight how the data is generated and the impact of the way that it is collected and analysed in this case.

Finally the ethical dimension is discussed to highlight the important ethical issues that need to be considered. Firstly a high percentage of the students are likely to be under 18 therefore, protocols related to minors come into force. Secondly the chat relates to pastoral support which means that sensitive subjects are being discussed that may relate to child protection. The chapter considers these issues in relation to key stakeholders before a summary is provided.

- 4.1 The college in context
- 4.2 The justification of a bespoke system
- 4.3 Evaluation and adaptation before full introduction
- 4.4 Influences on data collection and the data sets
- 4.5 Ethical considerations of chat
- 4.6 Summary

4.1 The college in context

The college where the research is taking place is a sixth-form college in the South of England. The College has 1124 students who are enrolled on a range of programmes from Level 1 to Level 3. Courses at Level 1 and 2 tend to be more vocationally based such as Business, Sport or IT but at Level 3 it is possible to study vocational subjects including BTEC qualifications or academic advanced level qualifications across a broad range of subjects.

The college is a city sixth-form college that attracts students from schools with lower participation rates and GCSE results. Students are drawn from some of the most affluent and deprived areas of the city. The city has some of the highest absenteeism rates in its schools in the country. These students then go on to study at the college with low levels of educational knowledge and esteem. The college has an emphasis on equality of opportunity and has systems and courses to try and encourage all students to participate in education. Students can exhibit challenging behaviour in the educational environment, particularly those students who are studying at Level 1. In terms of staffing, like many other sixth-form colleges, the majority of teaching staff are aged forty or over and there are slightly more females than males. The pastoral management team is made up of one male and four female managers who look after the college's tutors.

Students are offered support through their allocated personal tutor or tutorial manager. They are also able to access a college counselling service. Before the implementation of this research there was no facility for online support or for any sort of peer support to take place. The college has a tendency towards more traditional methods of support for students for example one-to-one interviews and group activities. Therefore, introducing a system to provide support online and in particular through a chat system is a new concept for the college and its stakeholders.

4.2 The justification of a bespoke system

There are a number of different chat systems available online commercially but for chat to be used effectively in the educational context there are critical drivers for its success. This means that an interface build is more appropriate for this study rather than the installation of existing software.

This is because there is a greater need for monitoring of IT usage, child protection controls, logging and storage of data, integration with college systems, student expectations and involvement. These critical drivers also highlight that the design of the interface should involve students to establish and monitor their expectations.

The interface needs to be strictly monitored as part of the IT acceptable use policy of the sixth-form college (Appendix 10) and needs to be seen to be as a form of support for students and not as a chat room for gaming or informal chat such as MSN. This is because there are a number of students under the age of eighteen and with high levels of vulnerability that need protection as part of the college's child protection policy (Appendix 9). This means that only students registered with the college are allowed to use IT facilities and in doing so are given a college identity and password. By only permitting college students to access the interface, the potential for outsiders to gain access to students online through the system is significantly reduced if not completely eradicated. This means that the system must be compatible with the college network and be hosted within the college's firewall. It also gives capacity for data capture through chat text logging. Links can be made between the interfaces and existing databases using identities for monitoring and coding.

Being bespoke means the interface provides an additional comfort for both students and parents who may have concerns over chat usage in any context by reassuring them that it is only available in college and cannot exist outside of it. All of the detailed discussion of the development stages and system features are given in Appendices 3 and 4. Figure 6 diagrammatically represents the process. Whilst each stage represents an individual step forward there are significant loops back that can take place at any time. For example, evaluations and recommendations for improvement may take place at all stages including the live introduction and as a result will loop back to the relevant stage. Making the design and build relevant to students is likely to lead to them feeling the design is more relevant to them (Geldard & Geldard 1999:63).

The key stages of the chat development process

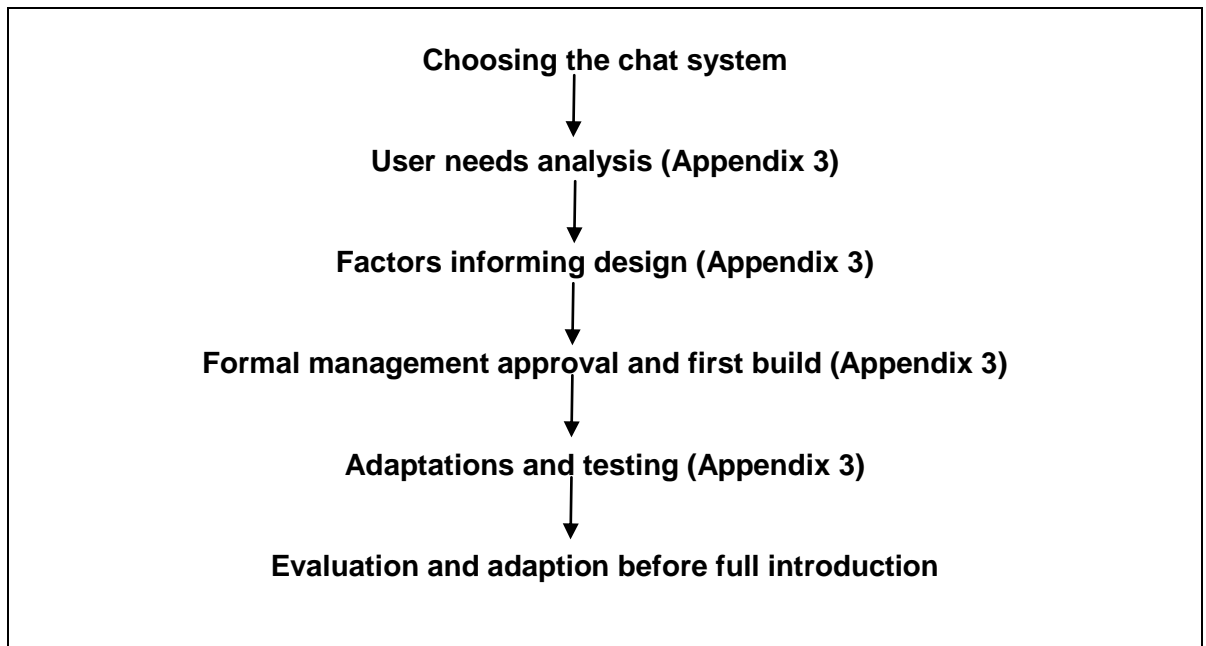


Figure 6 Each stage represents an individual step forward but there are significant loops back that can take place at any time

4.3 Evaluation and adaptation before full introduction

The results of the initial testing are structured according to the three subordinate research questions that are used throughout the research; technical, pedagogical and pastoral. These results inform the final system design and also shape the methodological approach that is used for full implementation. The initial testing is the first opportunity that students have to see the system working and as such these early results provide insight into the likelihood of student adoption in college. The screen image (Figure 7) shows the interface from a student perspective.

The system is anonymous as requested by students during the semi-structured interview stage of development. Emoticons are included as they link to the supportive purpose of the system. Emoticons are defined as emotional icons that are used to provide non-verbal emotional information in text based systems (Derks et al 2007:843).

The initial chat interface from a student perspective

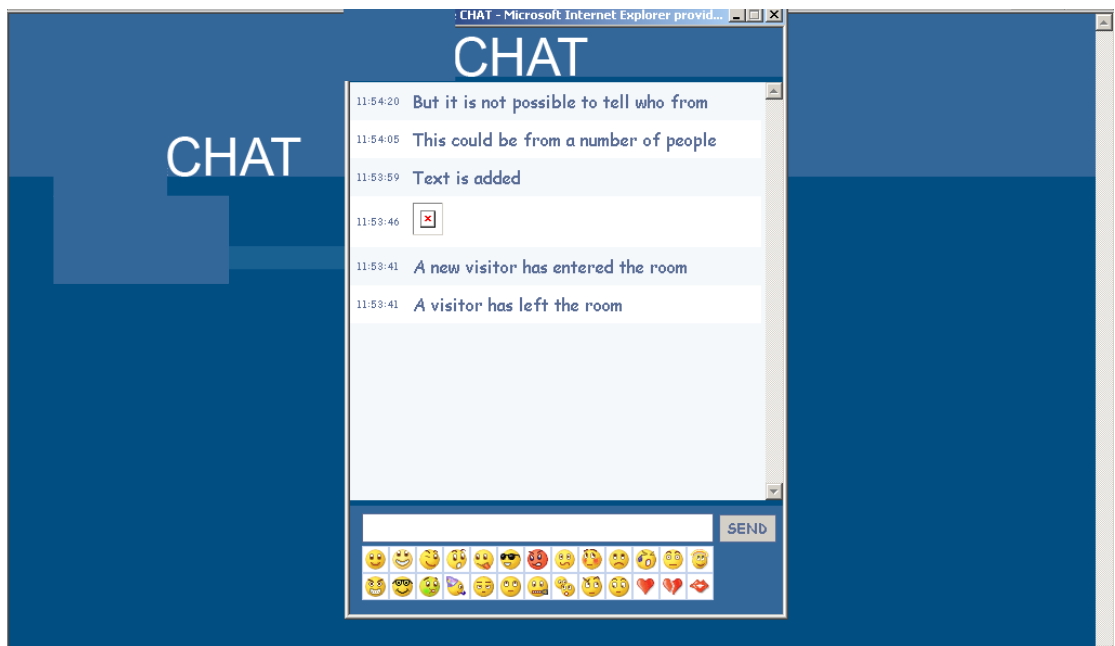


Figure 7 The initial chat window that students are able to view with references to the case study college taken out.

The most significant areas of exploration through testing of the interface are categorised into the three main subordinate research questions (Figure 8) and also the underarching question that relates to organisational influences. These categories highlight potential areas for adaptation including issues such as control, ways to publicise the system, logging and access.

Explorations of the interface categorised according to the three subordinate research questions

Technical	Pedagogical	Pastoral
<ul style="list-style-type: none"> • Anonymity • Emoticons • Lagging • Resizing • Alert 	<ul style="list-style-type: none"> • Behavioural control • Logging • Access • Publicity 	<ul style="list-style-type: none"> • Buddying • Advice and support • Expression • Fun • Accessibility • Support and aspirations

Figure 8 These explorations highlight particular areas for more in-depth investigation and exploration.

From a technical perspective, implementation is the first opportunity to investigate student reactions to the system and in doing so testing the results of the development interviews and using questionnaire feedback. The key points highlighted as being important in feedback are:

- anonymity
- the use of nicknames
- emoticons
- lagging
- screen sizing
- filters
- alerts

Students enjoy the anonymity onscreen but at times do find the thread hard to follow. Some students suggest nicknames should be offered or colours used to make this clearer. This is shown on-screen by the amount of text and through the questionnaire feedback. Students enjoy using the emoticons although there were some technical difficulties in displaying the image

When the chat was in full use (8 participants) lagging was a problem as on occasion participants' screens were completely blank. 'Lagging' is the amount of time taken between the sending of a contribution to it being able to be viewed on-screen (Herring & Panyametheekul 2003). Students felt they would like to increase the size of the pop up screen where they could chat. This is currently limited. Filters were put in to place to avoid the use of bad language with an asterix appearing. A form of alert (beep) would be useful to make the moderator aware that a student is online. It is desirable that chat text is presented in colour to avoid the use of nicknames but the technical expertise to implement this change is not currently available within the college. This leads to the use of the 'next best' option which is to add a nickname facility in order to strengthen the message thread.

From a pedagogical perspective, A 'Conditions of Use Page' is needed to give guidelines about acceptable behaviour. The chat needs to be subsumed within the IT Acceptable Use and Child Protection Policies and therefore, filtering and logging (recording of the transcript) is important. From an ethical perspective it is important that students are made explicitly aware that their chat text is to be recorded and is linked to their student IT account.

Students suggest chat should be offered during break and lunchtime to avoid use in lesson times but college timetabling means there is no common lunch. Access is not permitted while students are in lessons but will need to take place when lessons are being run. The publicising of chat including its purpose and availability will usefully take place via email, tutorial process and newsletter and as part of induction. There is the possibility for two type of chat – moderated and un-moderated. Students have the expectation they should be able to access the service as and when they need it. This means expectations about availability may be an issue.

From the pastoral support perspective, most students feel they would like to access the service and some would be willing to offer a buddy service where they could offer advice and support. Students like being able to ‘talk’ about feelings but not in a face to face way and feel it would be useful if they were upset. Students found it fun and wanted to do it again and this suggests that there is a demand for such a service to provide pastoral support. Students feel that such a system could be used to help with work, advice, to meet new friends, get support from a friend and to get things ‘off your chest’. Chat could be used as part of the college ethos to raise aspirations amongst students by making them more positive or raising their own levels of educational expectation.

Organisational factors influencing the design come from college policy. The chat system needs to be moderated by a suitable adult so the availability of the chat in the first instance will need to be according to the researcher’s availability. Technical expertise including support for the system and user training also influence its availability.

These initial findings demonstrate the potential demand for a chat service within the college environment and that it may be able to offer support for students. There are some issues related to its availability. This is because expectations of availability appear higher than the potential availability of the service. There are also implications for the training and development of staff for moderation purposes. The fully implemented system will also have further influences on it and these are considered in the next section of this chapter in more detail.

4.4 Influences on data collection and the data sets

The collection of chat data has seven main influences (Figure 9). The data will be collected as a result of text-based interactions in the system through the use of logs and be influenced by when, where and how the system is available. In line with the case study approach, reflections and observations are also taken into account outside the system including those made in person or by email discussing issues raised or other comments.

The seven main influences on the collection of chat data

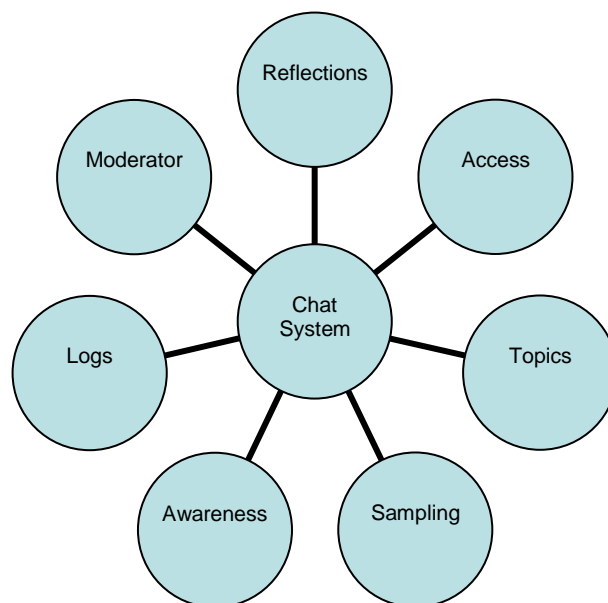


Figure 9 There seven key influences affect the type of data collected for analysis

4.4.1 Access

During the research collection period there are a minimum of two sessions of thirty minutes per week planned for a variety of different times including break and lunchtimes. This makes the system accessible to as many students as possible. There are two lunchtime sessions in the college with lunch starting at 12.15 pm and 1.00 pm.

Different times are selected for chat taking place. Some sessions have to take place during lesson times as a result of lunch breaks being timetabled at different times but students are told they should not be in lessons when accessing the system. A diary schedule of the sessions and times including notes is available (Appendix 12).

At the start of the research, there will be some variation in the frequency and length of sessions to make adjustments for popularity. This is due to the self-selective nature of the online chat. It is then planned as the study progresses for sessions to take place two times per week for between twenty-five and thirty-five minutes per session. It is expected that two sessions per topic keeps a subject 'fresh' and interesting so students do not become bored and go off topic. During the time the chat system is in use the moderator is unable to be contacted by telephone and does not permit access to the workroom to protect the anonymity and confidentiality of participants.

4.4.2 Topics

In the early stages of implementation the chat was available for discussion on any relevant topics that could be related to the pastoral support. After the first two and a half weeks students showed they wanted direction as comments made in the chat included 'what are we taking about today?' As a result of this, the topics are structured in to relevant ideas using the work of Owen-Yeates (2005:43), ideas from the researcher's own pastoral role and data collected during the chat interface research. The topics suggested by Owen-Yeates (2005) include smoking, needing to talk to someone, sexual worries and pregnancy. The impact of proposing topics and those particular topics that are chosen will be considered as part of the analysis in detail.

A full list of these topics is given in Appendix 11. Students are reminded that an expert is not present during sessions so chat is a forum to discuss issues but for specific advice they need to speak to an appropriate member of staff or be signposted to another other agency.

4.4.3 Moderator

The moderator is also the researcher during the research period. This simplifies the process and allows anecdotal reflections to be made. The role of the moderator is to answer questions, keep the students focussed on the topic and to provide guidance to students about what is acceptable behaviour. The moderator has the capacity to link to

the IT department and ask for individual students to be banned from the Internet as a sanction for inappropriate behaviour. The chat does not allow any individual including the moderator to be identified in the chat which presents a problem if students are unable to work out if they are discussing topics with the moderator or another student. As a result of this the moderator adds (mod) before any discussion in order to make it clear to students that they are chatting to the moderator (Figure 10). Students can emulate the same idea as shown by the student adopting the name 'Zen'

The identification of the moderator

10:48:58	student 2	Zen: I kinda figured that out....
10:48:55	student 1	I like to have fun
10:48:44	student 3	A new visitor has entered the room
10:48:42	moderator	(mod) y?
10:48:33	student1	I'm a nutta hahahahahaha

The use of 'mod' for identification

Figure 10 The moderator is identified as (mod) and students are able to add their own identification as shown by Zen

4.4.4 Logs

The chat logs provide a record of each session that takes place. Each message is allocated a time, date and user identification name. The log will be kept in the administrator user area of the chat system and can be accessed by the moderator at any stage during or after the event. As each individual message is allocated to a user name it is also possible to link the messages back to students and in doing so, link to their college record including their personal details and course history. By logging the interactions any disclosures regarding child protection issues can be saved and forwarded to the college's child protection liaison officer. Other members of the pastoral team are given access to anonymous transcripts. This is in line with child protection. Transcripts from the sessions, are made anonymous and then placed in the restricted staff area to ensure that more than one member of staff is monitoring the situation and taking into account child protection issues. The restricted staff area is maintained by members of the pastoral team as recommended by BECTA (2005:20).

Hosting the system in this way means that follow-up can be offered for other services such as the college counsellor. This is particularly important as chat sessions seek to support pastoral issues with a clearly outlined pathway in the event that further action is

needed. Hosting in the college also means that only individuals who are directly linked to the system are able to log in.

4.4.5 Awareness

Students are made aware of the service in four main ways; website, email, posters and student bulletin/induction programme.

Chat website – the website is available on the intranet and can be accessed at any time by students. It gives details on the welcome message of when the chat is happening during the week, the topic in question and further details about monitoring and the research.

Email – students are emailed on the Monday of the relevant week with details of the times and topic for the week. Students are encouraged to go to the web page if they need more details and also to email the chat@college.ac.uk with any queries or questions. Students are also sent a reminder email within five minutes of a chat session starting to say that chat is online.

Posters – posters are displayed throughout the college on walls and notice boards giving details about the chat and the web address. The poster was designed by a current student at the college so it should appeal to, and be noticed by students.

Student bulletin and induction programme – students are given details about chat in the student bulletin which is read out to students weekly as part of their tutorial programme. The student bulletin is useful for publicity at the start of the term to make students aware of the service and during induction a presentation is given with details about the system and its use for students.

4.4.6 Reflections

During the chat sessions, observation notes will be taken by the researcher and also reflections of emails and conversations with students and other teaching staff about what is happening within the chat system. Using these observations encourages personal perspective to be used in the interpretation (Stake 1995:135) and therefore, provides a more personal depth to the study. A sample of these reflections is contained in Appendix 13 as part of the Reflections Diary. This helps with the case study methodological

approach as it is able to add richness and depth from which exploratory theory can be developed. Each thought or observation regarding the chat is recorded.

Emails are used as part of this data set, as are individual comments about chat and the use of such a system in college. Individual reactions of staff including teaching, management and IT are used as part of this body of data.

4.4.7 Sampling

The process of sampling is by self-selection as students are able to access the system within the constraints of accessibility, awareness and availability as already outlined. This could be seen to be a multiple-case sampling frame as there are approximately 1100 full time students in the college and therefore, the sample could be drawn from any of those students. The body of students encompasses all levels of student (1 to 3) and all courses available in the college including everything from IT to Sports Studies. The system is also available to students who are studying English as a foreign language and those with disabilities. It attempts to be as inclusive as possible.

There is no restriction on the number of interactions that a student can have with the system. They are able to access the system one time or many times. The sampling is theoretically driven as students access the system and then results are analysed in order to ground the theory. The overarching question considers the usefulness of bounded online chat rooms as a source of pastoral support in a sixth-form college. As a result, the level of interactivity is chosen by the participants themselves rather than being selected by the researcher.

4.4.8 Data Sets

There are three main data sets; chat logs including semi-participant observations for transcript analysis, emails and the notes or reflections of the researcher.

The chat logs will contain student data linked back to the college's database giving full details about students including their personal details, screen data (dyslexia and preferred learning styles, GCSE entry qualifications and course profile. This should enable data to be collected on the type and level of students that access the chat including the frequency of their visits.

Emails to chat@college.ac.uk from students and emails from staff to the researcher's email account are also to be added to the data set and will be used to inform the theory. Emails will be included from members of staff requesting information or asking for further

details within the main college system. The text from these emails can also be placed within the Nvivo software in order to code them and include them for analysis.

Building up a picture of what is happening within the chat through notes and anecdotal observation also helps to build up a richer and more useful picture of what is happening that would not be possible through the use of transcripts alone. A reflections diary will be used (see Appendix 13) after each chat session and any other observations or comments noted within it. These can also be placed within Nvivo as appropriate for coding. Such observations and comments add to the richness of the data as part of the case study approach. Using Nvivo software to organise the coding uses ideas or categories based on the original research questions from the conceptual framework. Therefore, the data is interrogated according to the categories; technical, pastoral and pedagogical with organisational factors being drawn together from those conceptual areas as appropriate.

The alternative method to coding would be to code by hand but this is rejected due to the management of data involved. Software coding makes the process easier to manage and organise (Kelle & Laurie 1995:19). Using Nvivo software is likely to have a lower error rate as human error is reduced (Welsh 2002:3). Using Nvivo software in this way allows researchers to interrogate the data quickly and in a more vigorous way (Welsh 2002:4).

Each of these categories links back the subordinate research questions identified at the start of the research and therefore, provides a starting point from which the nodes can develop

- Technical is likely to relate to any issues such as anonymity, anything not working in the chat or other technical problems that a student has had during a chat session, email or observation.
- Pedagogical relates to issues of access, logging, publicity, awareness, availability, behaviour, behavioural control and competence of use.
- Pastoral relates to the type of advice and support between students, feelings and the extent to which students are supported by the system.

Organisational influences and implications for colleagues considering the implementation of a chat system in their institutions will also be drawn from the data. Ethical and legal considerations will also influence the research process and these are now considered in detail.

4.5 Ethical and legal considerations of chat

The nature of ethics is that it seeks to make sure that processes are both valid and accurate for the purposes for which they are being used (Dockrell, 1988:181). There is, however, no set of standard international agreement or regulations of ethical standards (Ryen, 2004:231) and thus the researcher is bound by those given by the University and by common ethical conventions. The research is also governed by UK law including the Data Protection Act 1998, Human Rights Act 1998 and Special Educational Needs and Disability Act 2001 and Disability Discrimination Act 1995.

Research ethics are based on core principles which include beneficence and duty of care (Darlington et al 2002:21). Sharf (1999:245) and Spence (2002:40) suggest that the key ethical concerns when carrying out research within an online environment are privacy, confidentiality, informed consent and appropriation of others' personal stories. Ryen (2004:231) describes them as codes and consent, confidentiality and trust. Erlandson (1993:155) suggests that ethics is a set of safeguards that protect against physiological or psychological harm, maintain confidentiality and privacy, protection from deception and that informed consent should have been given.

The main ethical and legal issues are identified for this research by considering these definitions. These are:

- access
- sensitivity
- endorsement
- legal perspective

Access refers to ethical considerations of students and staff gaining access to the system. It also includes its reliability and continuation in the college. Sensitivity, relates to the system being designed for pastoral care and emotional literacy. This means procedures need to be in place to reduce the potential for harm of students. Endorsement refers to the approval and consent of all the stakeholders involved within the research including students, teachers and management by adapting or evolving policies regarding the use of IT within the college.

Data Protection, considers that the system must be secure to avoid unauthorised users, that data stored is anonymous, confidentiality is maintained and that issues such as the treatment of data in relation to permanency are considered. Human Rights within this

research dictates that students involved in the project have a right to access their information through data protection and through the Freedom of Information Act if requested. Disability discrimination seeks to prevent someone being discriminated against as a result of disability. Therefore it should be ensured that steps are taken to give access to all. There are six main stakeholder groups who are affected by the research; students, teachers, researcher, IT technician, college management and Southampton University. They influence both the development of the interface and its implementation from two perspective; a responsibility to the system and from it.

Students

As stakeholders, the students have affected both the design and implementation of the system. They have informed the design through interviews and testing feedback. The responsibility of the system to them is to make sure that it is made available to them in an appropriate way. Their responsibility is to use it appropriately and not during lesson times.

Teachers

Teachers are influenced by the system as students will be accessing a new method of pastoral support. There needs to be an awareness of when it is being used to ensure that it does not negatively impact on classroom teaching and learning. The responsibility of teachers is to make the college, through the researcher, aware of any positive or negative influences of chat on their students.

Pastoral colleagues

The pastoral colleagues of the researcher are influenced by the system and feel a collective responsibility for it. This is because the chat as part of the pastoral support system in college is seen to be something that may influence patterns of behaviour and student disclosure. Their responsibility is to make the researcher aware of any positive or negative influences of chat on their working practices and students.

Researcher

The researcher has a responsibility to make the system safely accessible at appropriate times for students. The system itself affects the work load of the researcher and therefore, there is a need to ensure that an appropriate level of opportunity is given to the system but not to the exclusion of other work. The researcher needs to make colleagues

aware of some of the issues that emerge from the chat, particularly if they impact on pastoral support.

IT Technician

The IT Technician has a central role in the study as he has built the system based on the views and opinions of students. His responsibility is to implement any further relevant changes as a result of continued analysis. The system affects him as he is only able to devote a finite amount of time to it.

Management

The management team influence the chat system as they give approval to let the research take place. Their responsibility, as a result of this approval, is to give appropriate resources and time to the researcher for the study to take place. They are influenced by the chat system in that they will not wish any negative behaviour to take place in the system as it may affect the perceptions and reputation of the college.

Southampton University

The University is a stakeholder as the research is part of work that is to be published in their name. The University needs affect the research in that it must be carried out within the University's ethical protocols including the development and implementation. The University also has a responsibility to the system by providing appropriate advice and guidance to the researcher in order that this work is carried out correctly.

Each of these stakeholder groups are influenced by the four main issues as demonstrated in Figure 11. The diagram shows the importance of ensuring that all aspects of the ethical spectrum are considered in relation to stakeholders when using the chat interface. It also shows that these influences are central to the design and purpose of the system from a holistic perspective.

The four main issues affecting stakeholder groups from an ethical perspective

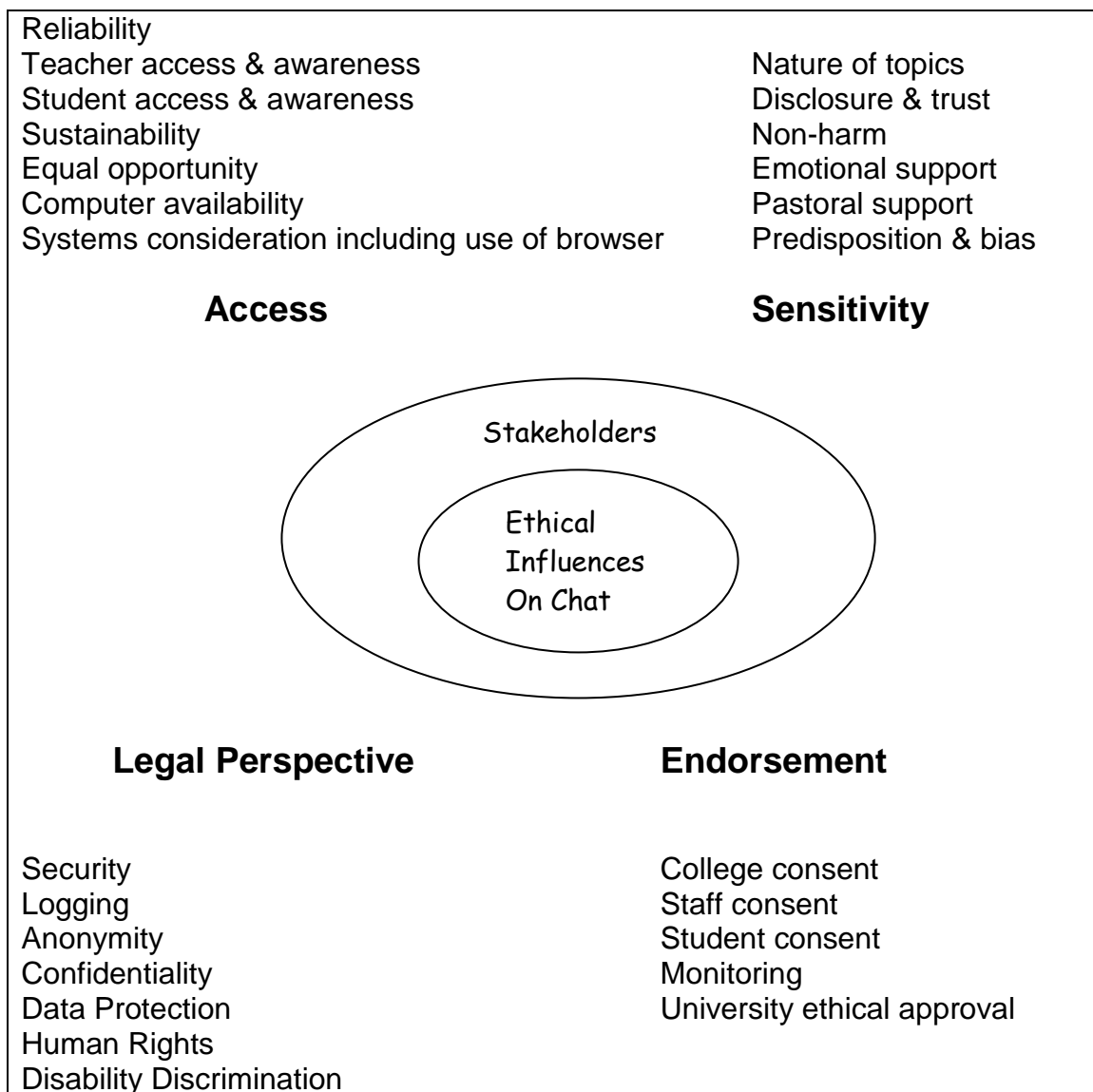


Figure 11 The diagram shows the different aspects of the ethical spectrum considered in relation to stakeholders when using the chat interface.

4.5.1 Access

The purpose of the chat interface is to provide a service for sixth-form students for pastoral support. There are several key areas relating to access that need to be considered and these are reliability, monitoring, publicity, feedback, staff awareness and sustainability.

In a safe environment it is critical that the service is reliable. In the early stages of the research it is acknowledged that there may be technical issues as systems are integrated and appropriate server based technology made available. This is a fundamental ethical issue as it is a shift in the support mechanisms available for students in college and is designed to encourage them to rely on this type of system for pastoral support. Therefore, reliability is critical to the success of the system and the study.

The chat system will be available during monitored periods each week and these times will be emailed to students in advance together with further information on the research and monitoring of the system. The researcher's pastoral role within the college means that in the event of an emergency the chat may need to be closed. This impact will be minimised by publicising the times when the researcher will be unavailable. The chat will be bound by the researcher's time and student availability.

Email, posters and the student bulletin are all used to publicise the availability of chat. The emails are to be sent round on an 'all students' basis which may be seen to be undesirable from an information overload point of view. There is a sensitive balance between making all students aware of the service and overusing email to the point where students become annoyed by it. Email, however, is the best method of making students aware of the service and will be done using a separate email account known as chat@college.ac.uk so that it is not linked to the researcher or any other individual member of staff. It is common policy for students to receive 'all students' emails as part of the culture of the college (Spence, 2002:48) and therefore, not seen to be unethical as it is targeted mail. It is also possible for students to filter their email if they do not wish to receive the messages.

Participants will give feedback about the chat system to the researcher using the email account which is cited by Sharf (1999:254) as being ethically important even if the researcher does not necessarily agree with it. The chat@college.ac.uk email link also provides an additional communication channel for students to question the purpose of the chat system and its results are also to be used as part of the research data set. The email account also gives users the ability to withdraw from the study at any time by asking for their details to be removed including any text that they have contributed to the discussions. This provides informed consent and the opportunity to end involvement with the research (Oliver 2003:47).

Teaching staff are made aware of the system by email but are not given express details about who is running it to maintain its independence. This is done deliberately to keep the chat system separate from the rest of the pastoral role undertaken by the researcher. There is the possibility that staff could access the system anonymously and therefore, take part in the discussion but this is not to be encouraged as it is outside the research focus.

From a sustainability perspective it is important to consider the ultimate fate of the chat interface at the end of the research timescale. It is proposed that pastoral support is not something that can only be supported over a number of days or even weeks but should go on for months if not years. Influencing students about the concept of pastoral support in a new forum like chat leaves the possibility of creating a demand for a service that is likely to continue after the formal study finishes. Every effort is made to implement the chat system into the support portfolio that is available in college so that it is integral rather than something bolted on for the sole purposes of research.

4.5.2 Sensitivity

Sensitivity is particularly important for this study as it takes place with participants who are termed as vulnerable. This is because around 75% of those able to access the system within the college are likely to be under eighteen. The key issues that result from sensitivity are parental permissions, college policies, trust and the prevention of harm, pastoral including topic choices, moderation and the role of the researcher.

Parental permissions

The College IT and Child Protection Policies are communicated to parents in the form of a parents' handbook and therefore, any issues related to the use of the online system and relevant permissions are given in this handbook. It is not desirable or practical to obtain express permission from parents to allow their children to access online support as students are seen to be more responsible between the ages of 16 to 18 and able to understand the implications of their actions. It is not ethical to make an excessive demands on the time or resources of the students or college if it will not give any 'foreseeable benefit' (Dockrell 1988:182). Gaining parental permission is not seen to give any benefit and therefore, will not be carried out.

College policies

Students sign up to the IT policy of the college which is standard practice, so they are aware of the consequences of using any IT based systems inappropriately within the college. For the purposes of this research it is not ethically necessary to introduce new sanctions or changes to the policy as a results of the introduction of chat with the exception of a change in use to allow 'College Chat' to be used. This allows chat to integrate more easily as it is part of the IT policy as a whole. The usual college IT policy sanctions are that in the first instance includes a ban for one week, for a further offence one month and finally six months or to the end of the student's course. The sanctions imposed by the IT policy remove any doubt about what should happen in the event that behaviour is not acceptable and all students have to sign to agree to the conditions of the policy when starting college. A student behaving incorrectly in chat will be given these sanctions and as a result risks a negative effect on their studies. This is because they will be unable to conduct research on the internet.

Whilst expression is of paramount importance the ethical position with regard to child protection disclosures is also extremely important. Whilst students are using the chat facility they are still bound by the Child Protection and IT policies of the college. This means that an admission in text that is related to child protection for example abuse or neglect will be treated in exactly the same way as if it was given verbally to one of the pastoral care team. Students may feel more able to make such disclosures online and therefore, need to understand that any such admissions will be followed-up. There is an ethical dimension to disclosure, whether it relates to Child Protection or IT, in that there is a need to make sure that the interpretation of the story is as accurate as possible and that it is not altered (Sharf 1999:248). It is also important that such procedures are clear to students using the chat (Harasim et al 1995:265) and this will be done by using by email and through the access pages of the chat system.

Trust and the prevention of harm

Any student entering the system needs to feel they are able to trust it as part of college pastoral support, through trust in the system itself and the moderator. They will also be giving informed consent as the message board will give clear details about the purposes of the chat and the use of the data logged. Sanctions against inappropriate behaviour and comments added by the research as moderator will aim to ensure that such trust is maintained. From an ethical perspective it is likely that students may feel more able to disclose sensitive, vulnerable or embarrassing information and this will need to be

managed carefully and be able to be linked (Taylor et al 2003:18; Weisinger 1998:83). It is critical for this study and use of the chat system that students should not come to any harm as a result of taking part in a chat session. Within the system students should not come to any physical harm as the access times are limited to a maximum of one hour. This means that breaks from the system or ergonomics are not relevant. In terms of psychological harm, it is critical that students are not made to feel too vulnerable or unsafe so they do not suffer stress or anxiety to an unacceptable level. They will need to feel that they are able to contribute without any negative consequences such as ridicule or doubt.

Pastoral support topic choices

As the chat provides pastoral support it is expected that participants may feel emotional responses to the text presented and this needs to be carefully considered. The type and nature of topics chosen needs to be managed sensitively to provide pastoral support but at the same time not place individuals in to situations they are not comfortable. This risk is seen to be 'no greater than minimal risk' (Darlington et al 2002:27).

There is also the ethical question of what should or should not be permitted as part of these exchanges because the perception of what is acceptable in chat will be shaped by the college stakeholders and also from society as a whole. In public chat rooms this has caused some issues for example an online discussion about whether the Holocaust took place or not would be offensive to most individuals but not to others. Censorship in public chat may not be possible or desirable as participants feel their freedom of speech is taken away but in a bounded college system is possible and in order to ensure that no one is harmed may be desirable. This is again due to the nature of the IT policy which governs the use of the system. Restricting the choice of topic too much may have negative consequences for support. However too much discussion about topics that are controversial or difficult may cause offence or distress. It is important that there is a careful balance maintained between the two extremes (Harasim et al 1995:211). In some instances there may be an ethical case for keeping information away from vulnerable groups and therefore, the question arises as to who is going to decide what is acceptable or not (Zembylas 2005:65). It is necessary to use ethical expectations as established by the college (Ess et al 2002:4) as a baseline to work from but this area does present some significant challenges.

As the chat is anonymous on-screen, it is hoped that if students find pastoral support exchanges difficult, that they will withdraw from the system by logging off. There is also a counter ethical argument that suggests by allowing the students to conduct such

exchanges in an anonymous environment; they are able to avoid the additional stress of having such a discussion face to face with a pastoral support person thus making online chat less harmful than face to face (Kralik et al 2005:540). It is important that whichever ethical strategy is chosen, empathy and emotional orientation are given by the researcher (Ryen 2004:235).

Moderation

The purpose of having the researcher as moderator allows monitoring of comments to take place. This makes participants feel welcome or at ease and is known to be important (Mann & Stewart 2000:110). It also reinforces the message that inappropriate or discriminatory comments will not be tolerated, with sanctions being placed on students crossing this boundary. This needs to be in place as such intolerance is not permitted by the institution and whilst some researchers suggest the role of researcher is to be like a journalist and just recount what happens (White 2002) this is not possible in an educational setting for young people. It is important that students are aware that a moderator is taking part and conducting research. This avoids the researcher 'lurking'. 'Lurking' means that the researcher is present but not participating in the sessions (Mann & Stewart 2000:88). Such research practice, in this context, is unethical as it is one-sided because the researcher would only collect information without contributing to the discussion or controlling it if necessary (Bell 2001:198).

Researchers (Whitty 2002; Lea & Spears 1995; Donaldson 2001:280; Koehn 1999:76; Zhou et al 2004) suggest that lying and taking on the role of the opposite gender takes place in the chat environment. With pastoral support, such exchanges and role changes may be viewed as useful if students start to appreciate differing points of views. This means that chat exchanges need to be carefully monitored and appreciated but should also take into account the need for students to make false claims about their gender or feelings. Anonymous computer mediated communication environments can work as a social amplifier and potentially increase the chance of aggressive patterns of communication e.g. sexual harassment by males (Ess 2002:230). The researcher will need to use the utmost integrity and ethical code in order to make judgements about the seriousness and likelihood of any false claims being true. From an ethical point of view, if there is any doubt, further investigation will always take place due to the nature of the participants involved and child protection issues. This is particularly important if any accusations about members of staff or fellow students are made publicly in the system.

The role of the researcher

The role of the moderator including their associated position of influence in the college structure is also ethically sensitive. As a member of the pastoral management team it is important that the researcher uses professional integrity to see the chat interface is operated and developed appropriately. Allowing participants to see the chat system as a complementary form of pastoral support should empower students to make comments and react more naturally than if it was directly associated with a specific member of staff.

4.5.3 Endorsement

Informed consent is necessary through all stages of this study. Endorsement at appropriate levels including students, teachers and management features strongly from development to implementation and impacts on college policy making.

During the development of the interface such consent is more explicitly given by asking students for permission before interview. On the web-based chat system's interface, consent is given by students being reminded on a message board that monitoring and logging of chat text is to be conducted and that they will be monitored as part of the college's Information Technology and Child Protection Policies. By entering the system they agree to these conditions. The use of the message board seeks to overcome the ethical issue of obtaining express consent as outlined by Mann & Stewart (2000:52). The college's IT user agreement requires students to expressly give permission for logging and monitoring to take place before any technological equipment is used. Specific reference is made to the use of student data as part of the study and that it will be replicated only in anonymous form.

Students accessing the live chat system are told that they are taking part in a research study in order that they can withdraw from it and agree to the use of their data in an anonymous format. Emails are sent to students inviting them to take part and giving full details of the research taking place. This information is replicated on the message board that students access when entering the chat system.

From a management point of view, senior management including the Principalship at the college give express permission for the research to go ahead and members of the governing body are aware. This is important for several ethical reasons including that

staff time and server space are used for the chat interface and therefore, there is an opportunity cost to implementation.

Staff members being interviewed during the design phase were given the option to be taped or not taped. Their right to privacy is respected throughout the study. This is of particular significance from an ethical perspective in relation to the time and anonymity of colleagues. The use of the data once collected is examined for its significance at every level to avoid it being used for unscrupulous purposes (Middlewood et al 2004:147). As the college management have given express permission for this research to take place there is a need to protect the interests of the college by keeping the results anonymous (Scott 1997:162). This anonymity is not guaranteed as it may be possible to link the researcher to the institution for reasons of employment. Every effort will be made to make reasonable adjustments to keep this to the minimum. Such links are often made within smaller local communities when conducting research and therefore, total anonymity cannot be guaranteed (Ryen, 2004:233).

As the study involves the use of human subjects there is a lot of potential for ethical debate. There is a view that technology may be blamed for adding to unethical practice (Spence, 2002:51) when in fact rather than be responsible for it, technology is just the tool through which unethical behaviour is carried. Avoiding issues relating to unethical practice or behaviour is essential and therefore, is treated as a high priority.

4.5.4 The legal perspective

From a legal perspective the chat system needs to be like any other system that is provided in the college network in terms of the law that governs it and the access to information contained within it. This includes differing levels of access, system requirements, awareness of monitoring, security of data and disclosure. These levels can be categorised in terms of inputs and outputs (Figure 12).

Figure 12 shows the differing inputs and outputs that take place in the system and their associated levels. Students, teachers and management all have Level 1 input status when the system is operating. Although the IT Technician is able to gain access through the student identity database during the exchanges this would be difficult and time consuming therefore, making his status actually Level 1. The researcher has Level 2 status as they are able to both add input and view the messages of those present within the room.

Initially the researcher's contributions take two forms; to stimulate discussion and to moderate text using sanctions if appropriate. This is necessary because the chat system links directly to the database of student identities and a transcript log is taken of each posting in case of child protection issues.

Categorisation of the inputs and outputs of the chat interface including levels of access

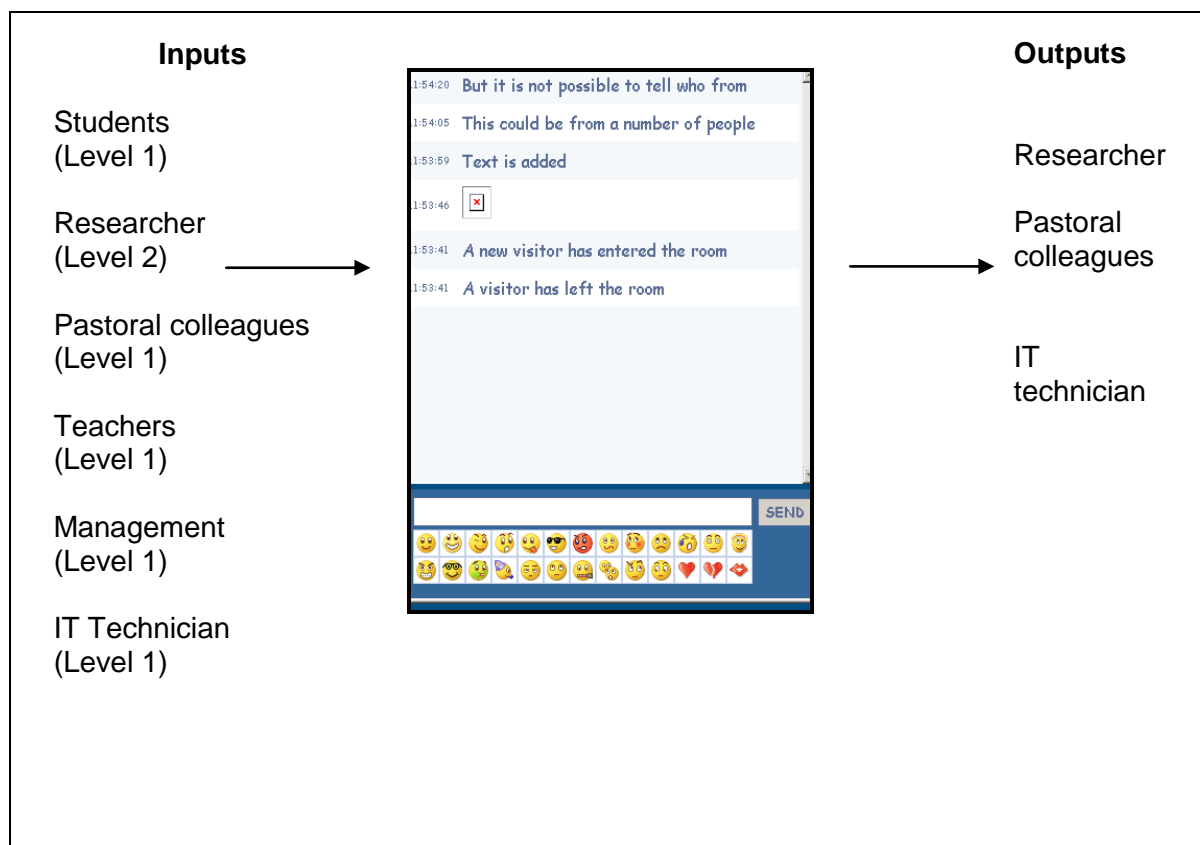


Figure 12 Different levels of access restricts the use of output data

Outputs are only accessible by the researcher, pastoral colleagues and the IT Technician. Whilst the IT Technician can effectively access any part of the college's network his role is governed by the college's IT policy and he will therefore, not be accessing the data. Access to the administration of the system including logs is only accessible by the nominated moderator (the researcher). The only access point for the IT Technician is through the logging database for the chat system and access to this database should not be necessary. Pastoral colleagues are given access to the chat logs in an anonymous form to keep them informed of what is happening in the chat and of any generic issues relating to students.

The system must be technically robust to allow it to support chat exchanges and it needs to prevent unauthorised access. Privacy has been cited (Taylor et al 2003:21; Spence 2002:43) as being a most significant ethical concern. The programming for the chat has been written to link to the college's student information system. This means that text can

be linked to individual students for monitoring purposes. The interface data logs are only to be accessed by the IT Technician and the researcher as they are linked to the researcher's own college identification number. The interface is to be hosted on a server in college that is maintained to the same level of security as the college's registration and student personal information databases. Maintaining security does rely on the professionalism and ethical responsibility of the IT Technician together with the threat of dismissal for inappropriate use (Kralik et al 2005:541) as part of the college's IT policy.

The student data set collected during the study is to be kept secure and reproduced only in an anonymous format. Files of transcripts are to be kept locked in an appropriate cupboard that can only be accessed by the researcher. This is particularly important for pastoral support which may give rise to sensitive comments. It is also important as students trust the researcher and the college to keep their data secure and free from public scrutiny. The data will only be logged and kept for the duration of the study, after which the text exchanges will be destroyed (Ess et al 2002:5). At any time students are able to email the chat@college.ac.uk email account to ask for information linked to them to be removed.

The chat system is to be given in an anonymous forum which is a deliberate attempt to give students the anonymity and confidentiality on-screen that they desired as part of the formation of the design. The need for anonymity on-screen is counterbalanced at times by the students desire to know who they are talking to. Ethically, anonymity is of paramount importance as keeping the content of contributions secure is more important than the knowledge of who they may or may not be talking to. Students are to be guided by the moderator and be stopped from disclosing their names as this is not desirable from an ethical perspective. Students may want to purposely disclose their personal details or those of their peers for dramatic effect (Taylor et al 2003:23) and this should be prevented to avoid distress to the student at a later date or to fellow students.

4.6 Summary

This chapter has considered the context of the case by providing a rich description of the college where the chat system will be provided for pastoral support. I assert that the decision to use a bespoke rather than commercial system is justified because of the links that need to be made between it and existing college systems for child protection, ethical and legal reasons.

Significant areas identified during the evaluation before the full introduction are explored including anonymity, access and the opportunity for support. These areas inform subtle changes to the design before full implementation in the college and are therefore significant for this case. These changes also highlight factors that are emerging from the case that relate to the subordinate research questions.

There are seven main influences on the way that the system is operated and data collected. These influences are particularly important for this study as they provide high levels of detailed information about how the system is structured and its future operation. Being aware of these influences ensures that specific features of the bespoke system and the college where it is being introduced are acknowledged.

The ethical and legal issues that influence chat demonstrate the complex nature of the chat system in relation to child and data protection. I suggest that these complexities need careful management and highlight areas for discussion that should be taken into account when using a chat system in this way. Moderation, in particular, is shown to be a challenging area due to the difficulties of proving truth or lie and the consequences of either. I propose that ethical and legal issues relating to chat need careful consideration before a system is placed within a sixth-form college to balance the need for safety and prevention of harm against issues relating to privacy and support.

Following the design of the system and its contextualisation, the next chapter of this research considers the results generated when a bounded chat system is placed within a sixth-form college for pastoral support.

Chapter 5 Results

This chapter describes the results drawn from the chat system. A full analysis and discussion of these results is given in Chapter 6. The chapter starts by highlighting the contrasting participation rates of students studying at different levels with Level 1 being the most active as a percentage of students studying at the College. It then goes on to consider 'lurking' levels. 'Lurking' means when students are in chat sessions watching rather than actively participating. Male level 3 students are most likely to be present in this way. The participation level results also show the difference in contributions that are made according to the level of student. The chapter then goes on to describe and discuss the content of the chat sessions according to the key concepts of technology, pedagogy, pastoral and organisation and using the research questions that have already been outlined.

- **5.1 Participation levels**

Participation level results are outlined according to the gender and level of students and the extent to which different students 'lurk'. Three cameo descriptions of students who were regular contributors are provided for richness and depth.

- **5.2 Technology**

The technical factors that assist or limit the embedding of a bounded online chat system within a sixth-form college include anonymity, confidentiality and hosting.

- **5.3 Pedagogy**

The pedagogical factors that need to be considered when designing and implementing an online chat system for pastoral support include access, publicity and awareness, availability, behaviour and control.

- **5.4 Pastoral**

The type of pastoral support that a bounded online chat room provides covering the social and emotional aspects of support including community, topics, relationships and boundaries, influences on access to emotional support and types of emotional support.

- **5.5 Organisation (underarching question)**

The organisational factors that influence the design and implementation of online chat systems for pastoral support were found to be access to data and child protection, investment in training and resources, IT acceptable use and pastoral programmes

Each concept is examined in rich detail. The software application used to assist this process and code the chat transcripts, semi-participant observation notes and other sources of data is QSR Nvivo. Using an exploratory case study approach (Yin 2003a:5) means that it is important that the data is considered in full and that a rich, descriptive and in-depth set of results are provided in order to be able to develop theory (Chima 2005:10).

5.1 Participation levels

The case study data comes from the study of the 151 self-selecting students who entered the system and participated in 37 sessions during the research data collection period between November and March. All students enrolled in the college were invited to participate. The participation rate was 13.5% of the entire student population of the college (1124 students). Therefore, these students chose to access the sessions held two or three times per week. Male students participating in the system represented 8% of the total student population compared to 5% for female. Within the results, reference is made to the different levels of learner study. 'Level 3' are those students who are studying A Level or equivalent e.g. BTEC National and are shown as first year or second year. 'Level 2', are those students studying at GCSE or equivalent (A – C grade). 'Level 1' students study at GCSE or equivalent (D – G grade) level.

There are fluctuations in session activity between very quiet or stopped early as a result of no participants (9 February) to extremely busy (20 November). Chat sessions were arranged at a number of different times during the week. This was to give the most possible access for all students. Access was spread across the different subject option times as much as possible. However, the reality of the College working week was that not every student was able to access the chat as they were not free at that time.

Figure 13 shows the participation rate breakdown for the individual years according to level of study. All level 1 and level 2 programmes are one year only. Level 3 programmes are for two years.

The results show that participation rates were higher for first year students on level 3 programmes than those for second years.

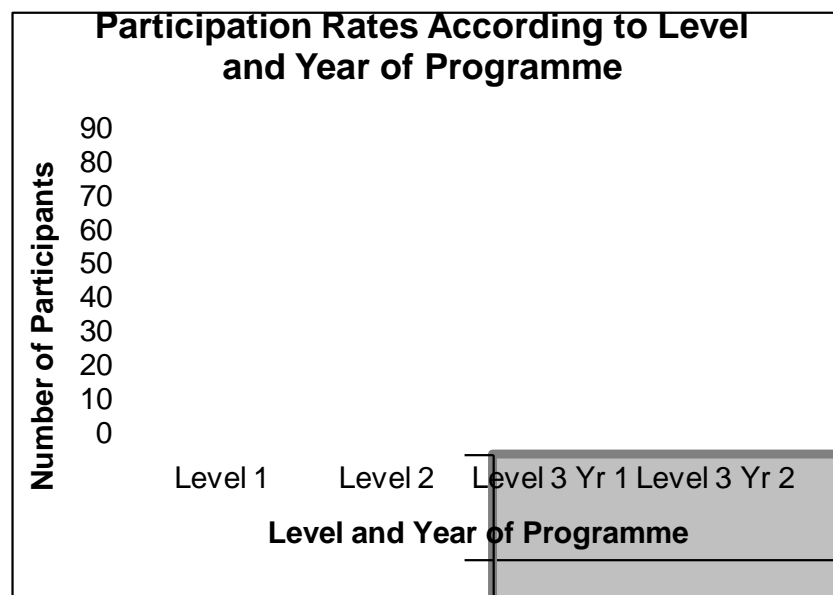


Figure 13 Participant rates showed significant differences in part due to variations in numbers of students studying at each level.

As level 3 students (AS and A2 Level or equivalent) made up the vast majority of the college's student population, as expected they were also the largest group participating in real terms. However, as a percentage of the possible number of students who could participate, they were not the highest. Although level 1 students were the smallest group of students, 20% of those students who could participate did. This compared to 15% for level 2 and 10% for level 3. Participation of students can be measured by the extent to which students 'lurk' within the system. 'Lurking' is the notion of being within a chat system watching what is happening but not actively participating with comments. Such 'lurking' did take place in the sessions. Figure 14 shows the level of 'lurking'. The level of lurking amongst male level 3 students was higher than any other group in real terms. Level 1 students only participated actively, they did not lurk.

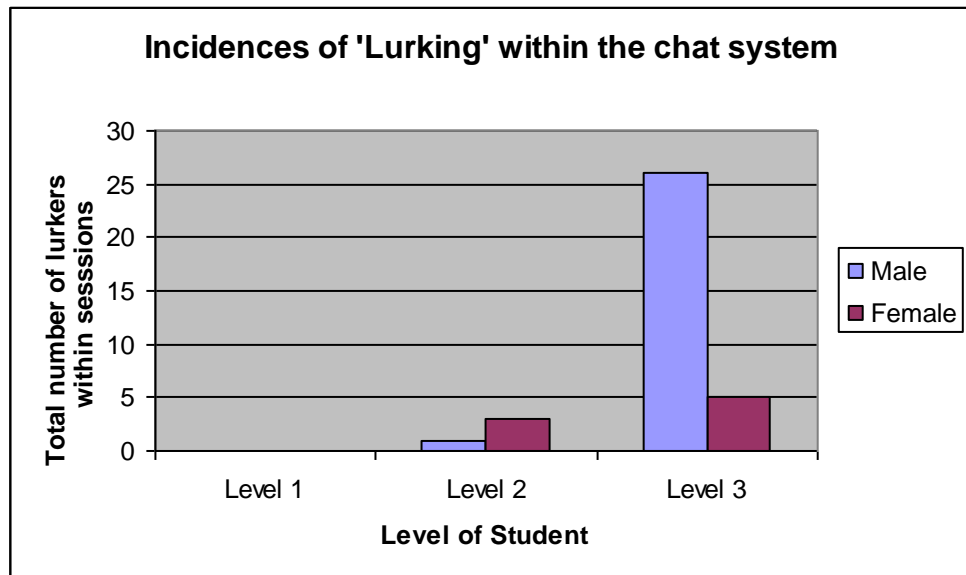


Figure 14 Lurking was significantly more common at level 3 and was not evidenced at all for students studying at level 1.

Measuring the number of 'lurkers' accessing the chat system as a percentage of all users who are accessing the system shows that male level 3 students the largest group in terms of actual numbers. They also the highest percentage group of users by gender (Figure 15).

Table showing the Male and Female 'Lurkers' as a % of all chat users for that gender and level		
Level of Study	Gender of 'Lurker'	
	Male	Female
3	38%	13%
2	6%	16%

Figure 15 The highest level of lurking was amongst male level 3 students as a percentage of users

Taking into account the overall participation rates combined within this additional 'lurking' information, level 3 students were least likely to actively take part in the chat sessions as a percentage of their peer level group but were most likely to 'lurk'. Female level 3 students were more likely to participate on-screen with 87% of those using the system actively participating and only 13% lurking. Male level 2 students were less likely to 'lurk' and were

more likely to actively participate than female level 2 students of whom 16% 'lurk'. The results did not show any level 1 students 'lurking' in sessions.

Linking participation rates and lurking together suggests that level 1 students were most likely to take part in chat sessions as a percentage of their own study level and were also most likely to actively take part as they do not show evidence of 'lurking'. As 'lurking' is about watching others within a chat it is possible that students operating at level 1 find it more challenging to follow the flow of the sessions thus are less likely to read and more likely to add comments. The results show that some level 1 students made very minimal contributions so in reality they were acting as a type of 'lurker' for example only adding hi or an emoticon. The extent to which they were actually reading the comments is difficult to assess.

Of the ten most regular participants in the chat 8 out of 10 were male. Six of these were studying at Level 3 and two studying at level 2. The two females were studying at level 3. 8 of these top 10 students were enrolled on vocational courses for example BTEC First or BTEC National. As these courses contain more practical content and teaching methods this suggests that these students may be more comfortable with online access or find communicating in this way more appropriate for them. Cameo outlines of three different high contributing users are provided to illustrate different types of usage.

Regular level 3 male student

The most regular user of the chat sessions was a male level 3 student. He regularly accessed the system to both ask for and offer help. In his first session he generally talked to other participants online but in his second session he asked for help about what to do if someone did not trust their girlfriend (29 Nov). He contributed a small amount to the next two sessions but did not fully participate again until 24 Jan when he let other participants know that he, and his girlfriend of one year had split up and he was feeling depressed. He changed persona in this particular session firstly asking for help, then saying that he wanted to talk about something else that was less depressing and finally returning to his original question of how could he get over her. In the next three sessions he tended to 'lurk' and contribute a little until the session on alcohol when he first suggested he was an alcoholic but then later suggested that drinking should just be for the weekends.

Regular level 2 male student

The most regular level 2 student who accessed the system was male. He regularly contributed to discussions. His transcripts suggest that he was accessing the system for friendship. He engaged the moderator in discussion in very familiar terms such as 'moddy'. He also frequently requested more access to the system for example by adding 'why can't this chat be open all day?'

Regular level 3 female student

One of the most frequently visiting level 3 female students accessed the system irregularly. She tended to 'lurk' within the system making only occasional contributions. She used the system to ask for sympathy as and when she needed it for example when feeling unwell. She contributed very fully in the discussion on feeling down or depressed. The results show that she contributed to topics that she felt were relevant to her – she contributed to both sessions on feeling down or depressed and to drugs and smoking but in other sessions such as alcohol her input was minimal.

The results show that overall participation rates are affected by the gender and level of study of participants in supportive chat.

5.2 Technology

In terms of technical factors there are three central themes drawn from the results. These are anonymity, confidentiality and hosting. The results show that anonymity affects the presentation of messages and the use of nicknames. The results show that the extent to which confidentiality is given is affected by boundaries and perceptions of students. The results also show that hosting affects systems integration and the successful operation of the chat sessions as a result of differing participation rates.

5.2.1 Anonymity

Anonymity has been a central theme through the research, planning and design phases of the system (see Appendices 3 & 4) and therefore has had a significant impact on results. Providing anonymity on-screen has affected the results in two ways. The first is that there was an impact on the 'thread of messages'. This means the extent to which participants can follow who is adding individual contributions. By not having any indicators on-screen, participants found it more challenging, at times, to follow what was happening in a session. The second effect shown was that those participants who could not work with complete on-screen anonymity, instigated the use of nicknames themselves. Therefore,

in some instances, they used nicknames at the start of their contributions. Examples of these nicknames are shown in Appendix 17.

From a technical perspective, nicknames highlight three key important issues. Firstly, the results show that participants used nicknames in a variety of different ways including to highlight their own contributions or to add their own names or those of others to challenge the anonymity. Secondly, the extent to which nicknames were used depended on the number of participant. Finally, nicknames tended to be non-gender specific and therefore retained elements of anonymity anyway. The results show that managing the different user expectations of anonymity is a challenge due to the wide spectrum of views and needs within this environment.

When using nicknames some participants opted to use the same nickname each time they joined but others used a different name each time or none at all. For example one participant (female level 2) used three different nicknames in different chat sessions and then in other sessions no nicknames.

The extent to which nicknames were used in sessions appears to depend on the number of participants who were in a particular session, their participation rates and the extent to which they felt comfortable with an associated name(s). Regular users who chose to opt to use nicknames encouraged others to do so but if no nicknames were being used when new visitors entered they were not used during that session.

All the nicknames used with the exception of one (CraZgal) were non-gender specific. This helped to reinforce anonymity. It also meant that participants made judgements about each other through the style of writing that was used or through judgements about the nickname. From a technical perspective anonymity provided relative freedom for students to contribute without the fear of online identification by peers. The use of non-gender specific nicknames may also demonstrate that online safety training as provided by government agencies and charities, for example www.besafeonline.org, was having an impact on young people.

The results highlight a wide spectrum of views about the potential use of nicknames that are drawn from the chat transcripts including the use of eighteen different nicknames by students. References to, or use of nicknames was found in less than half of the sessions. These ranged from those students who wanted to use their own offline nicknames to those who felt uncomfortable about the use of any nicknames. A visual representation of this spectrum is shown in Figure 16. This spectrum of results highlights the difficulty and

complexity of supporting individuals online in a personalised way that meets their needs. Some students engaging in discussion about nicknames suggested they preferred to be anonymous whilst others would not have minded if their own names were used.

The results also show this led to some students deliberately using their own offline nicknames or real names to deliberately subvert the anonymity. If the real names of participants were added, other participants objected and the moderator needed to challenge those contributions.

Spectrum showing the attitudes of students towards the use of nicknames and real names				
Wants to use own real name and may attempt to use it	Wants to use nickname uses it within the sessions Nickname may identify the user	Indifference to nicknames	Feels uncomfortable to use nicknames or uses those that could not be associated with the individual	Shows strong objection to nicknames and will not participate if in use

Figure 16 The spectrum highlights the different views of students towards nicknames and the difficulty of satisfying the needs of all users

The results show that participants can and do adapt their behaviour in different sessions. They also show that students change their opinions about the extent to which they want their real names used. When the chat was not targeted to a specific discussion, they were more willing to share names including nicknames but when it was linked to more sensitive topics such as drugs or feeling depressed they were less likely to want their own name shown on-screen but in some instances were more likely to add the names of other students.

The technical capability of the system had an impact on the expectations and behaviour of participants and this is highlighted in the results. For example, adding different colours or fonts to the presentation on-screen could have had an impact on the extent to which messages were presented and nicknames used. In this system such amendments were not possible and therefore participants adapted their contributions and behaviour to use

the system as effectively as they could. These results highlight the adaptability of participants in such situations and the way that changes can be made in the way the system is used to overcome any communication difficulties.

5.2.2 Confidentiality

The results show that confidentiality is an important element of a chat system. This is because confidentiality was an issue in terms of boundaries, the interpretation of confidentiality itself and the impact of systems integration.

A level of prima facie confidentiality was given due to on-screen anonymity but the boundaries of confidentiality needed to comply with those given outlined by the College IT user agreement. The term 'confidential' was used in all documentation advertising the system with a reminder of the IT user agreement. However, its interpretation is shown in the results to lead to debate about what was meant by confidentiality in chat for example 'shouldn't it say confidential with limits' (22 March Friends). The results highlight the need for participants to understand the concept of confidentiality in an online world and that is complex for them. However, it is important to recognise that levels of confidentiality are an issue for young people per se whether online or offline. This is due to child protection legislation that supersedes any levels of confidentiality that are offered to young people.

The results also show that although students could have their data removed from the system at any time, they did not ask for this to be done. This may have been happening for two reasons; that they felt happy and comfortable with the use and storage of their data and felt that it would be stored and used appropriately or that they did not have knowledge of the potential risk and therefore, had not considered the impact. These results highlight a potential lack of awareness in participants that may be an area for further study and analysis.

Requests were made, in a very small number of cases, to know more information about the moderator and these will be more fully discussed as part of Pedagogy. Such requests may have been linked to issues of trust and confidentiality. The results indicated that participants may use them to make judgements about the extent to which they feel their contributions were confidential. Although requests were received, details about the moderator were not given to participants to maintain the distinction between online and offline support. This meant that online discussions only existed in the system (unless a serious issue had come to light for example child protection and there were no such issues in the research period).

The results also show that participants did not challenge the statement that the moderator was a member of staff even though they had no proof (other than the use of an email address) that the moderator was telling the truth. It appears *prima facie* that they accepted that the moderator was a member of staff in the college. This may as a result of them knowing that the system linked to their individual college identification details and therefore, could not be accessed by someone outside the college.

5.2.3 Hosting

The results show that hosting the system within the college's network is important for security, sanction and child protection reasons. They also demonstrate some of the issues that need to be faced by colleges when implementing such a system including the volume of systems traffic, links to existing IT systems and participation levels.

Guided by the BECTA E-Safety Guidance (2005:1), all misuse and subsequent sanctions were recorded by the IT department and are noted within the research results. Details of the type of misuse are shown in Appendix 9 and highlight a wide spectrum of different types of misuse that are fully discussed as part of Pedagogy. During sessions only two students received a ban for behaving inappropriately according to college policy but in general whilst behaviour was 'silly' or 'off task' for example pretending to be Bob Marley, the level of misuse was actually relatively low compared to what I expected as a researcher and what is commonly seen in public chat rooms. The results show the importance of reinforcing the message about what is acceptable in college sessions and highlight the different way that students behave online at home compared to what is expected in college.

The results show that during sessions students did not disclose child protection issues but appropriate support mechanisms were in place as part of the college child protection policy (Appendix 9) if necessary.

There was a large volume of 'systems traffic' created with chat. 'Systems traffic' means the number of messages that are sent to and from the system hosted on the college server. This was because each individual contribution linked back to the college's information system database. In the first sessions this led to so many demands on the college's server that it crashed immobilising the operation of the college intranet, information system and email. Therefore, hosting chat on a quieter server should be used to avoid such problems.

'Lagging' is the amount of time taken between the sending of a contribution and it being viewed on-screen by other people (Herring & Panyametheekul 2003). As more users became active in chat sessions there were sometimes 'lagging' issues which led to frustration for users as their screens went blank. Again, the results show that moving the system to a server with more available access space, higher bandwidth and fewer demands placed upon it helped to reduce the problem.

The system was designed so that participants can enter and leave as they wish with a maximum of eight participants at any time. All students entering were acknowledged on-screen with a message that states 'A new visitor has entered the room'. When they left a message was shown 'A visitor has left the room'. The results show that as the system is anonymous there can be five different types of status that a participant may have from a technical perspective;

- online and communicating
- online and watching (known as 'lurking')
- online but not participating (the chat window is open but they are involved in other activity)
- offline due to technical problems but attempting to enter the chat
- offline as they have left the system

It is important for the moderator to gauge how many participants are having technical problems and the reason for these technical problems. However, the results show that the only email messages received dealing with issues from a technical perspective were about whether or not the chat was working on an individual day or to offer improvements that could be made to the system. These were generally offered by students of IT.

5.2.4 Summary

Overall, the results for technology show that anonymity affects how the system is supported and controlled including the extent to which other mechanisms such as nicknames are used or permitted. They also show that educating participants about the boundaries and expectations of confidentiality from a technical perspective is important to ensure participants are fully aware of the implications. The impact of hosting within a college's existing network is likely to generate significant demands on the existing IT infrastructure and therefore needs careful management. Finally, that it is important to recognise the different levels of potential participant status from a technical perspective,

how they impact on different sessions and the views of the college team about different types of status such as online and watching but not participating. These will be further discussed in Pedagogy and Organisation.

5.3 Pedagogy

The results show that there are four key factors that affect chat from a pedagogical perspective. These are moderation, communication, identification and non-application.

5.3.1 Moderation

The role of moderator is shown in the transcripts and through semi-participant observation to be necessary as it provides direction, control and interaction. Discussion within this section considers data from the moderated sessions but also from one un-moderated session. Whilst the un-moderated session was not statistically significant it did provide an insight into the significance of a moderator and adds a level of depth and richness that would otherwise not be possible.

The results highlight that as moderator I needed to control the flow of chat by welcoming new participants to the room and prompting questions for discussion. During chat sessions moderation provided additional instruction on the rules and norms of the room as well as stopping inappropriate comments by giving warnings including the threat of being banned. The anonymity on-screen required regular reinforcement. This was because participants sometimes added their own names or gave false names even though they were aware they were being logged through the college network. Moderation also encouraged the chosen topic of conversation to be moved onwards by paraphrasing points made and asking questions. An example of such paraphrasing is shown below.

13:59:48	Moderator	to get over someone the only 2 options r 2 make a list or get a new one
13:59:54	Moderator	is that all?
14:00:31	Student1	(L)
14:00:44	Student 2	taking one step at a time yes!
Extract: Boyfriend/Girlfriend Trouble 29 Nov		

The results show that the on-screen identification of the moderator was significant for supportive chat. In the early results as moderator, I was not identified as being different to

other participants and students chatted freely with me and/or other students but could not distinguish between the two. This meant it was possible for them to ask me about personal details including my age. Such informal communication is not desirable in a sixth-form environment and has implications for child protection. Therefore in later sessions, to counteract this, 'mod' for moderator was included at the beginning of contributions to clearly identify myself as the moderator. Including the word '(mod)' at the start of the contributions made by the moderator helped students to be reminded that a moderator is present and therefore, reinforces the concept of having rules. Students asked for activity timings or for others to be removed or reprimanded. Three examples of such requests are shown below.

13:55:16	a student	yer it should b on 4 like 30 mins but at differ times of day
13:56:29	a student	u need to learn how to b more strict dude.
13:57:28	a student	if sum1 doesnt talk bout the topic 4 that day. eitha kick em or ban em
Extract: Feeling Down or Depressed 24 Jan		

If students still did not change their behaviour after being asked by the moderator they were emailed to ask them to change. This did not happen frequently and was only done if absolutely necessary.

Apart from one session, when an error in closing the chat at the end of a session led to a chat taking place when the moderator was not present, all sessions were moderated. Students attempted to access the system even when it was advertised as being closed. This led to students having the ability, if an error occurs, to have 'free chat'. All interactions were logged so these transcripts were available for monitoring after the event. On the one occasion when students accessed the system without a moderator, they used it from 8.49 am until 10.24 am and then again from 12.24 pm until 1.15 pm (when the error was spotted and it was closed). It is possible that with system modifications the potential for leaving the session open in this way could be avoided with automatic closure on moderator exit. Whilst there is only a limited amount of data from an un-moderated session it is important to include it and add richness and depth to this exploratory study.

During the un-moderated session students supported each other effectively for the first eleven minutes by helping a student consider whether or not to break up with her boyfriend. One off-task comment led to the end of appropriate discussion and it did not refocus again. In moderated sessions if students go 'off task' the moderator challenges behaviour to bring them back to the topic. 'Off task' is defined in this context as contributions other than those that relate to the topic in question or support. The level of

interactivity between students in the un-moderated chat session was lower than other sessions due to the lack of topic focus. This session included a significantly higher number of males to females – ten level 3 male students and only two level 2 and two level 3 females (Appendix 12). The results show that there were more likely to be higher levels of off-task behaviour when more male students were present. Sometimes students portrayed themselves as moderator when the moderator was present but in the un-moderated chat there was no evidence of this happening.

Chat contributions that were not permitted tended to be shorter and lack detail, for example, adding personal details or location. In the un-moderated session without challenge they continued at a higher level than if a moderator was present. Although limited, the evidence seems to show that without a moderator students are more likely to lack focus and therefore, chat turns into a more social than supportive environment. The skills needed to control sessions effectively and give appropriate sanctions are complex so this evidence suggests that un-moderated sessions are likely to be less effective for support. A discussion of the different types of moderator role is given later in this section including links to control and behaviour management.

The results show that a moderator needs to be comfortable working in this environment as it is very fast moving and the use of language is different from everyday language including the use of abbreviations and ‘chat speak’. The moderator needs to be able to demonstrate active listening techniques in chat such as paraphrasing or questioning techniques to show they are actively participating and be able to provide immediate responses to questions if necessary. This type of ‘online active listening’ requires a high level of concentration and the moderator must be comfortable doing this and using the technology to support it. The example below shows questioning techniques being actively used in the chat.

13:37:12	Moderator	how do u know?
13:37:34	Student 1	Because I rang him! And he said he was staying on in town with his workmates.
13:37:53	Moderator	I c... had u had a row?
13:38:05	Student 1	Yep big one. I finished it with him and he cried.
Extract: Boyfriend/girlfriend trouble 30 Nov		

The results show different power levels within the chat system. Traditionally the balance of power in a teacher-student relationship remains with the teacher. In chat, there is a shift from teacher/student or moderator/participant role towards greater equality and

freedom of speech because of the ability of each to communicate equally and also because the moderator cannot use other forms of control such as body language or eye contact to control behaviour.

There is also evidence that communication between students known as 'horizontal communication' takes place more rather than 'vertical communication' (between the student and the teacher). The example below shows a student questioning who the moderator is and their response shows the type of familiarity that developed towards the moderator. This kind of familiarity is extremely uncommon in pastoral support face to face.

12:54:46	a student	Who is the moderator
12:55:03	moderator	(mod) someone who checks that the stuff in chat is ok
12:55:29	a student	oh rite....uve got a fun, intelligent job aint ya.
Extract: Feeling down or depressed 26 Jan		

The results show that students appear to have given their views more freely online. Students discussed their feelings openly for example when they felt violence was acceptable and not acceptable. One student suggested that it was acceptable to use violence if a relationship with their girlfriend was threatened but not if someone was stealing something like a chocolate bar. The moderator was able to pose questions to participants and ask for confirmation or further comment as an equal. This may not be possible in a face to face situation. Regular contributors appeared to want to interact with the moderator in a more familiar way like they would with their peers or friends rather than in a teacher/student way. This type of familiarity is not usually seen between a teacher and student.

Students made judgements about the moderator and one student suggested that the moderator was a computer which appears to dehumanise the relationship as shown below. Although 'Zen' asked whether or not the moderator was a teacher or student he used terms such as 'moddy' which shows a shift from formal staff/student relationship to one of greater informality.

11:15:01	a student	Zen: You a teacher or a student here moddy?
11:15:12	a student2	student
11:15:34	a student	Zen: a helper perhaps?
11:16:04	a student3	or computer?
Extract: Friends22 March		

The moderator's role, according to the results, can be categorised into four main roles as shown in Figure 17.

The Categorisation of the Moderator's Role

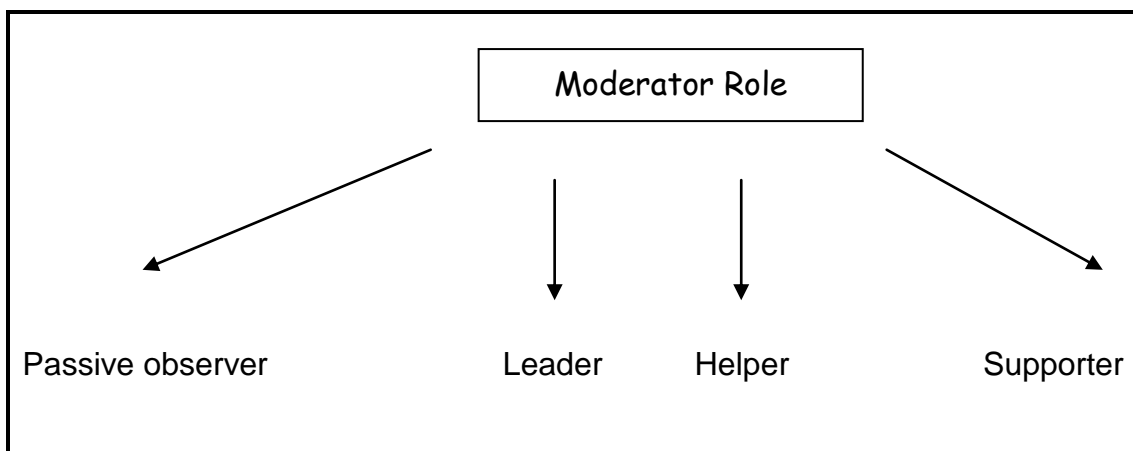


Figure 17 Four key roles emerged from the study and changed according to the number and type of participants.

The roles are **passive observer**, for monitoring text but only taking control if there was off-task behaviour, **leader** for prompting discussion and asking questions, **helper** for providing advice and **supporter** for giving praise and encouragement to students. All four types of moderator role were regularly shown in the results.

Over the course of the sessions the time spent in the different roles fluctuated. In sessions where students felt more comfortable with the topic for example 'Divorcing or separating parents', there was less intervention and therefore more use of passive observer. However in other sessions such as 'Alcohol' and 'Drugs and smoking' there was more use of leader and supporter. This may also have been due to differences in the type of student who was attracted to different topics.

If students felt able to direct the conversation they were given the space and time to do so, for example during the chat on 'Pressure from home 10 Jan' the moderator only gave ten interactions during the twenty-one minutes of chat by ten participants. Therefore, being a **passive observer**.

13:40:00	Student 1	so what effects you at home
13:40:07	Student 2	hey people
13:40:08	Student 3	my dad
13:40:17	Student 1	really why your dad
Extract: Pressure from home 10 Jan		

On several occasions the role of the moderator was to start discussion happening in the first place as students entered the chat. Opening questions to generate discussion meant that the moderator was seen as a **leader**. The success of the chat and its application to the chosen topic depend on the individuals present and the perceived importance to the students of the topic offered. This also relates, at face validity, to whether or not they could talk to their friends about the topic and how sensitive the topic was for them, for example on 17 January the topic was 'Coping with coursework'. It took approximately eight minutes for students to provide relevant or useful contributions as visitors entered and left the chat rapidly, gave greetings and discussed the deaths of their pets. After eight minutes a student added a relevant comment about coursework and then the chain of online conversation started to build.

The results also show that the moderator as leader was useful to let students know the session was coming to an end. This meant that five minutes before the end of a session the moderator indicated the closing of that session and participants could add their final contributions and receive support as necessary. This avoided students feeling abandoned or upset if the session closes too suddenly which is particularly important for pastoral support.

The role of moderator was also as a source of advice. Students directed questions to the moderator to be answered rather than opening the question up to other students as shown below when a student asked for support from the moderator as **helper**.

12:53:10 a student	mod: what do u do if u feel you should be caring for sum1 but u cant cos u got hurt?
Extract: Caring for others	14 March

The final aspect of the role was as **supporter** to give students encouragement and praise during the session for giving good advice or if they needed to be encouraged or motivated in some way.

14:07:05	student	gold – what actually is a property and do it (student means priority)
14:07:25	moderator	(mod) that is really good advice
Extract: Coping with coursework 17 Jan		

The results highlight that the anonymity of the moderator led to some speculation about their identity. Students commonly perceived the moderator to be a man. They made reference to things 'he can do' even though no reference was made to the moderator's gender. This was particularly interesting as I am a female researcher and therefore female moderator.

10:38:52	a student	Zen: he can kick peeps, ban peeps, point and laugh at peeps and get away with it etc
10:52:28	a student	Zen: Ah the mysteries of life mr moderator
Extract: Coping with coursework 18 Jan		

Students appeared familiar with role of moderator as supporter. They made specific communications and greetings to the moderator as well as to others in the chat.

12:57:01	a student	see u later mod, I have lunch x
Extract: Caring for others		14 March

The four roles of the moderator that have emerged from the results show the complex nature of the role and the need for the moderator to be flexible and adaptable. The change in power structure in the system presents challenges that are not present in face to face discussion of pastoral support. The breadth of the roles from passive observer through to supporter also shows the skills needed by the person(s) given this role. They need to be technically proficient in order to cope with the technical demands and have an understanding of the challenges of language, anonymity and pastoral support. Staff providing pastoral support may not have the technical background needed to perform the role. Conversely, IT staff may not have the pastoral knowledge to guide students. Therefore, college policy needs to support the training and development of skills for staff for chat to work effectively.

5.3.2 Communication

Two central influences on communication are highlighted in the results; the use of emoticons and the type of language. 'Emoticons' also known as 'smileys' are used as a method of communicating feelings. They were used in thirty five out of the thirty seven sessions for a variety of reasons including expressing happy feelings for example ☺. The results show that emoticons were more frequently used when there were higher numbers of participants. This is likely to be because participants needed to work at a faster pace and therefore they used an emoticon to convey their emotions rather than writing them in

full. The language used within the chat is ‘text-speak’ for example LOL meaning ‘laughs out loud’ and ‘tetley’ meaning ‘I totally agree with you’. Students made use of phrases such as ‘it kanes’ meaning it hurts (28 March) and ‘gr8’ for great.

As the language is ‘chat based’ it can be difficult to understand so the moderator and students need to be able to work in text-speak and understand it. The extract below shows a student who gave details about the children they care for. They explained one of the nephews/niece was 3 and the other two were 1 and 5 months and 1 and 6 months old. This can be difficult to follow so participants need to be able to understand the terminology.

12:35:07 a student	both ones 3 n the other two r 1 n 5 n 1 n 6 months so gd days n bad days
Extract: Caring for others	14 March

Students used capital letters to emphasise their language when they needed to make their voice appear louder to get mutual agreement amongst the chat participants as shown in the example below. This is known as ‘shouting’ in public chat rooms. Once agreement has been reached Student 1 goes back to using lower case communication. Such results demonstrate the blurring of communication between the public chat rooms that students may access from home and this bounded system.

13:26:10 Student 1	WHO AGREE ALL SAY YEAH
13:26:19 Student 2	yeah
13:26:46 Student 1	glad someone agrees wid me
Extract: Violence	28 March

The chat system has a bad language feature containing a list of inappropriate words that are defined according to the college’s acceptable IT use policy. These were shown on-screen as **** but were given in full in the chat logs if sanctions (including a student ban) was necessary as part of the IT user policy. There were relatively few instances of students using bad language in the chat but they did use expressions such as ‘shut up’ or ‘do 1 ppl’. Analysis of the transcripts showed that the bad language feature was important for two key reasons; to avoid exposing students to bad language and to support the moderator in maintaining appropriate discussion.

Chat interaction is almost instantaneous and so students expect immediate answers to their questions. If they did not receive fast enough answers to questions, the tone of their

language became more agitated for example a student asking a question about the meaning of ‘cold turkey’ (25 Nov) did not receive an answer for sixty-one seconds and then responded by stating ‘wots cold turkey? plz answer me for god sakes’. With eight users in sessions the perceived time delay between a question being posed and the answer being displayed appears to be heightened. It also means that the moderator needs to make a conscious decision about the method of communication between moderator and student. For example, whether or not the moderator should actually use ‘text speak’ to communicate as quickly as possible or if it is possible to respond as quickly by a different method.

5.3.3 Identification

For identification, the results show that there are six elements; naming, gender, age, location, nicknames and confidentiality.

Students frequently added names to the chat session even though they were asked not to, or ask if anyone from a particular course is present within the session. They also gave names of other students. The term a/s/l was used once (age, sex, location). This is commonly used in public chat sessions to speak to other participants. Students asked others who they were and who the moderator was. Some students stated that their name or details were confidential. Most participants did not want to disclose their names but one student clearly stated that they did not mind.

14:32:05	a student	cant I use my name I mean I dnt mind if everyone nos who I am...
Extract: No Topic Given 8 November		

Only one student asked about age and this was directed to the moderator (28 Nov). Reference was made to the physical location of students including whether they were in IT rooms or the library and what they were wearing.

15:04:15	a student	my nick name is craZgal:P
15:06:42	craZgal	hello new visitor!
Extract: Topic Not Given 14 November		

Students used nicknames to identify their contributions. Such identification was not part of the original design. The names were self-selecting and were used by students at the

start of their text contributions. Students tended to use nicknames that could not identify them for example Dr X (see Appendix 16). In one instance a surname was adapted for use. During individual sessions there were different levels of nickname use depending on the individuals involved. Students sometimes picked the same nicknames and caused confusion within the conversation as two 'bobs' appearing in the chat was more confusing than no names at all.

Students also took on the nick names of others with at least three students having pretended to be Zen even though only one student felt they 'owned' the name.

11:10:24	Zen	yup the one and only... not one of those 747 immatators that are around
Extract: Friends 22 March		

Students giving the names of others were also made aware that this was not one of the chat session expectations by the moderator and other students. In general, new participants accepted these expectations quite quickly.

10:48:03	a student	g:not ment to no hu peeps r ,r ya
Extract: Drugs and Smoking 8 Feb		

As the system did not distinguish between students and the moderator, students sometimes pretended to be the moderator when (mod) as a prefix was used (2 March). Students also changed their nick names sometimes causing confusion. For example one student called herself 'crazyfrog' during one session, 'gold' during another and 'sniff' on a third. Nicknames chosen by students may have identified them so using them in this way was not desirable. One student stated in a chat session that he used his offline nickname in chat. This removed his anonymity and was in conflict with the purpose of the chat system in the first place. The level of confidentiality and what was meant by confidentiality were issues discussed by students. Students were linked back to the home page of the chat system and the boundaries that were given there in order to confirm their understanding of what was meant by confidential communication and what was not.

The results show that there is a tension between the desire to provide anonymity online and the extent to which it can be controlled. They also highlight some of the issues relating to the potential use of allocated nicknames for example by giving nicknames, students may either consciously or subconsciously give personal information away. If nicknames are allocated upon entry to the system, it may be possible to change

nicknames for each session and therefore cause confusion for other users. The results highlight a flaw in the design of the chat system relating to the identification of the moderator and other users as it was possible to imitate both the moderator and other users.

5.3.4 'Non-application'

'Non-application' behaviour also known as 'noise' is defined as being any behaviour that deliberately breaks the flow of the session. Through transcript and observation analyses the results show it takes two main forms; off-task where the individual was not being malicious but was deliberately breaking the flow of the session by adding comments often completely out of context, or off-task where their behaviour was rude or deliberately hurtful towards other students.

13:54:57	Student 1	I get bullied because I'm fat
13:54:59	Student 2	I'm bob marly

Extra: Bullying 22 November

This kind of 'non-application' interrupted the flow of text and therefore, loses the thread of the conversation. Sanctions were given to students for such behaviour as part of the IT policy for example a one week internet ban in the first instance. Students tried to minimise interruptions in sessions by switching back to the relevant topic and reminding the rest of the group about it themselves.

13:41:20	Student	I thought this was supposed to be about break-ups!
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Extract 29 Nov 05

The level of 'noise' and 'non-application' appears to relate to the level of interest the students have in the topic. Bullying and boyfriend/girlfriend trouble had less than Christmas and New Year which created more. New Year also became directed towards football. The level of non-application depends on the timing of the sessions and the level of students involved. Level 2 students tended to add more inappropriate comments than level 3.

Male students, particularly those studying at level 2 and level 3 added more comments that were termed to be 'non-application' than female students (see Appendix 12). The

number of male participants was higher at level 2 and level 3 so it was likely that statistically this was the case. The number of 'non-application' comments by level 2 males were the highest as a percentage of the contributor group. This shows that male level 2 students were most likely to exhibit 'non-application' behaviour within the chat than any other group. Whilst the number of female non-application comments was small the highest number again was added by level 2 female students. This shows that level 2 students were more likely than any other group to add inappropriate comments in this chat system.

The chat transcripts show that there was a huge variation in non-application between sessions; some sessions were highly focussed whilst others lacked flow. This mirrors patterns in face to face speech when students will spend time concentrating on the topic but may also talk about other factors depending on what is happening around them. It is more noticeable as it is recorded word for word in text unlike being lost in face to face conversation.

Evidence from the transcripts shows level 1 students were more likely to enter the chat sessions to talk to each other about their own topics whereas level 3 students came in to talk about the specific topic offered and to interact with other students. This difference may be due to the difficulties that students studying at level 1 are more likely face, for example the pace of reading and writing in chat means they are likely to find it more difficult to follow. The results show that a level 1 student was more likely to try to communicate identification information for example asking where students were sitting, using real names and was more likely to take part in non-application behaviour. The first chat sessions show that level 1 students had a higher number of instances of off-task behaviour particularly in larger sessions that were harder to follow – in later sessions with fewer participants they were able to contribute appropriate comments but this was when the pace was slower and easier to follow. Level 1 participants were also more likely to contribute comments that they needed to withdraw or justify later and appeared less likely to think about the consequences of what they were saying for example in 'Drugs and Smoking' they were more likely to reveal that they were taking illegal substances than students at level 2 or 3 who were more hesitant in their responses. This suggests they may think less about the on-screen anonymity and the link back to their own personal details off-screen.

The level 1 activity did reveal a spectrum of activity. With some student asking for support and giving support and others participating very little (Figure 18). Level 1 students were less likely to use inappropriate language than other levels of student.

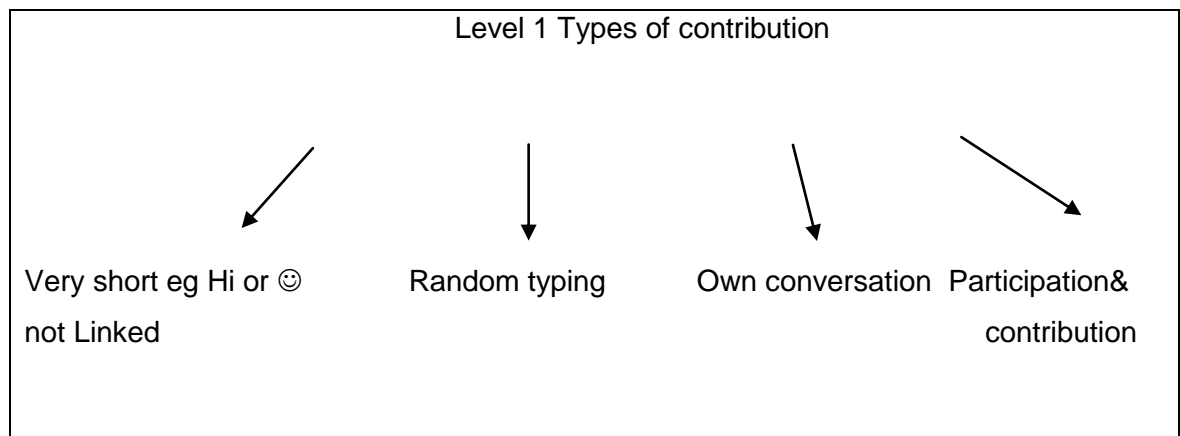


Figure 18 A spectrum of different activity was identified in level 1 users.

There appeared to be no link between what would be termed ‘bad behaviour’ (for example swearing or inappropriate comments) and the gender ratios of participants (male: female). For example in Drugs and Smoking the ratio is 8:3 (including 1 male ‘lurker’) and there was no inappropriate behaviour, in Friends the ratio was 11:4 and there were a number of different instances of inappropriate behaviour none of which were malicious, just silly comments.

5.3.5 Summary

The results for pedagogy show that there are key factors influencing the way that chat takes place. The role of the moderator has four key elements to it including passive observer, leader, helper and supporter. The extent to which the moderator uses each role is dependent on the topic involved and the mix and level of students who are present. The pace of chat communication is fast and the results show that it is important that the moderator in supportive chat has both a pastoral and IT background or is prepared to be trained in either. The results also show that the moderator is likely to need to communicate in ‘text speak’ and this needs to be acknowledged by the institution.

The results highlight the debate that is needed around nicknames and difficulties in keeping anonymity in chat sessions due to students adding names and using nicknames (including those of others). This totally anonymous chat system has highlighted the issue of students ‘borrowing’ nicknames including those of the moderator. The need to have some form of user identification mechanism is complex and was not provided in this system. As such it could be seen to be a flaw in the design. Finally, the results highlight the different levels of non-application amongst users in the study. The results appear to

show that it is more likely that non-application behaviour is affected by the study level of the student. In this study level 1 students were much more likely than other students to add comments that would be termed 'non-application'.

5.4 Pastoral

From a pastoral perspective, the results are organised into five key areas; community, topics, relationships and boundaries, influences on access to emotional support and types of emotional support. Pastoral encompasses the social and emotional aspects of supportive chat.

5.4.1 Community

The results show that students used the supportive chat sessions as a community. They showed their interest in different sessions by asking about the topic of the day and referred to the chat as being 'their chat'. Extracts taken from sessions prior to the allocation of topics highlighted a need for direction. These types of exchange significantly reduced after the introduction of specific topic areas.

15:26:33	Student 1	what is this all about????	Extract:
14:27:36	Student 2	subject?	Extract:
15:05:29	Student 3	wet doo u wanna tlk about	Extract:

In chat sessions students asked for more access.

10:41:43	a student	You should leave this chat open 24 hrs a day... give a teacher 10 cups of coffee for the night shift
Extract: Coping with coursework 18 Jan		

There were high levels of student greetings as participants expected to be greeted by other chat users and if they received no direct response were likely to leave very quickly. Saying 'hi or goodbye' was the most common contribution.

There were two main types of student participant; those who appeared to 'join' the community and frequently return wanting to discuss the latest topic and those who only

joined for a topic that related to them. Both types of participant greeted others before the main topic of conversation started. Frequent users stated that it was their 'community' and protected it from new entrants if they behaved inappropriately

10:56:02	a student	you think I care we were having a good chat before you came in now get out of my chat room
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Extract: Coping with Coursework 18 Jan

They also returned frequently to participated and apologised if they were late.

10:43:55	a student	Zen: dam a bit late getting here today
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Extract: Drugs and Smoking 8 Feb

This suggests that the participants felt they were able to validate and understand others as part of 'common ground theory' (Clark & Brennan 1991). Grounding in this way leads participants to a mutual belief that they share a common understanding. Such grounding may be difficult with external chat rooms as they do not have a specific community from which participants can be drawn. This bounded chat system had specific access so students could make judgements about other participants. Students asked about the number of other participants in sessions as shown below.

12:44:14	a student	whos this im talking to
12:44:26	moderator	(mod) the moderator
12:44:42	a student	whos that r u a student?
12:45:00	moderator	(mod) no a member of staff - does it matter?
12:45:14	a student	nope

Extract: Any Concerns 16 March

Finding out they were the only student present sometimes prompted a student to leave the session but for others they continued dialogue alone with the moderator until other students joined. The former was more common. This suggests that whilst students want a moderator to be present during sessions to facilitate discussion, that they prefer to gain support and understanding from their peers and therefore, will be less inclined to engage in discussion with the moderator alone. There was supposition that the moderator was a man, as previously discussed when considering moderation. It is possible that students

felt less comfortable to talk alone with the moderator, who they perceived to be male, than with other groups of students.

5.4.2 Topics

The results show the impact of 'free chat sessions' and topic related sessions on the support system. They also highlight that non-application levels were affected by the choice of topic. Finally the results illustrate the effect a chosen topic has on college policy making for example a high level of discussion on bullying has implications for the way that the college is dealing with such issues.

Early session results were 'free chat'. These are defined as sessions that do not have a focus or topic given to them. Students without an identified topic area discussed the weather, music choices and drugs. During these sessions requests were made for a topic focus and therefore topics were allocated thereafter. Different topic areas were tested on a weekly basis with some weeks having a topic for the week and two or three sessions being given on that topic. In other weeks the topic was changed for each individual session. Students liked both methods of topic allocation. The topic for the week allowed students to contribute on different days. The popularity of chat sessions changed according to the topic and this affected the ability of students to access chat regularly. Access was a problem at times due to the limit of eight users per session. However, for regular students a repeated topic caused frustration as they had discussed it before and asked for something new.

Topic choices were based on the work of Owen-Yeates (2005) and the researcher's experience. This was due the supportive purpose of the system. Topics used in the chat had a variety of reactions depending on the relevance of the title for different students. A full list of the topics as defined by Owen-Yeates and their justification for use is given in Appendix 11. The results (details in Appendix 12) show that during some topic driven chat sessions, students talked about other subjects that were not relevant to the topic but were of a supportive nature.

Students made reference to drugs and drug use if the topic was about something other than drugs but when the topic for the week specifically referred to drugs and smoking the type of interactions changed. Students asked about the best drugs to take and seemed to want to shock or make fun of drug taking. It also appeared that they were more likely to tell lies and then apologise afterwards. The moderator needs to understand expressions used by participants when discussing drugs e.g. 'I smoke green' to be able to understand

what is happening. The analysis of 'non-application' behaviour shows that it was higher during these sessions. The behaviour was only termed to be 'non-application' if it did not contribute to the pastoral support of the group. If the issue related to support, as shown in the example below, it was termed to be appropriate.

12:34:13 a student yeh I got a issue a about a guy I like

Extract: Being different or feeling different 2 March

It is likely that students felt that some topics were not relevant to them or they did not feel willing or able to discuss them. Students did, however, still join the sessions. This allowed them to introduce topics that were relevant as long as they were appropriate. This was encouraged and supported by the moderator. Topics introduced in this way included issues related to studying and loneliness.

Overall, responses to specific publicised topic areas appeared to be more focussed i.e. they contained less 'non application'. Bullying, for example, generated a lot of interest and significant debate. Boyfriend trouble during three sessions gave lots of data with a total of 93 minutes spent discussing the topic by 23 participants. One session (Tuesday) had higher attendance than other sessions. This may have been due to differences in student timetables and therefore access. A summary of the key ideas related to boyfriend/girlfriend trouble highlights the differences that were evident in sessions on the same topic (Figure 19).

Boyfriend/girlfriend Trouble Summary Table

Session 1	Session 2	Session 3
<ul style="list-style-type: none"> • Student splitting with girlfriend looking for new one • Asking chat participants personal questions eg do you have a boyfriend 	<ul style="list-style-type: none"> • Student getting back together with boyfriend including problems • What should a student get his girlfriend for Christmas? • Student ending with boyfriend • Feelings of wanting to cry – support from other participants • Religion • Bullying • Getting a boyfriend or someone to like you • Drugs • Trusting a girlfriend • Getting over splitting up with someone • People making fun out of you (taking the 'mickey') 	<ul style="list-style-type: none"> • Being gay • Boyfriend being an idiot and the student cheating on him with his friend – feelings of guilt expressed • Being really happy and contented within a relationship • Comments about college life

Figure 19 The summary shows the huge range of issues possible for the same topic

Overall, the results show that there was a higher likelihood that students were focussed on pastoral issues if chat sessions were allocated to a specific topic. This is because having a focus avoided the sessions being purposeless and therefore seen as purely social. The results also show the importance of being flexible with the topic area as those topics which were likely to be relevant to students on a prima facie level may not be those that they wish to discuss.

This is shown particularly in the case of drugs which was often discussed during sessions that were not allocated specifically for this purpose but was not discussed effectively as a topic. The topics themselves need to be considered in line with college policy making as the level of discussion in a particular area may highlight implications for alternative support for example if bullying is highlighted as a very big issue it suggests that further work should be carried out offline to deal with it. Combining such evidence with other college data such as student surveys or evidence from staff may establish its usefulness in the wider college context.

5.4.3 Relationships and boundaries

Students attempted to form online friendships. These were difficult to maintain without nicknames as students were unable to return to the next session and guarantee who they were talking to. Students also arranged to be in a chat session at a time when they knew that their friends were there. The examples below highlight this when in Extract 1 the student refers to another student's real name in the session. As this was not given during the session, the student must have arranged to meet their friend. In Extract 2 the student refers to another as being she and again appears to know the identity of the other student.

14:12:19	Moderator	have u tried telling him how u feel..
14:12:38	Student 1	no
14:12:43	Student 2	yes but he just takes the mick of her
14:13:04	Student 1	that ***? (refers to other student's name)
<i>Extract 1 above</i>		
12:39:45	a student	not many my new years resolution is to pay off my debts and to have mine and my littlins passpo
12:39:55	a student	passport by may**
12:40:08	a student	p.a.s.s.p.o.r.t
12:40:27	moderator	are you going somewhere on holiday then?
12:40:39	a student	shes going far far far far away, i hope
<i>Extract 2 above</i>		

As the chat was anonymous, building relationships was more complex. If students did start to form relationships online they were feeling a social sense of community with others that did fit with the philosophy of the system. Offline relationship building was not an aim of the system and therefore, students were able to portray or 'act out' different relationships as part of their own experimentation in social discourse therefore increasing the supportive nature of the system. The online chat allowed students who were struggling in their own offline relationships to receive support or feel that they were central to the chat system. 'Zen', for example was a student that I knew through my pastoral college role who found offline relationships more challenging and was bullied at the college. In the chat system he was one of the key players and regular participant. This suggests that 'Zen' was able to access different types of relationships online that may have been more difficult for him offline.

Students were also able to portray themselves as the opposite sex or adopt another gender during sessions. There was clear evidence of this taking place. Students also appeared to want to talk about issues that they would never talk about offline such as being gay. As moderator I had prior knowledge of the students offline as an 'insider practitioner' and was able to see completely contrasting behaviour of students in and out of the chat sessions.

Truthfulness in chat was complex. Students were told in all chat communications that all text was logged and linked back to individual college identities but still continued to put easily proven lies into the system. Two students in December suggested that they were pregnant. One was pregnant but the other was a male student as shown.

15:36:52	i got raped the other week, and now im pregnant and my parents have thrown me out! (male)
15:37:14	i think i might be pregnant but i'm scared of finding out the truth (female)
Extract 5 December Stress	
13:33:00	why do u think u are pregnant
13:33:05	how would your mum react if you were pregnant?
13:33:13	A visitor has left the room
13:33:39	coz i have missed a period and i am sick in the mornings (female)
13:33:50	my sister got pregnant when she was younger ad my mum had depression but she was happy in the end
Extract 7 December Stress	

The scale shown in Figure 20 highlights differences in interactions between those who added express facts about themselves detailing very personal information that could have exposed them to ridicule or mocking from others, to others who wrote lies that were damaging or upsetting for others, demonstrating a lack of empathy

The truth and lie spectrum within the chat system

Personal Truth	Truth	Lie	Damaging Lie
I haven't had a boyfriend since I was 12.	Tests can cause stress	hello can anyone relate to my story I have 3 boobs?	i got raped the other week, and now im pregnant and my parents have thrown me out!
Female Student(2)	Male student(3)	Female student (3)	Male student(3)

Figure 20 Students added contributions that ranged from the absolute truth to absolute lie

Students revealed details about themselves that may never have come to light at college for example being made homeless or that they had lived with a boyfriend at the age of 16 and drug taking behaviour.

The results also showed that boundaries were important to allow students to experiment with support ideas through chat. This was demonstrated in the session on alcohol when a student suggested that their friend had suffered rape, they then corrected their statement to say it was them, then suggested that was a joke before then going on to say they knew people who had been raped and were too scared to go to the police. The issue with this type of scenario is the extent to which this student was telling the truth versus the freedom for them to have such discussions online. In an offline environment it is less likely that a male student would feel able to talk about such issues openly. Chat is able to provide boundaries that are difficult to replicate offline. The difficulty with such scenarios is knowing when the activity is going beyond what is reasonable therefore, breaking boundaries.

Time was also a boundary for students as they asked for the chat to be available at different times of day and for different lengths of time.

12:57:37	(mod) we've nearly finished 4 today
12:57:48	(mod) r there any topics you would like next time?
12:57:59	i may of exaggerated a lil but paracetamol is good!
12:58:24	(mod) oh I c....so u wanna talk about paracetamol next time?
12:58:28	what is there to talk about paracetamol?
12:58:34	plz
12:58:47	i will b expecting an email saying wen its on!
12:58:50	(mod) y u need to take it - wot 4 etc - back next week!
12:59:13	(mod) ok u will get one....any other comments or ideas - email them as well
12:59:14	what days?
12:59:33	(mod) it will prob b same times next week - will email tomorrow tho
12:59:54	erm... deadlines?
13:00:03	i want my paracetamol topic though will b harsh if they dnt!
13:00:23	(mod) bye
13:00:25	A visitor has left the room
13:00:16	(mod) gotta go - expect the same 12.30 start. Will send

Extract 9 March Sexual Worries

The results showed it was necessary to include endings in sessions to avoid students feeling like the sessions ended too quickly and to ensure that students did not join sessions and make comments just when the session was finishing. It also gave students the opportunity to come up with ideas for future sessions

The management of time constraints was an issue. For pastoral support, students wanted the system open '24 hours per day'. The reality of the situation was that due to the type of issues were being discussed and the propensity for students to reveal personal information or sensitive details there was the need for a moderator to be present. Running a session without such boundaries and constraints (as shown in the un-moderated session) would have changed the purpose of the chat system.

5.4.4 Influences on access to emotional support

Using the work of Faupel & Sharp (2003), Hein (1996) and supplementing it with the use of 'emoticons' and 'text speak', it was possible to measure the extent to which students were using the system for the more emotional aspects of pastoral support using discourse analysis of 'feeling words'(Appendix 14) and the reflections diary (Appendix 13). The results show that emotional words were used in almost all the chat sessions and in a variety of contexts. Emotional support was affected by the choice of topics and the level of 'lurkers' present.

The choice of topic affected the use of feeling words for example the session on violence generated a high number of words compared to the session on coursework which had few. The title of the topic and the associations that students made with that title influenced the extent to which students participated in an emotional way for example alcohol and tiredness produced a number of emotional responses and yet divorcing or separating parents produced fewer directly measurable responses but did encourage much debate about the effects of divorcing parents.

From a discourse perspective, the 'Divorcing or Separating Parents' session did not produce the most emotional responses but did show emotional interaction between students as they debated the difficulties of living with one parent rather than the other and how they felt when parents left or appeared to choose their new partner over them. This was shown during the session below with the comments of a female student.

13:14:37	no i chose to live wiv my mum but she moved away n i couldnt go
13:16:01	its annoyed me alot cuz she chose a bloke over me well tht is how it felt
Extract: Divorcing or Separating Parents 28 Feb	

The number of 'lurkers' appears to have had a small but significant effect on the extent to which support is accessed. For example, the session on Coursework had the highest number of participants and 'lurkers' but only six examples of what would be termed 'feeling words'. The session on Alcohol had no 'lurkers' and a high number of 'feeling words'. Further examples included 'Stress' (Dec 5) when four students were 'lurking' and few feeling words were used and 'Stress' (7 Dec) with no 'lurking' students and higher levels of feeling words. Chat sessions allowed participants to see each other coming and going on-screen by stating 'A new visitor has entered the room' and 'A visitor has left the room'. Thus, if 'lurkers' were entering the room but not contributing other participants appeared to feel less likely to contribute. The impact of lurking on participation levels is shown in Figures 21 and 22 according to the different topics that were used.

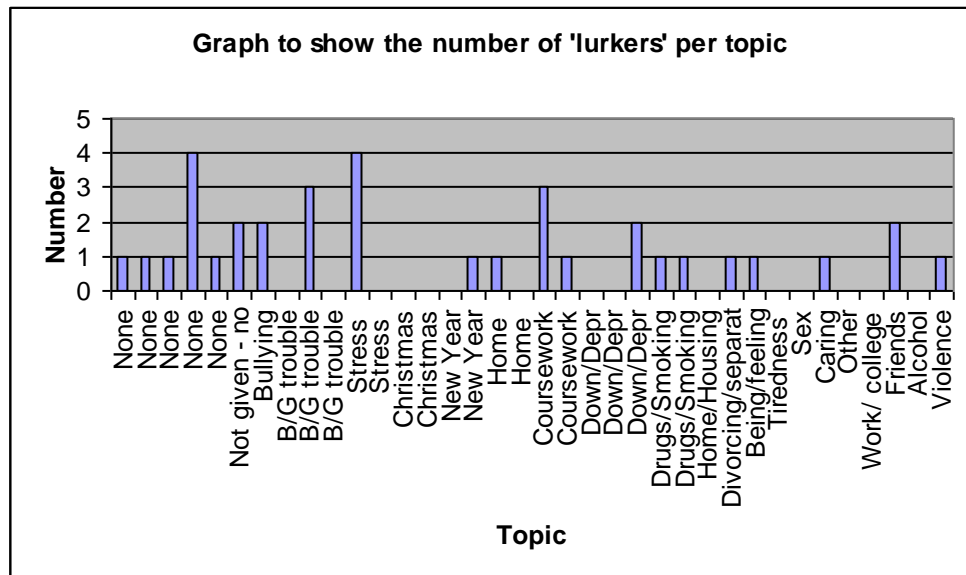


Figure 21 shows the number of 'lurkers' present. Topics such as 'Down or Depressed' have no 'lurkers' in comparison to other topics such as 'Stress' that have a high number.

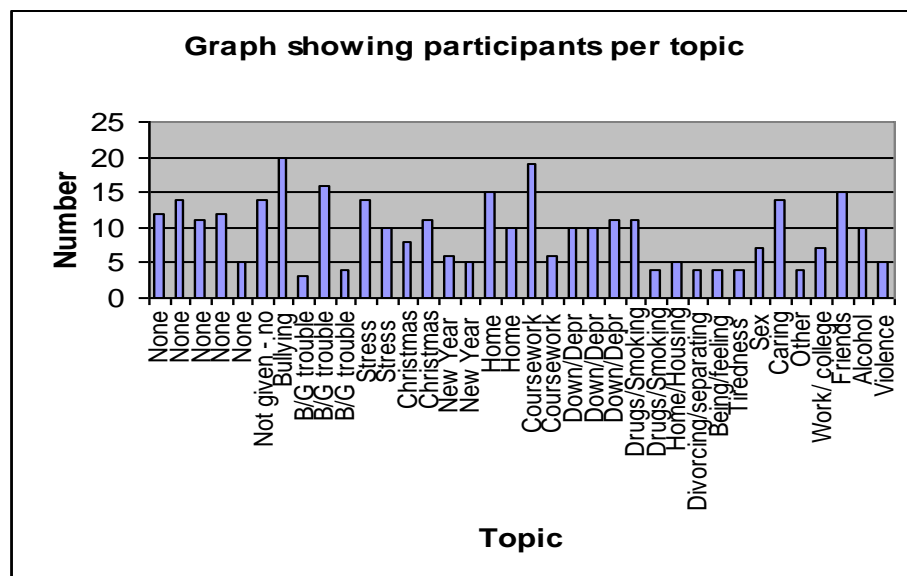


Figure 22 shows the number of participants per session and highlights that there appears to be no direct relationship between the number of participants and the extent to which feeling words were used.

The graphs show that the topics had an impact on participation and lurking levels but that there was no direct relationship between the number of participants and how often feeling words were used. Bullying, for example, had twenty users and only three instances of feeling words compared to Pressure from Home (2) with ten participants and higher levels of feeling words.

5.4.5 Types of emotional support

The results showed that there were three types of emotional support that were evident in sessions; students expressing their own feelings, appreciating the feelings of others and help (asked for or offered).

Students appeared able to express their own feelings in chat sessions, stating when they were upset, happy, lonely, guilty etc. They also showed awareness of the impact of their actions by apologising if they had written something inappropriate. Being forced to actually articulate an idea or comment meant that cognitive processing had taken place and this type of processing including reflective processing that was part of the purpose of providing pastoral support. Some students had a preference for only talking when other students were present and not when only the moderator was present while others were happy to talk just with the moderator. Both types of communication gave students the ability to consider their own feelings. The difference depended on the type of advice and issue being discussed. Some students valued advice from other students more highly than that offered by the moderator. Both methods of support are appropriate and give suitable support to students.

Students used chat to consider feelings about past events, something they may not have considered before in a face to face situation. It was also possible to ask them questions about issues they may not have thought about before in a less threatening atmosphere. This was due to their ability to ignore a question if they didn't want to answer it. Challenging ideas and thoughts was relatively safe in chat as comments were not linked back to the individual student on-screen but there was the opportunity to add text that was relevant or useful even if this had provoked debate. At any time students were able to leave chat without consequence. Students were able to consider issues that they may not have thought about before. The examples below show students chatting in this way.

13:20:43 a student I havent really though about that b4 I just get on wiv my
relationship hes there for me I need him

Extract: 28 Feb Homelife

12:41:41 a student that's funny no-ones asked me that before, I feel as though I
am about the same age as him really or older

Extract: 14 March Caring for others

Students tested the boundaries of anonymity by adding phrases or sentences to test and acknowledge their feelings. They could add whatever they were thinking and see their own words in text and then the responses of others as shown below.

13:07:55 a student Z - i'm gay
 13:08:12 a student Z - no not really I just know I can say that cos I'm anon

Extract: 7 March Tiredness and being unable to sleep

Students also expressed their feelings towards the other participants (Figure 23)

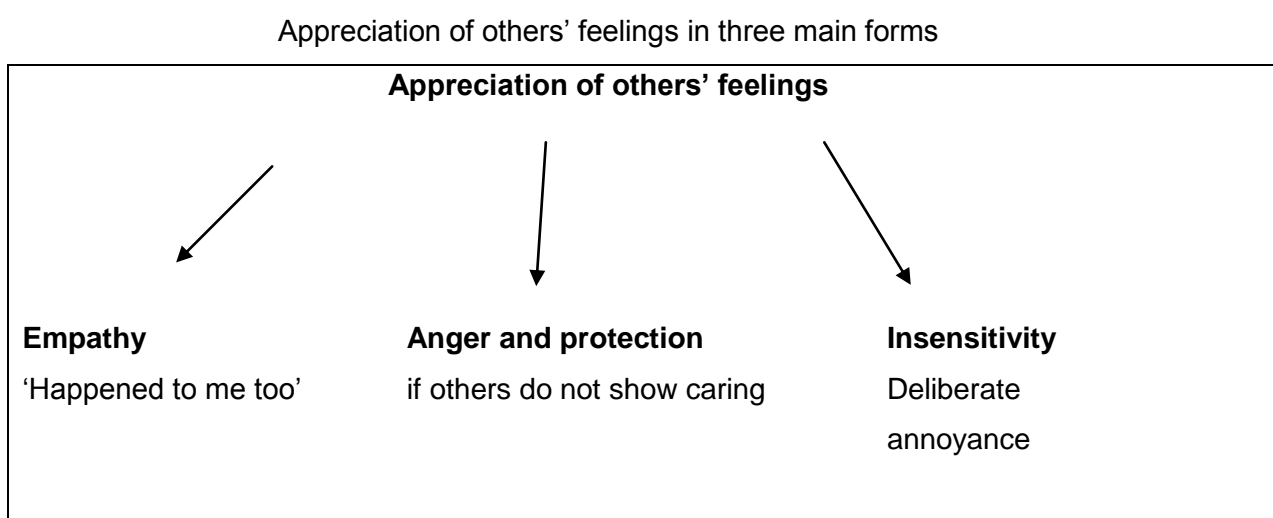


Figure 23 illustrates the appreciation of others with examples of behaviour demonstrated online

Students also showed empathy when they suggested things had happened to them too or that they 'know how something feels'. When students were using this type of empathetic response there was greater use of feeling words and also of peer to peer support. In such sessions as moderator I minimised my contributions and allowed the students to manage the session themselves but with full knowledge and awareness that the moderator was present. Anger and protection was demonstrated by students towards each other by requesting other participants should not be difficult or nasty to others.

13:56:39 a student dont be nasty bout people
 Extract 17 Jan

There was also protection for the room and community as a whole by asking others to leave chat sessions for others who want to receive and offer support. There was some

evidence in chat transcripts that there was a higher level of empathy when sessions were smaller as the level of non-application (shown in Appendix 12) went down.

Students commonly asked for help and for other students to provide advice, encouragement and support. The extract below shows the help asked for by a male level 3 student and the responses were mostly from female students.

13:50:45	Student 1	can u help me I dont trust my gf ?
13:51:05	Student 2	dnt trust your girlfriend?
13:51:37	Student 1	no basically she has a lot of male mates, I luv her but some reason don't trust her
13:52:11	Student 3	I have a bf and a lot of male mates but I dn't even think about doing tht
13:52:16	Student 2	yeah i bet u have a lot of female friends
13:52:25	Student 4	if you dont have trust then the relationship is basically ended (U)
13:52:35	Student 1	Yeah I do but its different init?
13:52:40	Student 3	not really
13:52:57	Student 2	nah not really maybe she feels same bout u?
13:53:21	Student 1	We luv each other so much, I am beginning to trust her its so
13:53:39	Student 2	well tell them that

Extract: Boyfriend/Girlfriend Trouble

Students added supportive comments showing empathy and also support for others as shown in the extract below.

12:47:08 student1	So this girl with the guy problem u ok?
12:48:08 student2	yeah i just have to tell him i guess
12:48:40 student1	ull be ok babe....take care of urself

Extract: Being different or feeling different

Support was also offered in terms of practical support for example during the session on violence the results showed that participants offered advice on what to do if someone is being attacked. This type of support from student was regularly shown in the results.

13:27:37 student1	a gd self defence thing is 2 get em in the neck.
13:27:42 student1	brings em rite down
13:27:50 moderator	(mod) in the neck - how?
13:27:51 student2	wat rite in a vein
13:28:06 student3	head lock
13:28:06 student1	dnt mata.
13:28:17 student3	head lock n arm lock
13:28:21 student1	in the front o the neck it chokes em 4 a bit

Extract: Violence

Sometimes students directly asked the moderator for advice as an 'authoritative source of advice' and therefore the results highlight the importance of having a moderator present. The student below was asking the moderator for advice.

12:53:10 a student	mod: what do u do if u feel you should be caring for sum1 but u cant cos u gothurt?
--------------------	---

Extract: Caring for others

Students were able to exchange information about what was happening in the area such as classes for boxing or access to local services such as housing or benefits.

5.4.6 Summary

From a pastoral perspective, the results highlighted the different types of pastoral support that were available through the bounded chat system. Students developed a sense of community and accessed the system for the relevant topic of the day on a regular or irregular basis. They asked for more frequent access. The topics were found to be necessary as they influenced participation rates and also the levels of non-application. Students accessed the chat with their friends as well as alone. The issues of anonymity and truthfulness were highlighted as areas that were challenging in supportive chat including boundaries of behaviour and of time. From an emotional perspective the type of topics and number of 'lurkers' present affected the levels of emotional support identified and these were shown to be drawn from three different types; expression of own feelings, awareness of the feelings of others and help (being offered and asked for).

5.5 Organisation

The impact of the introduction of a chat system into the college highlighted differing levels of acceptance and support for chat at the college including influences for design and implementation. The senior management were keen to adopt it as a new innovative way of communicating with students. Colleagues from other colleges that saw it working indicated that they felt it could be useful as students were choosing to access the support themselves. They felt it was particularly useful for level 1 and level 2 students who traditionally are less willing to access offline support services. Amongst the rest of the college staff, there were mixed views about its use mostly due to attitudes towards IT and possible implications for other areas such as child protection. The key areas for policy making that were shown in the results were implications for access to data and child protection, investment in training and resources, IT and pastoral programmes.

5.5.1 Access to data and child protection

Access to data was a key issue. If students disclosed any information that was felt to be related to child protection, the child protection policy required that information to be passed on. This was a particular challenge when taking into account the earlier issues described around truthfulness and role-play. The chat system provided students with a level of anonymity on-screen and allowed them to talk about topics they found difficult or sensitive. Students were told that any child protection issue that was relevant would be referred according to the child protection policy of the college. There were, however, 'grey areas' when students added contributions for example stating they were depressed or feeling unhappy. These were difficult to categorise according to child protection principles. Therefore, the results identified that having a clear set of procedures to deal with such contributions was necessary. This is no different to offline support but was heightened due to the online nature of the comments. Such information, in these cases, was not passed directly to other members of staff but chat logs were accessible by all pastoral managers through a secure area. An example of such a difficult situation is outlined.

13:48:45	a student	are you gonna tell my tutor what i've spoken about?
13:48:55	moderator	(mod) do you want me to?
13:49:29	a student	No, please dont. I'll be okay. Though I do hate living.. because my friend died
13:49:41	a student	and it should have been me.. not her!

The results also highlighted that there was an issue regarding access to the data and how much that data was shared amongst the pastoral management team. Over the period, it was decided that anonymous information should be shared to raise awareness of issues but without taking action. This meant that the moderator was not the only one accessing the system and therefore avoided them being placed in a vulnerable position. In the case study college, students were allocated to a pastoral manager at enrolment who was their contact for pastoral issues. This system did not restrict who a student accessed and therefore the results were drawn from students across all the pastoral management teams. Sharing the data across the team meant that it was then shared by the team.

5.5.2 Investment in training and resources

The results revealed that moderation was extremely time-consuming and therefore shows that support through time and resources is essential. They highlight that choosing the right person to take on the role of the moderator in a sixth-form environment is critical to its success and that they should be chosen very carefully. This was due to the need for both IT and pastoral skills to be at a high level.

The system at the college was fully integrated with the existing management information systems at the college. This meant that investment was needed to develop the system and then to link it to individual students. Problems that were created due to the IT infrastructure not being able to cope with the volumes of activity also meant that additional equipment was required and this required further investment in resources.

5.5.3 IT acceptable use

True freedom of expression for students was highlighted as being debatable in this environment as it was constrained by the IT and child protection policies of the college. The punishment or penalties for inappropriate use of words or challenge within chat need to be carefully managed, particularly as students see themselves as 'equals' in the power relationship between member of staff and student. This needs careful management and requires the use of an 'Acceptable Behaviour within Chat Policy'. Moderation, as previously outlined, requires the moderator to have IT skills and pastoral skills combined. Many staff within sixth-form education have one or the other type of skills but it is more unusual to have both and therefore, training investment is required.

Chat rules and boundaries were complex to set. As an emerging tool for pastoral support purposes, it was difficult to give a definitive set of rules to be followed. Giving a set of specific rules went against the original ethos of how the chat was started. However, providing clear guidelines was necessary in terms of expectations of behaviour. Key areas that were shown in the results to have implications for policy making were; the choice of words that were to be termed inappropriate, the level of sanctions for inappropriate behaviour, changes that needed to be made to existing policies to allow supportive chat to take place and decisions about the extent to which parents were informed about the supportive chat service.

Whilst all students were made aware of the expectations of behaviour in chat, for some it took one or two sessions to fully understand how to behave. This was particularly evident in relation to anonymity when students tested the boundaries of expected behaviour by mentioning the names of other students or by asking questions for example – do you know who I am? Email being offered was important, although now well used, as it enabled students to be contacted asynchronously if their behaviour or questions were inappropriate. They were then reminded of the monitoring policy. Email was only used twice during all the sessions for this purpose.

5.5.4 Pastoral programmes

The choice of topics and the follow up within the pastoral support structure was highlighted in the results. When students' problems were identified it was important that they were shared appropriately and that support was given through the tutorial and curriculum areas to reduce that problem for example bullying was raised as an issue and required cross-college support to deal with it.

5.5.5 Summary

The results have highlighted that there are key issues for colleges implementing bounded chat rooms for supportive purposes. Firstly the senior management team need to be supportive of the introduction of such a system by giving access to time and resources. This is also necessary as bounded systems need to integrate with existing IT systems such as management information systems. From an organisational perspective the results also show that policies may need to be updated or changed including those relating to child protection and IT. They also show that processes relating to any of the data that is generated need to be clear and that students need to be aware of what

happens to their data. Finally the results show that pastoral programmes need to be adaptable and change if issues are highlighted online. The bounded chat system needs to be embedded in the support structures for that college.

Chapter 6 Discussion of results

The discussion of the results is organised according to the key concepts of technology, pedagogy, pastoral and organisation that were highlighted in Chapter 5. The discussion of the results highlights several key constructs. Online chat systems in bounded environments provide a spectrum of participant consciousness that is quite distinct from public chat rooms as users have some form of awareness about who is taking part. The discussion illustrates that some elements of public chat behaviour are brought into the bounded environment. The study brings further knowledge to the field about how young people behave in public chat rooms including disinhibitive behaviours and deindividuation. The analysis of perceptions of the length of time between contributions and responses shows that these are magnified in chat sessions. Such magnification leads to specific responses that are influenced by technical considerations and personal feelings.

The analysis features eight important skills that are needed by moderators in order to effectively participate in the chat environment and these include feeling comfortable with online control and changes in perceptions of status. The analysis of the results provides further insight into blurring of virtual and real world boundaries including the construct that there are four different perspectives that students may be operating from when they add their emotional contributions ranging from something that has happened through to a lie to gain a reaction. It also indicates the choice of topics used in sessions can affect levels of participation, gender break down and lurking. The discussion of results proposes that from a college's policy making perspective, chat can offer an alternative method of support which when applied to the model of effective pastoral action (Simovska & Jensen 2007:7) leads to action. Full discussion of these constructs is provided with implications outlined for future practice.

6.1 Technology

6.2 Pedagogy

6.3 Pastoral

6.4 Organisation

6.5 Summary

6.1 Technology

On a conceptual level, the results highlight that there were three characteristics of technology that were important for this study and these were anonymity, confidentiality and hosting.

6.1.1 Anonymity

Anonymity had a significant influence on student participation as it made communication more challenging. It encouraged students to make decisions about how best to communicate in the system for example through the use of nicknames. It also provided them with the potential to experiment with their online identity in a bounded way.

Online chat requires students to concentrate on the flow of the messages to keep up (Coleman et al 1999:62). In an anonymous environment, this was challenging due to the speed and flow of messages, so some students decided to instigate the use of nicknames. On a prima facie level this could have undermined the anonymity as nicknames can often provide information about participants (Jacobson 1999) but what actually happened was that students tended to either consciously or subconsciously choose names that were mostly non-gender specific and did not identify themselves for example gold or sniff (Appendix 17). They also frequently changed the names and therefore reinvented themselves. It is likely this was due to them protecting their anonymity with peers as students were aware that the college knew who they were from the data logs and tracking. Therefore, the results suggest that anonymity was important peer-to-peer rather than for the college. This may have been related to the topic being discussed and social pressures in college. This is likely to be due to the level of challenge associated with a topic. When topics were more challenging to discuss such as girlfriend/boyfriend trouble or sexual worries, nicknames were used and changed but for other topics such as pressure from home, none were used.

The anonymity also affected the way that students behaved online as it allowed them to 'act out' in ways that are commonly seen in public chat rooms. For example, they were able to take on different personae or identities in this entirely discourse environment (Markham 2004:373). They were also able to experiment with their on-screen identity and gender to take on roles that would not have otherwise been possible. For example, a male student discussed the problem of finding themselves pregnant and who they would go to. This can be explained by the way that anonymity reduces inhibitions when

contributing ideas and thoughts avoiding the need to conform to the ideas of the peer group without threat (Pissarra & Jesuino 2005:276).

The results show that the bounded nature of the chat system led to a form of 'bounded anonymity'. That is a level of anonymity based on the judgements and ideas of participants about what the other participants would be like rather than the reality (Ma 1996:176). The perception of others in one's own mind is as critical as reality for supportive purposes. Therefore, students already had a number of identification 'clues' that helped them to establish who they were talking to and this offered them a level of security and knowledge that made them feel comfortable (Preece 2000:89). It also allowed them to speak freely to discuss sensitive issues if they wished to do so. The negative side of freedom, however, was students were not able to feel the social impact of their comments. This type of freedom encouraged some totally uninhibited comments that will be further discussed within this chapter as part of the pastoral concept and in relation to deindividuation and disinhibition theories (Dietz-Uhler & Bishop-Clark 2002:27).

It has been found that anonymity on-screen is not able to offer total protection to students as they may give subconscious clues to their identity e.g. through gender. According to Preece (2005:155) linguistic style can betray a person's gender as females tend to be more self-deprecating and apologetic and include more adjectives in their speech compared to men. The results supported these findings as female students did add more of these comments than males but not to any significant level. According to Preece's theory some males would have been viewed by others as female on-screen. The results showed that students communicated differently depending on how they wanted to be portrayed on-screen. The influence of gender on-screen may be consciously or subconsciously taken into account when adding contributions but this was not measurable.

Anonymity through the design and implementation stages of the system was suggested to be extremely important but the results showed that some students did not wish to be anonymous. These students used their real names on-screen or nicknames that were known to others around the college and did not value the anonymity. It is not possible to know exactly why they were doing this but it may be explained in two ways; that they were able to use their names as they felt confident about the topic and other participants, that they were trying to subvert the anonymity or that they were trying to let others know that they were accessing the session. Each chat session developed its own culture and set of norms (Salmon 2000:162) so such disclosures were discouraged even though students stated that they 'did not mind'. Issues relating to anonymity and the representation of

identity through the use of nicknames will be further discussed as part of pedagogy (6.2.3).

6.1.2 Confidentiality

Confidentiality was an important characteristic of the system technology due to its supportive purpose. The results showed that students either must have felt that their contributions were treated appropriately and in line with the Data Protection, IT and Child Protection Policies of the college or did not consider the treatment and storage of their data. This was clear in the results, as students were able to ask for information to be removed at any time but did not do so. Students accepted the terms and conditions offered including 'confidentiality' on a prima facie level. This may be attributable to their own cultural interpretations of what they believed was meant by 'confidentiality' and the belief that information could not be repeated or passed on without their permission (Brook Advisory Centres 2007).

Students were carefully and regularly informed of the system rules including the use of the data before, during and after chat sessions but the extent to which this was internalised is questionable. This is no different to offline communication, but does highlight key questions that need to be raised about how young people view confidentiality online and the way that they consequently behave. The Department for Children, Schools and Families (DSCF) in September 2007, The Byron Report 2008, The Children's Act 2004 including Every Child Matters, all highlight that confidentiality is a particular issue for the education sector regarding allegations of child abuse made against staff and the use of social networking sites, often including chat applications.

Informed consent was an issue for this study due to its supportive nature and its purpose for research. Gaining consent was challenging as it was done through 'permission information'. Students had to agree to it as part of the logging in procedure for the system. A full awareness of informed consent is a common issue for all forms of technology (Marx 1998:171) as many users do not make any reference to it or try to understand it. As the students were sixteen years of age or older they were able to give consent themselves (Wiles et al 2005:9) but asking them to complete written consent paperwork would have identified them to others in college. Therefore, this would have been unethical as it was more likely to lead to feelings of vulnerability (Coomber 2002; Wiles et al 2005:16). All colleges have a duty of care to ensure non-maleficence, which means that no individual should be harmed as result of taking part in the research (Wiles et al 2005:7) and students were aware of this.

Requiring written consent rather than agreement through an online system does not provide users with any greater security than offline with paper. Arguably the measurement of informed consent and true awareness of the implications of any research is no different in an online research environment than it is in an offline one. Having written signed consent does not constitute understanding of the implications but merely that a consent agreement has been signed (Kraut et al 2003:12). There is also the issue of the extent to which giving informed consent can really cover all possible eventualities for the data and how it could be used in the future. The results show that levels of trust, anonymity and the way that the data is stored make online support more complex than verbal offline exchanges where sketchy details are recorded. Providing written paperwork also does not guarantee that students will take the process any more seriously and have been known to give false identities such as 'Mickey Mouse' (Coomber 2002). The relationship between the students and the college is also important as there is a bond between the two parties that must be acknowledged and would not be seen in a 'public chat room'.

6.1.3 Hosting

By hosting the chat system within the college's IT infrastructure, the results highlight the construct that there are links between boundedness and levels of consciousness. In public chat rooms it is common to give false details and therefore, can be difficult to go back and assess the extent to which a person is really who they say they are, their age, details and so on (Hinz 2007:1). Within this bounded system there were clear links between users and contributions thus it was possible to collect and evaluate student contributions according to level of course, type of course, gender, age and so on. Linking anonymous contributions back to participants discretely is what makes this research secure. As the system was bounded it meant relationships were only formed between members of the college community (Lazar & Preece 1998; Wellman 1997). Students could realistically make some judgements about chat user profiles as all of the participants, except the moderator, were between the ages of 16 and 20. Such knowledge informs the concept of the 'known stranger' (Steiner 1989:155). In this system, participants were known to be students but may not have been known offline to others. On a simplistic level, it would seem likely that students would either know participants or not know them. However, the results actually revealed a spectrum of student consciousness about other participants going from 'known stranger' to the active participation of friends who arrange offline. The construct that I have developed to explain these levels of consciousness is illustrated in Figure 24.

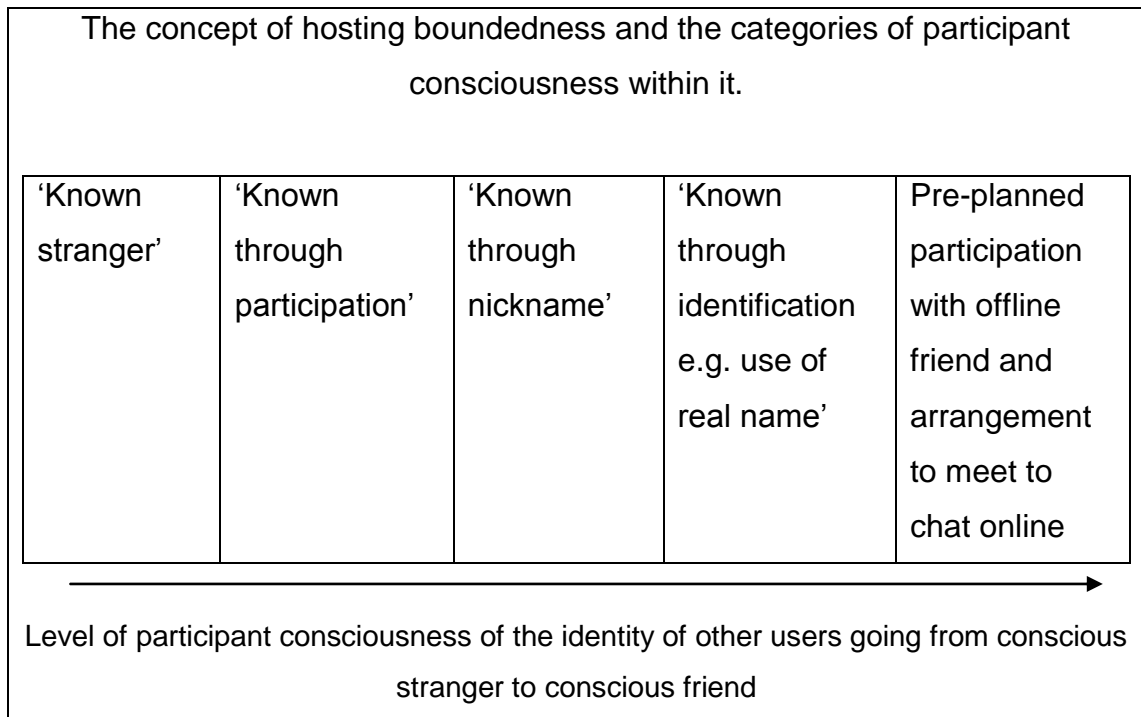


Figure 24

The effect of bounded hosting is what contrasts this system with public chat systems. In public chat systems there is the additional possibility of the ‘unknown stranger’ and the ‘known named friend’ at either end of the spectrum. The potential for such relationships has given rise to concerns about public chat rooms in the past. Unlike public chat systems this enclosed system offers students the opportunity to feel relative anonymity but at the same time feel protected as their contributions can only be accessed by others of a similar age and cohort thus removing the element of the unknown. This is important for a pastoral support system.

Boundedness does limit the possible attributes of other participants but it is important to note that it does not limit the ability of participants to continue to be ‘actors’ who are directing their messages to what has been referred to as an ‘audience’ in chat (Islam 2006:77). Students act out ‘parts’ in chat such as taking nicknames of other users and adding comments on their behalf. They also act as the moderator by controlling behaviour. They do this knowing that they are monitored and that their contributions can be traced. This almost parallel world is what makes chat in a bounded environment interesting and different from other environments and why this study is important.

Before the study started, on a prima facie level it seemed likely that students would act differently in a college system than a public one. It seemed unlikely that they would

change gender or act out roles as they were being monitored. This was not the case and they mentioned issues such as violence and drug taking regularly. This suggests that either students had a high level of trust in the system and felt able to mention confidential or sensitive information, or they were using it in the same way as a public system.

All systems are limited by the bandwidth available for communication (Kollock & Smith 1996:110) as this restricts the speed at which communication can take place. A high number of contributions created high systems traffic and in chat such traffic led to lagging (Suler 2004:27). Perceptions of lagging and the actual amount of time for lagging can be very different (Markham 2004:366). If students did not receive an immediate response they started to question whether anyone else was there (Marvin 1995) or added additional information that led to confusion. For example after 59 seconds of delay a student added 'no-one chatting' and another time 'can sum1 talk to me'. A delay in response can lead to some students feeling isolated or alone (Maier et al 1998:125). The results highlight that the perception of the length of time between contributions being sent and a response provides four key responses that may be influenced by technical issues or the feelings of those participating. These are shown in Figure 25.

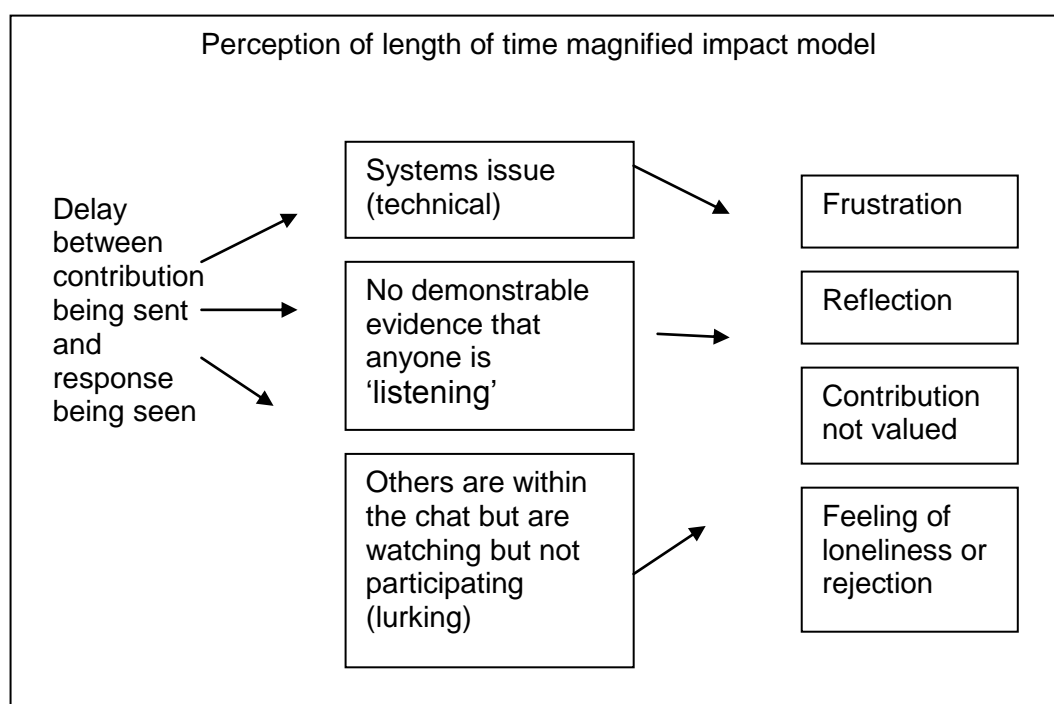


Figure 25 Delays between a user contributing and being acknowledged on-screen appear magnified on-screen and lead to four main responses

However, lagging can be positive (Suler 2004:25) as it allows time for users to reflect on their contributions and those of others leading to support for pastoral issues. Students were unable to 'show' they were listening other than in text so if the lagging time was too

long they thought they were alone or not being listened to. If it was too short there was no element of reflection. This balance needs careful management. On occasion, it also appeared that others were not 'listening' if comments were ignored. This could be explained by the use of individualised audiences (Islam 2006:78) whereby two individuals were chatting and ignoring the responses of others. Assuring community interaction rather than rejection if the 'actor' does not receive acknowledgement from the 'background audience' (Islam 2006:81) is critical for pastoral support but is a challenging aspect of working in this supportive environment.

6.1.4 Summary

The discussion of issues relating to technology highlights that the bounded nature of the system affected the way that students behaved within it and in particular the use of nicknames in this anonymous environment. The discussion highlights key aspects of public chat rooms that have been brought into the environment. It identifies key differences including that chosen nicknames did not, in the vast majority of cases, highlight the gender or ethnicity of participants. The results show there was an increase in peer-to-peer communication and a need to consider issues of consent and confidentiality. These are frequently an issue for technology (Marx 1998:171). Participant consciousness of others within the system was identified as significant as boundedness provides a spectrum of consciousness that is not available in public chat rooms due to the different concepts of stranger in this environment. Analysis also identifies the impact of lagging and the extent to which it may be viewed positively or negatively when considering response rates and the ability to reflect.

6.2 Pedagogy

The discussion of pedagogical influences centres on four key aspects; moderation, communication, identification and non-application as highlighted in Chapter 5.

6.2.1 Moderation

The results highlight implications for changes in the relationships between staff and students online due to their ability to communicate more equally and in fact with the powerbase shifting more towards the student who uses text speak more frequently. This is in contrast to the usual student support relationship and was a key finding in the results. The skills, knowledge and understanding that the moderator must have in order to

be effective within a chat session are complex as due to the supportive nature of the chat. The skills drawn from the analysis of the results are shown in Figure 26. My construct identifies that there are eight skills that a moderator needs to have or develop.

Having a moderator present but not exclusively giving advice allowed students to help one another. It is more difficult to do this face to face situation in colleges and certainly impossible to do it anonymously without the use of a system such as chat. Protocols within institutions reinforce that the teacher is in control giving the advice and students receive it passively (Nash 1976:94). The extent to which a moderator becomes involved in exchanges and their perception of appropriate or inappropriate behaviour is complex but is no different to the challenges faced in the offline situation (Anderson & Simpson 2007:133). However, the base of communication power may be different and this has huge implications for such online systems.

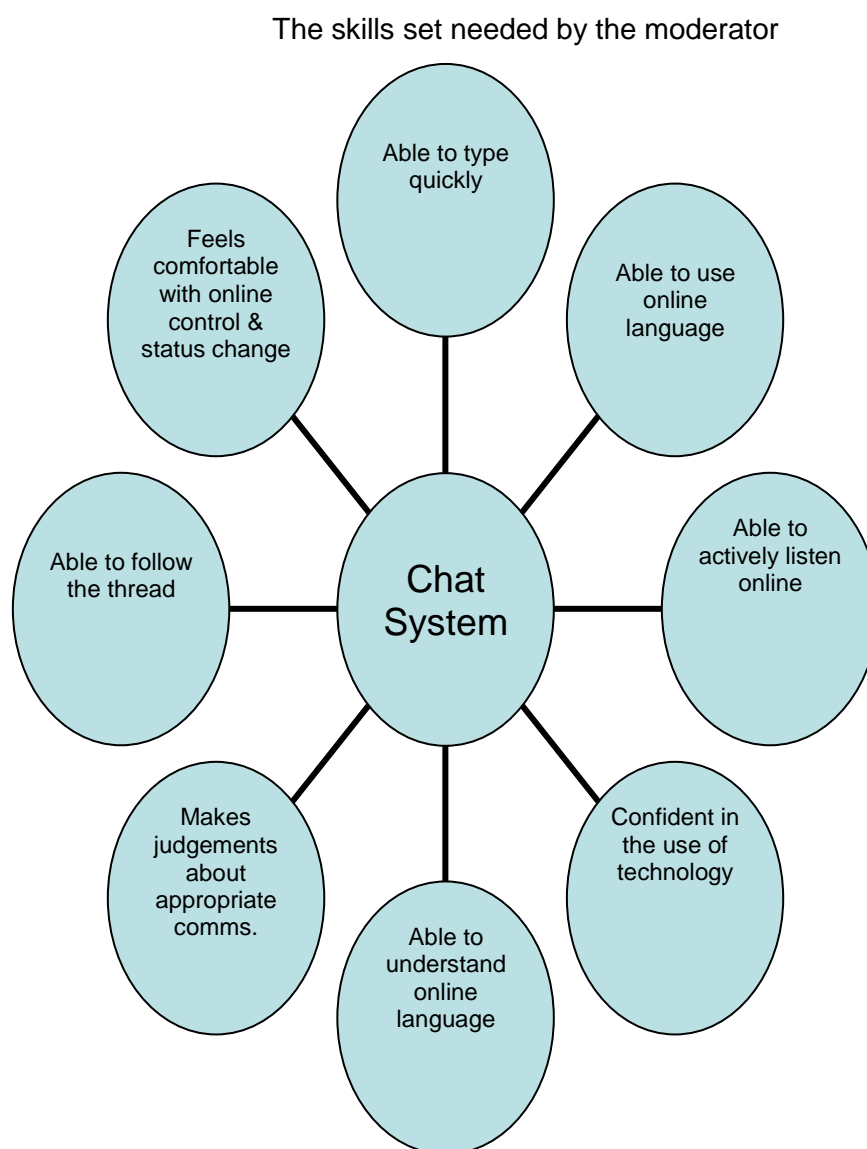


Figure 26 The moderator needs to have a number of different skills to be fully effective

The results showed that some students take on the role of moderator and tell other students to behave – this is less likely to happen in a face to face situation due to the domination of the teacher in a classroom situation (Evertson & Weinstein 2006:24). Online students felt confident to do this. The shift towards greater emphasis on group self-management of behaviour is different in chat compared to traditional support. For example, there has been a tendency for teachers to monopolise the teacher-student relationship by talking for 70% of the time (Charlton 1998:52). Chat works differently and the results show that when a moderator was present students did 'self-regulate' to provide support. The role of moderator was necessary to keep control and ensure cooperation (Kollock & Smith 1996:110). It required a high level of skill. Online active listening required high levels of concentration and confidence in the use of technology (Buchanan & Lukaszewski 1997:127). Therefore, the results show the moderator needs to feel able to work in this environment to be effective within it. The moderator added an authority structure to the environment without which participants would not be able to effectively participate (McMillan 1996:318). Although limited to one session, this was demonstrated in the un-moderated session.

The results highlight the shift from traditional teacher/student or moderator/student roles to relationships that were more equal with greater emphasis on freedom of speech. They demonstrated that there were changes in 'status and power differences' as everyone starts on a perceived level playing field (Stuhlmacher et al 2007:330). This change in relationship may be explained by the increase in peer communication. There was more 'horizontal' (between students) rather than 'vertical' (between staff and students) communication. (Turnman 2005:121; Suler 2004:31). It may also be explained by the perceptions of students about an adult being in a chat session. Most adults consider chat conversations to be 'lightweight communications' and therefore, potentially unimportant (Grey 2001:79). This can encourage students to demonstrate inappropriate or dominant behaviour towards the teacher as they believe their power and control is enhanced (Bocij & McFarlane 2003:24). As the moderator was anonymous in this study, students may not have perceived them as a significant adult and potentially as more of a peer and equal.

The results show that the moderator had key roles with a significant one being to start open questioning. Preece (2000:85) has defined this as a key role of any moderator. The moderator also was able to provide closure to sessions. This was found to be particularly important due to the supportive nature of the system as serious problems may be discussed online (Mallen 2004: 81; Rheingold 2000:190).

The results highlight the assumption amongst students that the moderator was male even though no clue has been given to their identity. The actual gender of the moderator was female so although gender may be portrayed due to linguistic style (Preece 2000:155) these results highlight it is not always the case. Gender suppositions about the moderator may have come from associations with the role. It is seen as being strong, rational, dominant and assertive, traits that are categorised as male (Stuhlmacher 2007:331). This explains the perceptions that students had about the moderator being male.

6.2.2 Communication

Communication was linked to threads of topic areas (Marvin 1995) and easily produced. Conventions established in public chat rooms, for example capital letters when shouting (Willett & Sefton-Green 2003:8), were seamlessly introduced into this system and the majority of students needed little or no support. The only area in which they needed guidance was for behaviour expectations and boundaries. The use of 'text speak' to communicate meant that there was extensive use of abbreviations, acronyms and emoticons to convey both words and feelings. The results showed that communication was fast moving so whilst spelling or grammar was not a problem for students studying at lower levels e.g. level 1 and 2, the pace of the text was. This may explain why these students were more likely to add comments that were not relevant or appropriate. These particular students, however, were more likely to want to contribute. This suggests that whilst chat may not appear to be accessible to all, students wanted to engage with it and particularly those at lower levels. Technical skills influence the extent to which students feel satisfied with any chat system (Gunawardena & Zittle 1997:8) and how 'real' a person is perceived to be through communication. Level 1 students were likely to have the lowest level of IT skills in the college but the percentage of their population accessing the system was highest. This suggests that their perception of other participants as being 'real' may have been higher as they were more attracted to it than other groups.

The use of 'emoticons' (images or icons that show expressions on faces such as ☺ to communicate) was also evident. Virtually all sessions included some use of emoticons to express feelings which was in line with the purpose of the chat system. The results showed that emoticons allowed students to participate at the fast pace required in chat sessions as they were more easily added than full text. Higher emoticon usage has been linked to higher 'social presence' theory in that the more emoticons were used the more 'real' students were likely to be perceived in chat sessions (Gunawardena & Zittle 1997:11). The results show that students wanted to be more 'socially present' in some sessions rather than others for example in the sessions on 'sexual worries' or 'other

concerns' there was no use of emoticons at all suggesting that students did not feel as comfortable displaying social emotions. These sessions had higher numbers of 'lurkers' compared to others. This suggests that students were adapting the way that they communicated depending on how comfortable they felt with the topic being discussed in the same way that they might in an off-line environment.

6.2.3 Identification

The results show that in all but one instance students were using nicknames or identifiers which protected their own identity. This allowed students to explore different issues by projecting themselves as they wished (Gunawardena & Zittle 1997:11). Working in this way was important as it allowed students to explore pastoral issues without feeling the need to be open with their peer group or teaching staff. Most students did not want to use nicknames, and when they were used they did not provide clues to the identity or gender of the contributor in the majority of cases. This suggests that students in bounded chat were able to move towards more gender-free virtual support (Herring 1996:1). This is in direct opposition to the behaviour found in public chat rooms where most participants use nicknames to identify their gender (Subrahmanyam et al 2004:656). Again, unlike public chat rooms, the nicknames that were used did not make reference to race or ethnicity (Subrahmanyam et al 2004:659). This may be explained by the anonymous nature of the sessions and that students were asked not to reveal their identities. Also, unlike public chat rooms, there was less need to find out information about other participants as they were drawn from the bounded population of the college rather than the population of the internet as a whole. Thus making assumptions about who was participating online was less complex as there were a limited number of participants who could be online.

Students found following the 'thread' of conversation more difficult without nicknames but the use of nicknames did illustrate some potential difficulties. In chat for pastoral support, it is important that if nicknames are used that are used consistently to add value to the supportive relationship. This was difficult to maintain without giving clues to the identity of those involved. Identities became more obvious over time for example some students were always available at a certain times or subconsciously gave away clues to their identity. The anonymous chat system tried to prevent such links being made so students could freely change themselves and the topics that they wished to talk about. They did not need to feel constrained by the identity allocated to them. The use of colour for contributions, which was not technically possible for this system, may be one way of giving a form of solution to this issue and requires further investigation.

6.2.4 Non-application

The results show that non-application was an important element of a bounded chat system including its consequences and implications for student behaviour. Colleges cannot be seen to have systems that are uncontrollable, yet control is one of the biggest issues for chat (Colomb & Simutis 1996:206) and was highlighted as an issue.

Anonymous online systems may encourage more frequent negative comments for no apparent reason (Preece 2000:83). This may be as a result of disinhibition as students, in this study, felt less inhibited to reveal their true feelings whether those were positive or negative and therefore, felt able to disrupt the community (Suler 2001; Rheingold 2000:191).

The results show that level 2 male and then female students were more likely than any other group to take part in non-application. A *prima facie* explanation for the level 2 students is that they wanted to access the system but felt less inhibited than the level 3 students who were more controlled in their contributions. Level 1 and 2 students were also more likely to want to their own topics that in some cases were more social and therefore non-application. The results show that it is important to consider how and why systems are being used by students (Beetham 2005:87) in order to reduce levels of non-application as appropriate.

6.2.5 Summary

The pedagogical influences on chat including aspects of moderation and control have a big impact on the extent to which users access the system and the college feels in control of it. The results show moderation in particular is a critical driver for success in this type of system and this supports the findings of Kollock & Smith (1996:110). The pedagogical discussion centres around issues of relationship, power and control. The discussion highlights the skills needed to be an effective moderator including confidence to use technology (Buchanan & Lukaszewski 1997:127). Explanation is given for why there were different levels of emoticon usage based on the perceptions of how 'real' other participants were and according to the topic being discussed (Gunawardena & Zittle 1997:11). Finally implications for behaviour and control are highlighted including the effects of disinhibition on the contributions that students make and their participation levels (Suler 2001; Rheingold 2000:191).

6.3 Pastoral

The chat transcripts highlight five key areas of interest in relation to the pastoral arena. These are community, topics, relationships and boundaries, influences on access to emotional support and types of emotional support.

6.3.1 Community

The self-selecting nature of the system meant that students who were attracted to it were likely to feel comfortable working and communicating within it as they were drawn to it (Suler 2004:20). By seeking to join, students were part of a community (Blanchard 2004) whether that was through active participation or through lurking. Whilst there is some discussion about what constitutes an online community, the work of Preece (2000:10) explains community as being people, a shared purpose, policies (including rules and protocols) and computer systems. The results show that all of these elements were present in the chat sessions and therefore explains the notion of community. Repeat visits for different topics indicate that students were able to validate and understand each other (Preece 2000:156). The community greetings highlighted in the results also show that elements of public chat rooms were brought into the bounded community.

The results show males were more likely to access the system than females. This is important for college pastoral support at a time when suicide rates amongst young men are significantly higher than those of young women (Gott 2003:6) and men are less likely to ask for help as they see it as a sign of weakness (Biddulph 2007:25). Providing pastoral support online provides an additional support tool. In mixed sex offline situations it is less likely that male students access support than female students as they see peer support as a female domain (Cowie & Nutson 2005:42). In the chat system the opposite was true with much higher numbers of male students accessing it. This may be due to male students feeling more comfortable with IT (Colley 2003:674) and may be explained by studies that show males are much more likely to access IT than females (Rekabdarkolaei & Amuei 2008:185) even when they had experienced the same levels of ICT experience and training.

The need to greet others, for first time users or repeat visitors, is part of the online culture that is present in public forums and was present in the chat college system. Like public chat rooms, the set of behaviours and expectations including acronyms and emoticons that go with being online (Anderson & Simpson 2007:132), became a basis for the development of the college's own sense of online community and culture. This culture

continued to develop during sessions (Goodfellow & Hewling 2005:356), particularly as students transferred the college's offline identity and culture to the online system. Research shows that online culture can filtrate back out into the offline community (Al-Sagaaf 2004:13) although there was no direct evidence of this happening during the study.

6.3.2 Topics

The results show that students wanted and benefited from being given a topic area to discuss. They highlight that free chat may not be appropriate in the educational environment although it is widely used in the public domain to support young people. This is because unfocussed chat led to higher instances of non-application behaviour and therefore, as the system needs to adhere to the expectations of everyone in the college it is critical there is a focus to chat sessions. The level of application to the topic is an indicator of the quality of interactions in a chat session and how well the group is maintaining its focus (Preece 2001:351). The results show significant differences between topics for example drugs and smoking (with few contributions) and boyfriend/girlfriend trouble (with many). Bullying is one of the top ten stressors that impact on young people (Rennie 1998:33) and interest was higher in this topic than any other topic. The results show that the choice of topic had a significant influence on the number of students accessing support. Therefore, choosing topics that are appropriate and significant for particular student groups is critical for colleges considering this type of online support.

6.3.3 Relationships and boundaries

Relationships in the chat system mirrored those found in public chat rooms for example students experimented with their use of gender and sexuality (White 2002). Chat room relationships have been found to be particularly supportive of young men who are gay and unable to either be open about their sexuality or have relationships offline (McNamee 2006:75). There was evidence in the results of students discussing sexuality and relationships. Offline relationships were brought into sessions as friends met in the system and other friendships formed online. The purpose of the chat system was not for students to make friends but it did provide support for lonely students that was otherwise unavailable. Lonely students can be difficult to support as they may not let their peers or teachers know they are lonely and therefore it is possible that chat may be able to effectively provide support for them. Chat was able to offer students the chance to have one or more social personalities. Trying out other identities or selves is really important

for young people particularly between the ages of 16-19 as they are choosing the identity they want to keep (Hartman et al 2006:814). The results showed that students were able to have different social relationships and identities due to the online anonymity. Chat is uniquely able to offer this interaction with others for experimentation in social roles (Turkle 1996:179).

Chat was also able to offer students the opportunity to experiment with situations and receive support and advice accordingly. These situations included relationships that didn't exist, false pregnancies and other fantasies that allowed them to reach out to others (Fenichel 2004:5). College rules, on a prima facie level, suggest that students should always be telling the truth whether on or offline so boundaries related to telling the truth need to be clear in a bounded chat system and outline the way that lies are dealt with and followed up or indeed not dealt with. Chat systems have a tendency to dissolve the boundaries between what is real and virtual (Simovska & Jensen 2007:2) and thus the results highlight that college approaches towards the use of lying online are critical. This is because some lies may be viewed as positive as they are part of experimentation whereas others may be destructive. The following construct of the existence of four different perspectives being considered during role-play scenarios, is drawn from the results;

- This has taken place.
- This will take place.
- What would happen if this did take place?
- This is a lie to gain a reaction (deindividuation).

There is also the issue of the extent to which a lie may be deceptive but not actually untruthful and therefore not damaging (Barnes 2008 :12). Due to college procedures for child protection there is a tension between acting upon something which may seem serious and the extent to which it may not be truthful. This tension needs to be considered before a system is used in a college.

Chat is one of the only environments where users can change their perceived personality or gender (Turkle 1996:249) so there needs to be a careful balance between allowing the freedom of the user to experiment and express themselves against the need for the moderator to respond to something that they feel is an issue that should be further investigated.

The results show that having a topic for discussion is important and that publicising that topic with regular reinforcement of expected behaviour was important to keep students on track. Students have to learn how to work in chat (Columb & Simutis 1996:206) and this reinforcement helps them to learn. The role of the moderator changed the rules and boundaries as experienced chat users were able to support the rules and boundaries reinforced by the moderator and thus move towards greater self-regulation and management.

The results show that endings were used in sessions to ensure that everything that needed to be said has been said and to give time for greetings. This provided a boundary for the end of a session. Without stating that the session was going to end, students continued to add contributions and did not tend to leave on their own. This highlights the need to have the appropriate amount of time to run sessions and for the starting and finishing times to be supported. The results show that students wanted to chat more than they were able to, due to session availability. This management of expectations supports existing research findings (Chester & Gwynne 1998) when students wanted to log on and participate for up to 5 hours per day. Rules and boundaries help to build the online community and reinforce the supportive nature of the system.

6.3.4 Influences on access to emotional support

The text was viewed in its purist sense to look for the deeper meaning of the unique response without confusion (Thurmond 2001:256). As part of noninterventive and empathic case study (Stake 1995:3) the activity of the students was not disturbed during the sessions (unless absolutely necessary) to give them the freedom to participate as they wished. The results show that students accessing pastoral support had differing levels of words that would be termed 'feeling words' depending on the topic that was given, the number of lurkers present and the level and gender of students present. This may be explained by the differing ability of students to participate without feeling self-conscious (Glantz & McNeese 2003:633). Scenarios were explored included the break up of relationships, stress and divorcing or separating parents. In some of these scenarios students took on different roles. Such role-playing may be due to deindividuation theory (the separation of the individual from their own contributions and a tendency towards inappropriate online behaviour) or shows evidence of participants 'testing' the community to see its response (McMillan 1996:318). Such 'testing' may be a legitimate form of experimentation rather than a false truth or lie (Larain et al 2007:94).

Overall, male users accessed the system more frequently than females so this suggests that they were attracted to use the system for pastoral support. Using chat in this way provides an anonymous opportunity for male students to be able to disclose their feelings and discuss issues without having to reveal any person information on-screen. The ability to 'talk' albeit using only one medium of communication 'text speak' may have given male students an outlet for their feelings at a time when 67% of young feel they have nowhere to turn for emotional help (Biddulph 2007:25). This is extremely significant when considering male students are more likely to feel affected by pressures regarding their masculinity and not wanting to look weak by asking for help. With total text anonymity they can be weak, submissive and emotional in their online communication (Stuhlmacher et al 2007:331). Such engagement and dialogue suggests that chat was providing pastoral support (Haddon et al 2005:6) as by accessing the system students were looking for it. Anonymous chat eliminates direct pressure to conform to stereotyping for example females needing to flirt or use their gender to communicate (Herring & Panyametheekul 2003).

The level of study of students had a significant impact on their access and responses. Level 1 students were more likely (as a % of their peer group) than any other level of student to access chat and most likely to add chat that would be termed as off-task. Aviram (2006) suggests that students accessing IT systems need to become digitally literate and in doing so become more aware of the impact of their own feelings and those of others. From the research data it is apparent that level 1 students found following the 'thread' of a discussion more challenging than others. Therefore it is likely that they may benefit from additional support to use the system and make enlightened decisions about their behaviour and contributions in the digital world. Joining a chat session but not necessarily being able to follow it suggested that students were joining the chat for reasons other than for the specific topic that was available. The results show that in some cases it was likely because they were lonely or sought the companionship and sense of belonging was provided within it (Morahan-Martin & Schumacher 2003:661). This was evident because many students who were accessing the system found offline relationships more difficult or challenging. This was a particularly important finding of this research and was possible due to the dual nature of the role of the moderator.

6.3.5 Types of emotional support

Emotional support is divided into three key areas; expressing their own feelings, appreciating the feelings of others and help (asked for or offered). Students chatting were more likely to be aware of their own feelings as they typed and read comments being

made. Typing is just as valid a method of communicating as any other (Sharp et al 2004:464) and the chat results show feeling words were used. However, exploring feelings online may have negative consequences due to students saying things they would not normally say in a face to face situation (deindividuation theory) and therefore, being more likely to write insulting or inappropriate messages Dietz-Uhler & Bishop-Clark 2002:27). Evidence (Bocij & McFarlane 2003:31) has been found in public chat rooms that anonymity can lead to 'emotional detachment' and therefore, may lead to higher levels of negative comments.

The chat seemed to empower students to vent their frustrations, explore and experiment with their feelings in a supportive environment which mirrors the work of Suler (1998). The acting out and exploring of pastoral issues varied according to the session audience and the interaction of the user with that audience. Comments were either directed to specific individuals and therefore, one-to-one chat takes place in the middle of the session or comments are made in a more generalized nature for everyone in the room and therefore, asking for all participants to respond. This directly supports the findings of Islam (2006:78). Seeing comments in text offers an opportunity for students to become visually aware of their own feelings and also be able to reflect on them afterwards. There was little evidence of students showing detachment from their feelings but there was evidence that students were 'lurking' and therefore, seeking support by watching what was happening even though they were not being active themselves.

Students were able to make suggestions and then reflect on why they chose to make these in the first place or consider the reaction that they received as a result. For example, a male student who wrote he was gay and then went on to reveal that he was not really gay but just wanted to say it because he could (7 March) may be considering whether or not he is gay, whether or not he is likely to be gay and the potential reaction of others if he were to say he was gay. Finally it may be a lie to attract attention. Chat offered him the freedom to express himself (Grohol 1998:127). Giving students time and space to have virtual experiences enhances personal development and knowledge (Larrain et al 2007:93). Other scenarios in the results showed students experimenting with portrayals of the opposite gender, taking drugs, being pregnant or being attacked. It may also be the case that as topics were being provided that students may have wanted to add the most 'challenging story' in order to feel they belonged. This may also link back to how they feel about themselves in the offline environment and if they feel they want to have an 'altered self' online (Morahan-Martin & Schumacher 2003:668). Experimenting with different scenarios and different forms of personification is also seen to be part of adolescence (Larrain et al 2007:92) and by providing an opportunity for such

experimentation to take place online gives a safe avenue to do so. This is also why it was important to have a moderator present during sessions as participants were more likely to be vulnerable and consequently needed monitoring to ensure that they were not hurt or damaged by accessing chat. Having the moderator shown very clearly as distinct from the rest of the participants was also important as it ensured that everyone knew a moderator was present and therefore, support was available (Hay 2003).

The results also show that chat was able to supply empathetic support (Lewis 2006:5) through the appreciation of the feelings of others. The expression of feelings is more intense in chat sessions as everything is put into text and must be written and then read by others. It is also more intense because all other distractions, such as body language, cannot get in the way unlike offline communication (Chester & Gwynne 1998). The feelings of empathy and sympathy are also evident amongst those with similar shared experiences (Preece 1999:74) and this was apparent in the results due to the bounded nature of the chat system. Lagging gave time for some reflection and therefore, the potential for logical/emotional thinking to take place (Suler 2004:45). The transcripts revealed that there was evidence of 'cyber one-up-man-ship' (Adamse & Motta 2000:30) when students made their stories even more fantastic than others to attract the group to take their feelings into consideration. A young female student wrote about her experiences of finding herself pregnant and wanted to have her feelings appreciated by the rest of the group. A male student also 'pretended he was female and pregnant'. Both of these participants were seeking a reaction either positively or negatively from the rest of the group and therefore, demonstrates that they were aware of the feelings of others from a negative or positive perspective. There was less non-application and more empathy shown in sessions with fewer participants (Clouder et al 2004:475).

The results show that support of a practical pastoral nature was possible between students (Salovey & Sluyter 1997:121). There was evidence that over time the level of non-application reduced as students asked for and offered more help (Hay 2003). Such help was a move towards a higher level of peer support by offering a system that allowed students to ask for help and offer it spontaneously (Cowie & Wallace 2000:9). Encouraging students to use each other as part of their own support mechanisms in the college was possible through the chat system and offered a unique opportunity to provide pastoral support in an anonymous way.

6.3.6 Summary

This analysis of the pastoral support aspects identifies key issues that include the self-selecting nature of students accessing support and their sense of online community drawn from being people, having a shared purpose and policies (including rules and protocols) and access through a computer system. This mirrors commentary made by Preece (2000:10). The impact of choice of topics, number of lurkers and the gender of participants affected the emotional support accessed. There was also evidence of scenario role-playing that is only possible in an online environment. Different levels of digital literacy appeared to affect the types of emotional response including the demonstration of a student's own feelings, appreciating the feelings of others and help.

6.4 Organisation

The results show that the organisation was affected by chat through access to data and child protection issues, investment in training and resources, IT acceptable use and pastoral support programmes.

6.4.1 Access to data and child protection issues

The results show that college policy needs to clearly outline the way in which information from chat sessions is used and the level of trust that students are able to put into it. As the chat system was providing pastoral support there was a high level of trust by students and therefore it was important to ensure that they knew when information was likely to be passed on and on what basis (Marx 1998:17). The issue of disinhibited behaviour has policy implications as the results show there was an increase in student contributions that were not truthful or exaggerated issues as students may have felt less accountable for their behaviour (Dietz-Uhler & Bishop-Clark 2002:30). It is suggested that as much of chat communication is negotiable and self-selecting it may be difficult to establish the boundary between legitimate and illegitimate identity experimentation (Chester & Gwynne 1998). Thus having a clear policy including boundaries and rules can help reduce any potential for conflict. However, there is still tension between the need to provide clear rules for behaviour and the desire for students to act out different scenarios that might have implications for child protection. The results show this tension is difficult to manage and therefore needs very careful consideration.

6.4.2 Investment in training and resources

One of the biggest issues for chat highlighted in the results is the level of support for chat and clarification of college expectations for its use. Chat needs time for development and moderation and financial resources to build the IT infrastructure. The results show that moderation was difficult and time-consuming and therefore, time needs to be allowed and an appropriate person appointed (Preece 2000:85). Investment in new technology is a priority area for the government as part of the technology strategy for FE skills and regeneration (Becta 2008) and in particular for the 'digitally excluded'. Therefore colleges need to consider such investment in their planning.

6.4.3 IT Acceptable Use

Debate needs to take place regarding the extent to which freedom of expression can take place in bounded chat systems and how lying and disinhibited behaviour is to be dealt with. The results show college policy needs to support students empowering themselves to take charge of their needs rather than having support being 'done to them' (Simovska & Jensen 2007:3).

Using chat to support problem solving is one method of working towards 'ACTION', part of the model proposed by Simovska & Jensen (ibid). My construct therefore, is that online chat systems can provide opportunities for action in an anonymous way that would otherwise not be possible and in doing so offer opportunities for higher levels of self management. College policy making needs to support this model of action rather than the more traditional approaches of students being influenced to do something. Figure 27 demonstrates how Simovska & Jensen's model (ibid) can be applied to the chat situation and that chat offers a unique opportunity for self-referred anonymous problem solving support that is not otherwise available. Thus offering a complementary support service.

The online chat system applied to the four-sectioned model
defining the concept of action (Simovska & Jensen 2007:3)

	Directed by others to access support (Open)	Self-management of support (Anonymous)
Teacher/student pastoral support	Offline one to one meeting with pastoral support team arranged by a member of staff	Not possible with anonymity
Specific topic focus with peer problem solving	Offline group support session with peer discussion and problem solving	Bounded chat system for pastoral support ACTION

Figure 27 Action can be achieved through a topic focus with peer problem solving in an anonymous and self-managed way.

The results show that colleges using chat should consider the use of text speak language and perceived shift in power status between student and teacher. In chat, students communicate on a more equal basis or in some instances at a higher level than teaching staff due to their technical expertise. Some managers and teaching staff may feel anxious about this and therefore, feel uneasy about feelings that their authority has been reduced (Simovska & Jensen 2007:11). The results show that having clear policy information about the use of text language is important as it shows the extent to which managers and teaching staff support its use. Permitting students to use text language in the system is more likely to encourage them to use it for themselves and ask for help therefore leading to action.

6.4.4 Pastoral support programmes.

The results show that elements of public chat rooms are brought into the bounded chat environment and it is possible that students are communicating in a disinhibited way when accessing chat rooms from home. By providing chat in college, it should help teach students to cope within online environments and understand how to work in this way (Anderson & Simpson 2007). This is particularly important due to the success and popularity of social networking sites such as Facebook, Myspace and Bebo (Cicognani 1998:17). It also provides an opportunity to make chat part of college pastoral support provision by offering it as an additional self-servicing tool that students can use. The results show that the most popular topics were those that have implications for college support such as bullying and boyfriend/girlfriend relationships. The results show that the topics chosen should link with wider pastoral support that is given to students to help support them through their studies and beyond. By offering chat in this way, expectations about chat language and rituals may lead to good online sociability and community governance (Preece 2001:349).

6.5 Summary of key findings

The key findings draw the four key concepts together (technology, pedagogy, pastoral and organisation) that have been used throughout this study. The section begins with a consideration of the areas that have been drawn from the study that are most significant to me as the researcher. It then goes on to consider those areas that are most significant for the college. Finally the significant findings that contribute to the understanding of the impact of chat are given.

The most significant constructs for me, as the researcher, relate to the behaviour of students within 'bounded' chat sessions. These include the difference in power status and communication between staff and students. Throughout the study, students were aware that a moderator was present and yet the behaviour and contributions added during sessions were very similar to those expected in public chat rooms. Such examples included the use of experimentation with online gender, the type of communication with the moderator and the potential for disinhibitive behaviour. Conventions that are common in public chat rooms including the use of emoticons and 'text speak' were seamlessly introduced into the bounded environment.

The study shows that chat in such environments can provide an opportunity for safe experimentation and represents an opportunity for schools and colleges to be able to use 'safe bounded environments' to actually educate students in the use of chat technology.

The study also enhances understanding of behaviour within chat rooms that are anonymous as it demonstrates that there is a spectrum of truth for communicating online rather than a dichotomy between truth and lie. The construct linking boundedness and consciousness was drawn from the results and revealed that there was a spectrum of participants within a bounded environment from 'known stranger' to 'pre-planned friend'. These findings add to the body of knowledge about participant consciousness in anonymous environments.

The findings show that gender and level of study can affect participation rates, including male students being more likely than females to 'lurk'. The findings show that chat can provide an opportunity for students to experiment with their feelings without fear of rejection or embarrassment. This includes 'acting out' fantasy situations or issues. It also offers the opportunity to feel empathy from others although there needs to be acknowledgement of 'cyber one-upmanship' (Adamse & Motta 2000:30).

It was found that there was a relationship between the moderator and the students that would not be seen in 'public chat rooms' due to the nature of the bounded environment. This is because although the students did not know the identity of the moderator they did have expectations about the level to which they were being 'looked after' in college. Their level of trust in the system was consequently likely to be higher than a system outside of the college. A further finding that is significant was the perception of students about the gender of the researcher. As a female researcher the supposition that the moderator was male made me question my writing style in chat, the stereotypical imagery of the role of a moderator and the impact of gender and level of study on participation rates. As the gender of the moderator was not given to students, the study shows that there is the potential to have 'gender-free virtual support' as the gender of the moderator is able to change in the mind of the student receiving support according to their needs.

Participation rates amongst student groups were of significant interest. This is because students were self-selecting and could participate actively or 'lurk'. Self referral for pastoral support is important as students choosing to enter a system are more likely to engage with it. It is also significant because the study shows that more young men than women were attracted to it at a time when suicide rates amongst young men are significantly higher than those of young women (Gott 2003:6). The findings show that

providing supportive chat may be able to provide a new outlet of support that can complement existing structures and that topics chosen within supportive chat can have an influence on the level of interest amongst students in the college. Applied to the four-sectioned model defining the concept of action (Simovska & Jensen 2007:3) chat is able to offer anonymous self-management with group peer-to-peer support that leads to action. Such support is not possible offline.

The findings also show that from an emotional perspective the extent to which emotions were demonstrated depended on the topic being discussed and the number of students who were lurking in the session. The findings highlighted that it was possible for some students to express their feelings in this type of environment and to offer and accept help whilst also being aware of the feelings of others. For other students exhibiting disinhibitive behaviour including lying, there was some evidence of students feeling emotionally detached as they did not consider the feelings of others and added hurtful information. The construct that there are four main student perspectives when considering role-play scenarios in chat highlights the range of potential student thinking. Managing the tension between freedom of emotional expression and control of disinhibited behaviour is challenging particularly in light of the college's child protection obligations.

From a college's perspective, student perceptions of anonymity and confidentiality are significant. This is because both may have an impact on participation rates. There was evidence in the study that students accepted the terms relating to confidentiality and anonymity 'prima facie' and therefore may not have given full consideration to the consequences of each. The study shows that it was not possible to offer total anonymity on-screen as clues to the identify of users may be given subconsciously but that in the event that this did happen learners were able to 'reinvent themselves' with a new online persona. The findings demonstrate the need for further discussion, debate and education with young people about issues relating to anonymity and confidentiality online. This is particularly important due to the growing support amongst young people for social networking sites such as Facebook and Bebo.

The findings show that clear policy making is significant for colleges in relation to chat. The study shows that time, resources and skills development are essential for supportive chat to work. Policy should also be developed to include clear boundaries for students including behaviour expectations, use of language and consequences of participation. However, the study also shows that the norms and values exhibited in chat sessions shift according to the mix of participants at a particular time and therefore student training and a flexible policy approach can help to assist good online community and sociability.

Chapter 7 Conclusions, limitations of the study and areas for further research

This chapter considers the conclusions in relation to the original research questions and limitations of the study before outlining further areas for research. It places the results and discussion of the results in the context of the overarching research question, the subordinate and underarching research questions.

The study finds that a bounded online chat room was useful as source of pastoral support in a sixth-form college. This was due to interest and participation levels amongst students who would traditionally not access pastoral support services being higher than expected . The study also highlights that bounded online chat is able to offer a unique way of offering pastoral support with the ability to convey emotions through 'text speak' and 'emoticons'. It also illustrates that the usefulness of a bounded online chat room for pastoral support will be affected by the culture and norms of the institution in which it is placed and the time and resources that are allocated to it. The conclusions, limitations and areas for further study are organised as organised as shown.

7.1 How useful are bounded online chat rooms as a source of pastoral support in a sixth-form college?

7.1.1 Participation Rates

7.1.2 What are the technical factors that assist or limit the embedding of a bounded online chat system within a sixth-form college?

7.1.3 Which pedagogical factors need to be considered when designing and implementing an online chat system for pastoral support?

7.1.4 What kind of pastoral support can a bounded online chat room provide?

7.1.5 What organisational factors influence the design and implementation of online chat systems for pastoral support? (underarching question)

7.1.6 Summary

7.2 Limitations of the study

7.3 Areas for further research

7.1 How useful are bounded online chat rooms as a source of pastoral support in a sixth-form college?

This study has analysed access and participation rates of students and considered the concepts of technology, pedagogy, pastoral and organisational through the design, implementation and analysis of results. Important aspects of the usefulness of bounded online chat rooms include the students' participation rate, the technical factors that assist or limit implementation, pedagogical factors influencing the design of the experience and the elements of pastoral support that can be offered. Through considering these aspects the underarching organisational influences can be identified.

7.1.1 Participation Rates

The study shows that there are key influencing factors affecting the extent to which students participate and their level of interest. Gender and the level of study of the students have the biggest impact as shown in Figure 28. This supports research that shows that boys have a greater affinity for computers (Colley 2003:674) and access it from a background where accessing support has been traditionally seen as a sign of weakness (Biddulph 2007:25). Being aware of the influence of gender and level gives bounded environments like sixth-form colleges, an opportunity to encourage support through this method and tailor topics and foci accordingly. The timing of the sessions also has an impact on participation rates and the type of students accessing it.

The study shows that student expectations of access are likely to be higher than the provision that can be offered and this needs careful management. It also shows the level of potential interest in systems like chat and the need for support systems to be innovative so that students engage with them. Chat is becoming an increasingly popular method of communication for young people. It allows students to gain access to others with similar issues to themselves particularly within a bounded environment consisting of a large population of 16-19 year old students. Technology is changing the way that young people behave and interact with others (Meyrowitz 1985:9; Werry 1996:59). There has been a trend towards the use of social networking sites that allow students to communicate their feelings, plans and ideas in text form. Young children have also been found to be more willing to discuss problems online than they would do with an adult in authority (Harasim et al 1995:65). All of these influences are affecting the extent to which young people are likely to participate in chat.

The factors influencing student access and participation rates

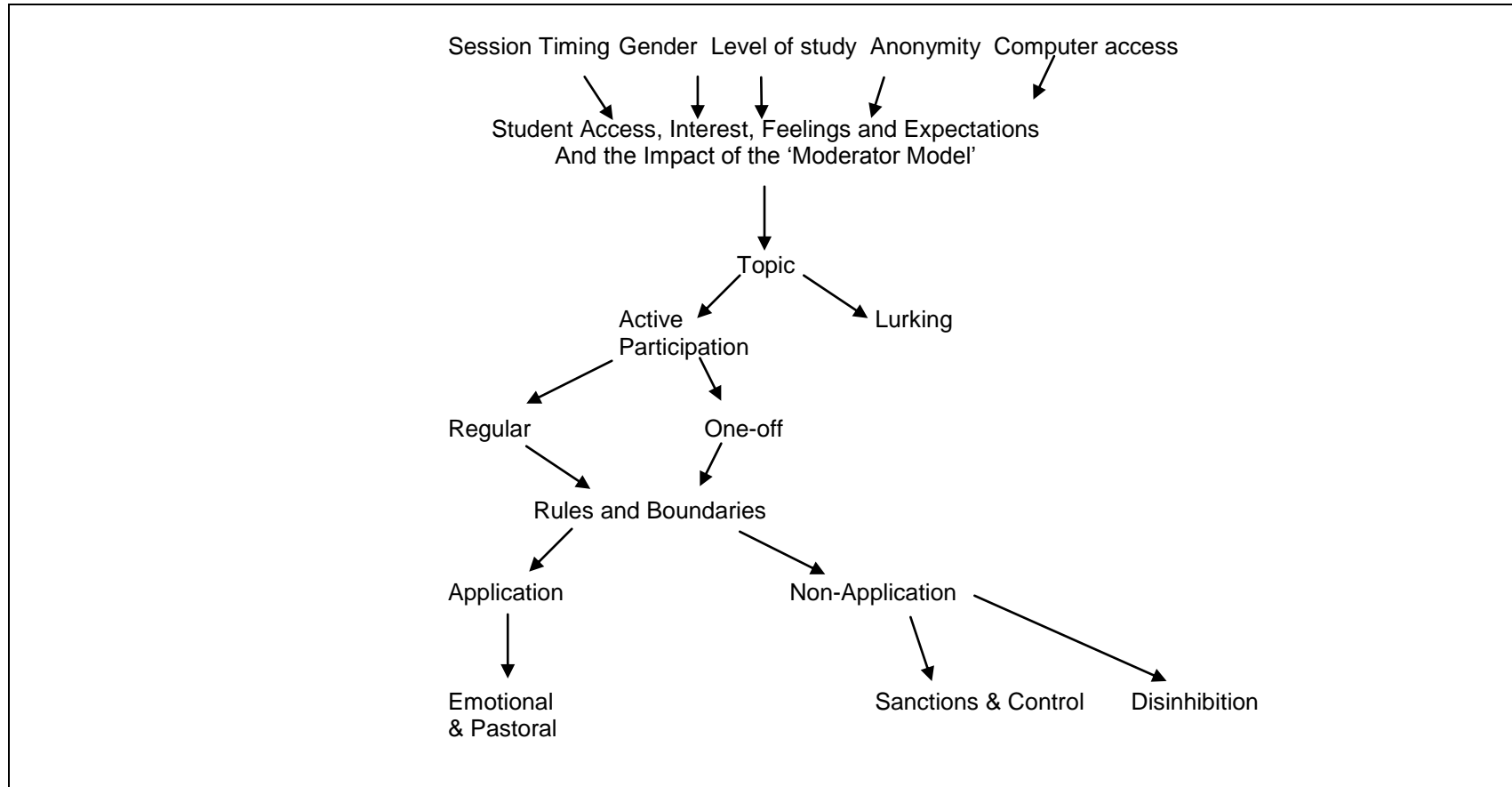


Figure 28 Diagram showing the significance of factors and their associated outcomes on student access and levels of participation.

7.1.2 What are the technical factors that assist or limit the embedding of a bounded online chat system within a sixth-form college?

This study identifies that the most significant factors that assisted or limited the embedding of this bounded chat system were anonymity, confidentiality and hosting. Each factor had a significant impact on the way that the system was used.

Complete anonymity in a bounded sixth-form chat environment was not possible due to child protection obligations and the requirement that student identification details were linked to the system. This was as a result of the college's duty of care to prevent students being harmed or harming themselves. This significantly affected the design and speed of the system. It is questionable whether true anonymity can ever be offered online as any data added to a system always has the potential to be tracked at a later date and linked to a PC or user.

Confidentiality was highlighted as a significant technical factor that has the potential to assist or limit the system's use. This was because the participants in this study only accepted confidentiality on a prima facie level. The results appear to show that participants did not consider what was going to happen to their chat contributions and had the belief that information could not be repeated or passed on without their permission. There are significant implications for chat systems and online websites using chat (including social networking sites such as Facebook) of these findings. The results highlight that users of chat systems may not have considered what is happening to their data and may not have thought through the consequences. Further evidence of this phenomenon was provided in February 2009 when sixteen year old Kimberley Swann was sacked from her job for her comments about her employer on Facebook (BBC Online 09).

The final significant factor drawn from the study is the technical impact of hosting and participant consciousness. Hosting in a bounded environment enabled the college to monitor and track all contributions in the sessions and excluded any outsiders from taking part without the college's permission. It highlighted the new construct of bounded consciousness and the different levels that are possible in a bounded environment. This spectrum has added to the field of knowledge in this area and is significant for this study.

7.1.3 Which pedagogical factors need to be considered when designing and implementing an online chat system for pastoral support?

From a pedagogical perspective the significant factors that need to be taken into account when designing and implementing a system are influences on the moderator, communication, identification and non-application. The most significant research findings relate to the impact of the moderator and are shown in Figure 29 'The Moderator Model'. The moderator's influence was significant from a pedagogical perspective but was also felt in all aspects of the study. The role of the moderator reinforced the spirit of community, emotional safety and sense of belonging (McMillan 1996:318). The moderator in this bounded system was a teacher and students were aware of this but could not be certain due to the on-screen anonymity. The study shows that it may be possible for an anonymous moderator to be a member of the support staff or student if appropriately trained as long as the role maintains its authoritarian perception so that control can be maintained.

The study shows that the skills set required for a moderator is a significant influencing factor when choosing an appropriate moderator for an online chat system. Even within teaching staff it is difficult to find people who have the skills necessary to cover all the elements needed (see Figure 26) particularly when few teachers have experience of communicating in chat. Only 5% of teaching staff in HE in Louisiana, US had even used chat (Guillot 2003:56) and there have been concerns about its use and control in the classroom (Learning Hubs Survey 2007). A person choosing to be a moderator is likely to be self-selecting in the same way that chat students are self-selecting. This is because learning so many skills and working in this way can be stressful and without a commitment to this method of working unlikely to be adopted (Clarke 2004:52). Therefore, sourcing a moderator to run a chat is a critical pedagogical factor for success.

The type of communication and roles that need to be portrayed by the moderator are varied and therefore, they must be able to deal with different roles in sessions such as leader or helper and also be able to understand 'text speak' to communicate effectively. The study shows that the technical level of skill and language used by students may be higher than that of the moderator if they are a member of staff. This means that their perceived level of power over students may be reduced. The moderator and the college as a whole need to be happy with this change in power as perceived level of control influences the extent to which students conform to the rules and boundaries established by the chat. The study also shows that conventions within public chat rooms will be brought into a bounded chat environment including the use of 'text speak' and emoticons.

The Moderator Model

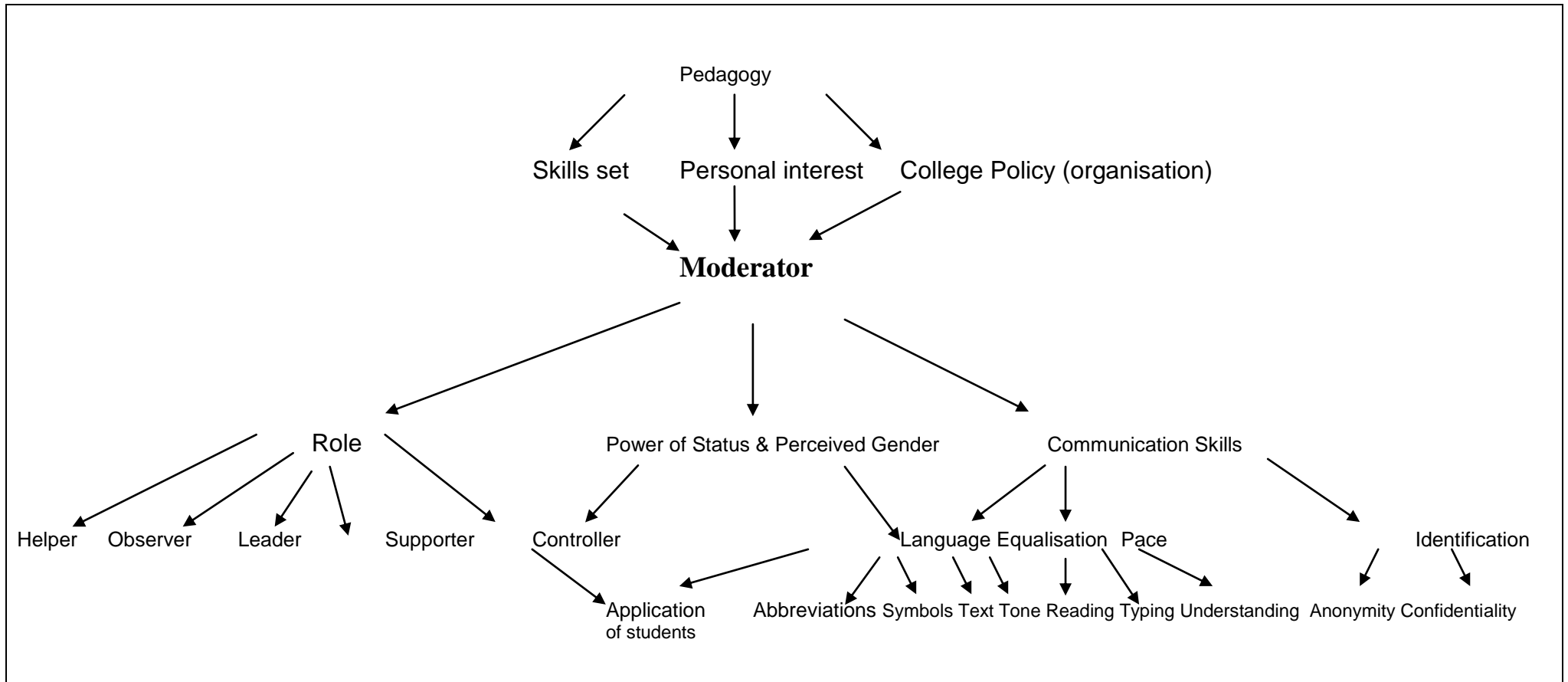


Figure 29 The moderator model highlights the importance of role, status, gender and communication skills on chat for pastoral support

The presence of a moderator in this study supported students to feel they were able to effectively contribute or that inappropriate behaviour would be challenged. Perceptions of the moderator are critical and therefore, maintaining the anonymity of the moderator is important to ensure that there is no tension between their off and online roles if this is applicable.

The students' perceptions of the gender of the moderator was also a significant finding. This should be considered when designing and implementing a chat system because perceptions of gender may have an impact on participation rates. Traditional offline support does not usually attract high numbers of male students as they find services more difficult to approach (NSPCC 2004:3) but participation rates in the chat support system were in direct contrast and this may be as a result of the perception that the moderator is male. It may also demonstrate that male students are more attracted to such systems and therefore, legitimises support for its use for alternative pastoral provision.

7.1.4 What kind of pastoral support can a bounded online chat room provide?

This study shows that pastoral support can be offered within a bounded environment and that peer to peer (horizontal) problem solving can take place. Horizontal communication is significant for this study as it is easily offered and accepted online without question by participants. In a face to face situation this may not easily be possible and in fact impossible if anonymity is desired. Pastoral support in this study was seen to be social, emotional and practical in the form of support and questions as well as role-play and the consideration of scenarios.

The study shows that gender swapping and role-playing take place in supportive chat. This gives a unique opportunity to extend the type of support offered and to allow both real and theoretical support to be given. The study highlights the tension between allowing students to experiment with pastoral scenarios and the child protection obligations of the institution. It also highlights different perspectives that are applied by students to scenarios and the difficulty of gauging reality as the lines between the virtual and real world become blurred.

Measurement of emotional support was complex due to the use of 'text speak'. The study indicates that as symbols and terminology are rapidly developing to express emotions it is becoming more challenging to measure the type of emotional support offered in existing systems of measurement such as Faupel's feeling words. The study shows emotional support may be conveyed in text through the use of new symbols e.g. emoticons and that young people are able to convey emotions in this way. It also shows that essential elements of what is termed pastoral support are shown in the system as students refer to their own feelings, appreciate the feelings of others, ask for help and offer it.

The study shows that male students are more likely to access support in chat but are also more likely than females to 'lurk' and therefore, have the potential to vicariously share information. There is a small but significant link between the level of 'lurking' and the extent to which pastoral support is evident. This suggests that 'lurkers' may reduce how comfortable students feel in sessions and therefore the usefulness of the support. The moderator being referred to as 'he' may also influence the extent to which male students see the system as being relevant to them but this is an area that requires further investigation.

There is a link between the level of participant, the extent to which they are interested in a tool for these purposes and how much they participate. The study shows that the higher the level of student the less likely they are to take part in the study but the more likely they are to be on-task or 'lurking'. This means that level 3 students may be more conscious of the implications or only choose to participate if they are really interested in a particular topic. Level 1 students, although participating the most as a percentage of their peer group, are more likely to join to 'belong' rather than participate actively in the discussion. This is demonstrated through 'non-application contributions' that are higher than any other group

The topics themselves influence the extent to which pastoral support can take place. Initially starting without a focus revealed that students wanted a topic of interest that they could use to start discussion. The choice of topic influences the extent to which students participate and those topics that would seem to be a high priority for support on a prima facie level e.g. drugs and alcohol may not be the most appropriate topics to consider.

The study shows that participants will make use of chat according to their own needs such as the topic is relevant to them or the need to be part of a 'community' (a regular user). Both types of access help to provide pastoral support. The study shows it is essential for rules and boundaries to be clearly defined from the start of the chat so that all participants are clear. The study reveals issues regarding the extent to which anonymity in the full sense of the word can ever be really given due to the potential for communicating information about oneself through text or nicknames. What is essential within this environment is the feeling that students can add their contributions in 'relative anonymity' and therefore, feel safe to share experiences as they wish. The key factors that are drawn from the study relating to pastoral support are shown in Figure 30.

The factors affecting the kind of pastoral support that a bounded online chat room can provide



Figure 30 Seven key factors influence the delivery and type of pastoral support provided

7.1.5 What organisational factors influence the design and implementation of online chat systems for pastoral support?

The underarching question 'What organisational factors influence the design and implementation of online chat systems for pastoral support?' examines issues that affect implementation in colleges. From an organisational perspective, factors that influence the design and implementation include, access to data protection and child protection issues, investment in training and resources, IT acceptable use and pastoral support programmes. Many of these factors involve the development of policies and therefore, policy making is important for the success of a supportive chat system in a bounded environment.

This underarching question identifies that there is a need to have clear expectations for how students should behave in the chat, what happens to their information, the language that is used and consequences of their contributions. Such policy making should be used to reinforce the bounded nature of the system and that expectations of a college chat are different to those of public forums. These areas should inform and be drawn from college policy for the use of chat. Figure 31 shows the way that policy making both drives and is influenced by factors in the college. The research provides some understanding about the transition of public chat room behaviours into bounded systems including the propensity towards disinhibitive behaviour by some students.

Making sure that all aspects of policy making work together is important for the success of a chat system in a bounded environment. This is because the system may reveal child protection issues that are affecting students that will need support through other mechanisms such as counselling or tutorial support. The research provides evidence that the self-selecting nature of chat can obscure the boundaries between legitimate and illegitimate identity experimentation. The study highlights the tension between student experimentation including the ability to lie and the duty of care to protect and report abuse. Such tensions need to be debated and discussed before system implementation to avoid any issues.

This study highlights that chat is most effectively embedded when the topics chosen for discussion are supported and embedded within a pastoral support programme. Part of the uniqueness of this study came from bounded anonymity and the fact that young people could self-manage and receive peer-to-peer support without identification that is likely to lead to 'action' (Simovska & Jensen 2007:3).

The attitude of managers and teaching staff towards chat is influenced by college policy. Having a clear policy will impact on resources including time and technical expertise that are allocated for chat. Without support from college management it is unlikely that any form of chat can effectively be established and it is even more difficult for pastoral support chat due to the sensitive nature of the topics involved. The attitudes of teachers and management towards chat are likely to have the biggest negative impact on chat as student interest in using chat is clearly shown in this study. Managing the expectations of all parties is a challenge that needs to be met.

Factors driving and influencing college policy

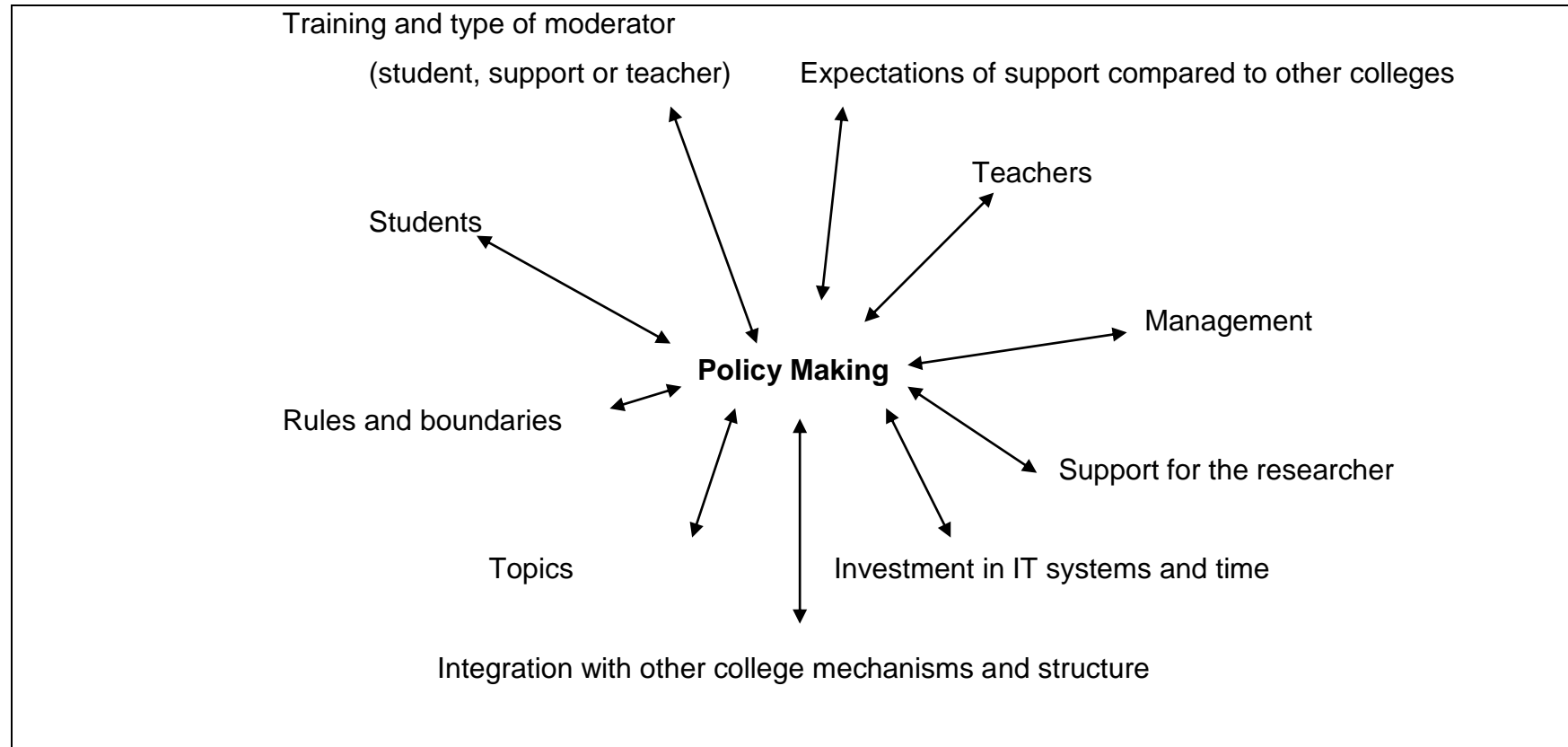
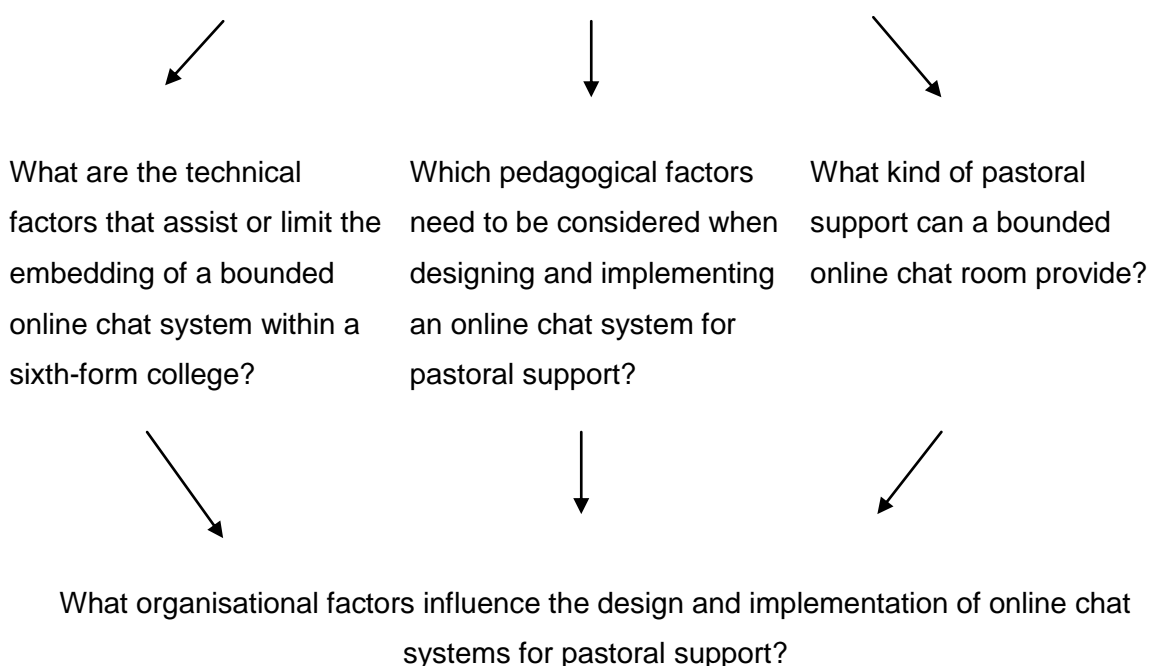


Figure 31 The influences and impact of college policies on technology-based support systems

7.1.6 Summary

This study has considered the overarching research question ‘How useful are bounded chat rooms as a source of pastoral support in a sixth-form college?’ In answering the question the study has focussed on three subordinate and an underarching question that have identified a framework detailing four conceptual areas; technology, pedagogy, pastoral and organisation.

How useful are bounded chat rooms as a source of pastoral support in a sixth-form college?



The research questions were chosen as they were derived from the conceptual framework built at the start of the research. Technology has a significant impact on the way that chat support is delivered and the impact on its usefulness. Therefore understanding the technical factors was important as part of implementation. Researching pedagogy and the pedagogical factors influencing the design and implementation of an online chat system was an important research area as it provided evidence of how pastoral chat could be delivered and was able to draw research findings from public chat system delivery into the bounded context. The research question considering the concept of pastoral was able to fully investigate the support that may be possible from a pastoral perspective and in doing so was able to consider the wider context of chat systems including pastoral support for community and online relationships. The final underarching research question brought all of those research areas together by providing an underarching view of the results of the research questions into guidance for organisational policy and practice.

The usefulness of bounded chat rooms can be measured through participation rates and interest. This study shows that students are interested in accessing bounded chat rooms. Male students and those studying at lower levels accessed supportive chat in greater numbers than would have been expected. Particularly when compared to their access to offline support which has been traditionally low. This indicates that chat is offering them a support service of interest that they may not otherwise access. An effective system is one that receives a high number of repeat visitors as this suggests that participants find it useful. There were a significant number of repeat visitors therefore highlighting that students must have found it useful in some way. It has also been suggested (Salmon 2000:46), that it is the rapidity of exchange and element of fun that makes chat attractive. This research also highlights that the choice of topic and other participants also affects the extent to which it could be termed useful particularly with regard to lurking behaviour. The study highlights that different users will have different needs and expectations about what they want from chat, how often they want to access it and the type of scenarios that they experiment with during sessions. Such experimentation is a key part of adolescence (Larrain et al 2007:92) and chat can support it in a safe and controlled way.

The study highlights the unique communication, through 'text speak' that chat is able to offer and the ability to have support in a 'gender-free way'. The study shows that students thought the moderator was male even though I am female and therefore chat has the potential to offer tailored support through the interpretation in students' own minds and their subjective thoughts and reality (Ma 1996:176).

From a support perspective, the study has shown that chat may be a mechanism able to support lonely students. It has shown that lonely students were attracted to it. The study also illustrates that bounded chat rooms are also useful for the purposes of educating students about their behaviour in public chat rooms. This is because elements of the risk taking behaviour such as gender swapping and inappropriate behaviour have been shown to take place in this more controlled bounded environment. Working with young people to help them be aware of the dangers as well as benefits of chat rooms in a supportive environment is a useful way to educate them.

The topics identified by Owen-Yeates (2005:43), supplemented with additional topics from my knowledge of pastoral support, have had an important influence on the usefulness of chat. Providing topics that can be accessed by students was found to be the most effective and useful way of providing more focussed chat discussion. Ideally

these topics should also be embedded within the pastoral support programme so that chat is an alternative and equal supportive mechanism on offer for students.

Finally the study highlights the significant amount of time and resources that are needed to embed a bounded chat system in a sixth-form college and in this particular case the anonymous nature of the system required significant investment. The usefulness of any system will depend on the infrastructure and development costs that are available and this certainly applies to chat from systems and time perspectives.

7.2 Limitations of the study

This section identifies the limitations of this research that became apparent during the study. They are divided into three main categories relating to anonymity, the college itself and technical issues.

The study is limited through affordances related to anonymity. This is because although data has been collected about the students taking part including their courses, level and gender these transcripts are analysed on a *prima facie* level. This means that it is not possible to go back and question participants about what they specifically meant in their communications or what they were feeling at particular points as it would effectively identify those students involved and therefore, was seen to be unethical. The interpretation of the transcripts has been done by me as researcher and 'insider practitioner'. Therefore, the interpretation is limited by my subjective judgement about what is happening. The observation diary was used to help support judgements about what was happening during and after chat sessions but again it was my interpretation of events that was noted.

The chat system was used in one sixth-form college as a method of pastoral support. As the system, topics and timings were adapted to the needs and wants of that institution the results may not represent what might happen in other sixth-form colleges, post-16 providers or schools. The culture of the institution that was used for the study was very open and supportive of experimentation. In institutions with different norms and values the results may be very different. The study was also influenced by the reaction of the cohort of students to chat at that particular time. As chat becomes even more integrated into the social lives of young people it is likely that reactions to it and its use for support will be transformed and this may attract or restrict the extent to which students adopt it.

The study shows that technical issues have a huge impact on the extent to which chat can be integrated and then accessed by students for support purposes. The study was limited by the technical expertise available during development and implementation. Technical restrictions during the design and build stages of chat impacted on the way chat was delivered and was able to support students. These restrictions may have affected the results and adoption of chat within the institution.

7.3 Areas for further research

This research has enhanced and developed my understanding of the use of bounded chat rooms and their usefulness in a sixth-form college. It has continued to encourage my reasoning that chat has the potential to offer new opportunities and thinking within the educational environment and that its further introduction is useful and possible with careful management.

During the period of my case study research there has been a significant amount of negative media interest in chat and a perception of a lack of control and boundaries. My results and the media interest indicate that chat needs further investigation in the educational environment to educate teachers, parents and students themselves about its appropriate and inappropriate use. Since the start of my research, I still fundamentally believe the phrase 'Chat – control it don't ban it!' As more and more young people engage with it, chat should be developed for legitimate reasons such as pastoral support so that the fun and attractiveness that it has for young people can be fostered usefully.

Constructs have been drawn from this case that could be tested on other cases. These include the construct of bounded participant consciousness to confirm that there is a spectrum of participation and that the 'known stranger' is perceived in all bounded chat systems. A further construct that could be tested is that of participation rates being higher amongst male and lower level learners including different patterns of lurking behaviour. If this study was to be carried out in another college participation rates should mirror those seen in this sixth-form college. The supposition that the moderator was male was a further significant finding from the study that could be tested in future cases. The significant impact and roles of the moderator may be tested in other colleges to ascertain whether the role of the moderator is affected by differing levels of students in terms of their gender and ability. Finally, the reaction to different topics in different institutions may be tested to see if the norms and values at one institution may be compared with those at another. Even amongst sixth-form colleges on the South Coast, there is a huge variation in the type of students who study there including their numbers, levels, needs and expectations.

During the analysis and discussion of results there have been a number of research questions that have emerged and require further investigation and these are outlined.

What impact does the gender of the moderator have on the participation rates and behaviour of young people in a bounded online chat system providing emotional and pastoral support?

The research shows a direct contrast in the participation levels of male students compared to female students. This may be as a result of perceptions about the moderator's gender as many students believed that the moderator was a man even though this was not the case. It is usual in offline provision for male students to be less likely to access traditional support services so further investigation into why male students are attracted to online support services and the impact of anonymity on their decisions to access such support online is a developing question.

How can new tools be developed to more effectively measure evolving and developing 'text speak' in order to fully understand and support the meaning of online words and phrases?

The study shows that the development of 'text speak' within chat rooms impacts on the extent to which pastoral support can be measured. Feeling words that have been commonly used to measure emotions are evolving and therefore, the development of further understanding of how emotions are communicated in chat rooms including the use of emoticons for this purpose is required.

What is the impact of 'lurking' within a bounded system, why do students want to 'lurk' and what do they gain from it?

Within the public domain it is relatively common for 'lurking' to take place as participants have no knowledge about the other participants who could be drawn from any country in the world and be, in many instances, from a wide age range. This phenomenon is still shown within a bounded chat environment and therefore, understanding more about 'lurking', its usefulness to participants and impact is an area that needs to be understood more fully.

How can we influence the attitudes of teachers, management, students, parents and the media towards online chat to educate and empower its use for positive purposes such as support rather than trying to limit or ban its use?

The results of the study show me that attitudes towards chat are still having a negative impact on its use and development. Unless we are able, as a society, to harness the energy, drive and empowerment that chat can have for young people in a positive way, it will always be seen as something to be afraid of or resist even though we know it has the potential for positive self-referral for young people. Researching how it is possible to influence the attitudes of key stakeholders is a significant developing question.

What impact does the culture of the institution have on the willingness of students to participate in a bounded online chat environment?

This developing question seeks to consider whether the institution itself impacts on the use of chat including the need for specific rules and boundaries. This study looked at one sixth-form college environment. Within post-16 there are possibilities for its use within further education colleges or pre-16 within schools. There is a need to understand how students within these environments would engage with it and feel supported by it.

Is it possible to work out the gender and details about a participant through user name alone and what would the effect of using nicknames be on a bounded online chat system?

This developing question is important as it considers the anonymity that a 'bounded' chat might be able to offer if nicknames of choice were to be introduced and the extent to which they would the ability of students to remain anonymous on-screen.

The questions that have evolved from the research process are significant for further research. They drive me to want to understand chat more fully, particularly within bounded environments. Through carrying out this research, I fundamentally believe that chat offers many opportunities that need to be fully investigated and that the findings of this research show that there is potential within education to be innovative and supportive in new and challenging ways.

Attitudes of teachers, management, students, parents and the media will only begin to change when there is greater understanding of the use of chat as a method of

communication within the digital age. Therefore, conducting research that provides insight and greater understanding of how chat can be used positively to support students within an environment like a sixth-form college is necessary. This is particularly important as the media continues to link chat to traumatic events. These include suicides allegedly linked to social networking sites and the threat of inappropriate access by adults to groups of young people. Linking chat in this way may encourage it to become more marginalised and therefore potentially poses a greater risk for those who do choose to communicate in this way.

Chat offers freedom and support for students to be able to 'act out' different scenarios within a safe controlled environment that is potentially gender-free. It offers the opportunity to consider pastoral support in a different way that may not be possible otherwise. Greater autonomy stays with the student as they choose when, how and if they access the support. Whilst accessing support they can choose who they want to be, the extent to which they want to share issues with others or offer support.

Students in sixth-form colleges today were not even born when IRC developed in Finland and have not known what it is like to grow up, in most instances, without the Internet. Therefore they are developing ways of communicating and feeling supported in their lives that may not be viewed as 'traditional methods'. Like other communication devices that have been invented and widely introduced into modern society the impact of chat needs further investigation. I have been able to see through this research that there is demand amongst young people in college to be supported using methods that they feel are relevant to them rather than those that have been handed down from generation to generation. The telephone and television have fundamentally changed the way that humans live and I believe that chat has the potential to change the way that support is given in a 'live' and exciting way. It is essential, however, that the energy and excitement that chat creates is used productively and in a way that enhances student support.

This research has reminded me of some of the prejudices that chat has to overcome to become an accepted mainstream form of supportive communication within a sixth-form college. I believe that in the right context and within an appropriate framework, chat can offer a unique and beneficial form of support that can respond to the changing needs of young people in the digital age.

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March 2009

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Appendix 1 Defining terms in the chat context

There are several key terms that need explanation within the context of computer mediated communication and describes its diversity and use by young people, the differences between synchronous and asynchronous including the influence of one-to-one and many-to-one relationships, the impact of social presence theory and the position of synchronous communication in relation to other CMC methods including instant messenger (IM) and email.

computer mediated communication (CMC)

CMC is the term used for any text-based communication process involving the direct use of computers for two-way interaction (Mann & Stewart, 2000:219; Inglis et al 2002:12). It is an evolving form of communication that links communities not by geographical location but by common interest (Rheingold 2000:9) and is able to break down traditional social barriers to reduce loneliness (Rheingold 2000:241). Such exchanges make use of a variety of different tools from computer-generated message boards with relative low interactivity to real time online direct communication such as text-based 'chat'. The combination of varied media and the interest of young people in CMC means that it is an expanding method of communication that is changing and shaping human interaction per se. In the United States (US) an upward trend in usage between 2002 and 2005 resulted in 87% of teenagers using the Internet, 75% of those made use of CMC through instant messaging (Lenhart et al 2005:2). In the UK Internet access between 2002 and 2006 (January to April) increased by 26% to 13.9 million households representing 57% of UK households. 20% of adult users accessed communication technologies including chat. Due to its popularity amongst young people this percentage will be higher amongst the 16-19 age group (Pollard 2006:1). These trends in online interaction demonstrate the importance of CMC access in the lives of young people in the US and UK and therefore, its importance for research purposes. CMC can be divided into two types; asynchronous and synchronous.

asynchronous communication

Asynchronous communication means that it is not dependent on real time interaction and can occur at different times independently of each of the parties (Black et al 2003:195; Inglis et al 2002:253). Examples are newsgroups, message boards or web logs where information can be 'posted' or placed within a website like a poster or message being placed on a notice board. They do not require the sender and receiver to be available at

the same time and thus can be available twenty-four hours a day for users to spend more time on decision making or research (Harasim 1993:23; Inglis et al 2002:12; Browne 2003:255). It is also possible to re-read messages at future dates for further reflection. The interception of incoming messages is common through a moderator to check suitability and validity before they are posted. Such interception gives a high degree of control. Email is also categorised as asynchronous as it allows reflection by participants before reply. The asynchronous ability to reflect on comments can be an issue as well as a benefit to users as there may be a considerable time between the sending of a message and the receiving of a reply which can be distressing for users and difficult when immediate responses are needed or deadlines met.

synchronous communication

Synchronous communication is a direct contrast to asynchronous as it is about the real time experience and requires users to contribute at the same time by being directly involved in the communication (Inglis et al 2002:124; O'Sullivan 2000:59). It takes several different forms including videoconferencing, streaming audio, instant messaging or chat rooms. Each of these allows immediate communication between participants either through vision, voice or text. The 'there and now' feeling is what makes synchronous communication attractive to users as they can receive rapid feedback and a sense of community to motivate and encourage them (Haythornthwaite 2005:16). Such rapidity has led to it being seen as attractive and fun (Salmon 2000:46). The immediacy provided within synchronous communication is making changes to the way that humans are able to socialise and is having an impact on their subjective reality (Zhao 2006:464), that is to say the way that they view the world around themselves based on information and influences that they have experienced to make sense of what is happening around them now. Such sense can also be gained through retaining the text from synchronous exchanges and reflecting upon it at a later date. This means that synchronous data can be converted into asynchronous text after the exchange. Asynchronous exchanges cannot, however, be converted into synchronous communication (O'Sullivan 2000:60). Communications within synchronous communication take three main forms; one-to-one, one-to-few and one-to-many (Lee 2000:116). This gives users the opportunity to communicate with one or more individuals depending on the type of communication.

They are able to communicate in real time with others that they already know through Instant Messaging (IM) where participants are 'invited in', or in the public domain anonymously or with others they don't know in chat rooms. The technology used for both

systems is similar but the fundamental difference between them is whether participants are known or unknown that distinguishes IM from chat.

social presence theory

All synchronous communication stems from the concept of real time interactivity but there is a wide range of media that are categorised within it and these use varying levels of sensory perception. This broad range makes diverse use of visual, auditory and text-only connections. Videoconferencing uses visual and audio connection as images are seen and conversation is heard using Internet technology and a computer screen to display the information. It is not dissimilar to meeting face to face as visual clues such as body language are accessible. Aural clues present in voice are also able to give extra information to participants when using audio streaming as they communicate in real time similar way to using the telephone. This gives users information about who they are interacting with. The theory that is associated with this notion is known as social presence theory (Short et al 1976:65-76). This theory suggests that social perceptions are more easily formed if there is higher social presence such as greater use of visual and audio channels to communicate for example seeing the person you are communicating with or hearing them (Tu 2000:28). Text has the least number of these channels and therefore, according to social presence theory it should be the most difficult medium for participants to form social perceptions. However, strong relationships and understanding have been found within chat environments (Sherman 2003:2). This suggests that as text-based communication has developed so too have the communication structures and technology that support the ability of participants to form social perceptions for example symbols and acronyms known as 'paralanguage' (Tu 2000:28) are used to convey feelings including the use of emoticons '☺' as shown to convey happiness or unhappiness '☹'. The application of social presence theory to synchronous communication including examples of such communication is given in the diagram that follows.

Although chat and instant messaging only make use of text based it attracts high numbers of users to communicate with others across time and space without being constrained by physical proximity (Zhao 2006:459). The lack of social clues within chat allows communication to take place without any influence of gender, race or social class. This results in a perception that there is less desire for comments to be censored or for individuals to conform to the expectations of the participant group (Walston & Liszt 2000:465).

[illegible]

Appendix 2 Defining emotional literacy and emotional intelligence within the context of pastoral support

Emotional literacy is defined as 'the ability to recognise, understand, handle and appropriately express emotions' and be able to intentionally make emotions work for a person through self awareness and awareness of others (Sharp 2001:1; Weisinger 1999:4; Steiner 2002). Neurological research shows that most emotional responses take place outside of human consciousness (Haddon et al 2005:6) and that such responses change our moods and energies. Helping people to appreciate different emotional states helps them to understand their own emotional responses and those of others. To facilitate this process individuals can be measured according to how they deal with, and adapt to, their own emotional competency to assess their own 'emotional knowledge base'. Thus the ability to learn and accept emotional skills is individualised.

Researchers (Steiner 1999:24; Salovey and Sluyter 1997:22; Goleman 1996:43; Lynn 2002:3; Sharp 2001:24) have used the concept of a five point model to outline the five critical core areas of study

The five point model of critical core areas for the study of emotional literacy

1 Knowing your own feelings
2 Having a sense of empathy
3 Learning to manage our emotion
4 Repairing emotional damage
5 Putting it all together (recognising the needs of others and interacting with them).

Empathy is the concept of knowing what others are feeling by feeling those emotional states vicariously and responding compassionately (Levenson et al 1992:234; Eisenberg 1986:31). A higher degree of emotional literacy gives individuals the ability to deal with emotional needs in a more satisfactory way and be better able to cope with life.

Bannister (2002:217) suggests that supporting emotional literacy can allow student to tell a story and gives them power to deal with their own emotional needs – channels such as chat may allow them to relate to different ways to communicate rather than imposing 'adult' methods of communication on them. The 'master aptitude' (Weare 2004:40) cluster of significant competences allows student to use their emotions to help plan and solve problems including the capacity to talk about difficult events that have happened to them.

Appendix 3 Three key stages of the chat interface development in detail

Three of the key stages that took place as part of the chat interface development are detailed within this Appendix. These are; User needs analysis, Factors informing the design, Management approval and first build and Adaptations and Testing. Each is examined in detail.

User needs analysis

In order to develop an appropriate system that is focussed on being student-centred rather than interface centred student semi-structured interviews were used to construct a vision of what students actually consider is important in relation to the use of chat and support in the college. These interviews informed a summary table with skeletal detail to inform the design. Student semi-structured interviews were used to prepare the design. They revealed trends in chat usage amongst the target population including such diverse things as gender swapping and email for chat.

Central themes presented included the desire for anonymity, security and different types of interaction. These discussions took into account published research promoting equality of access for example using comic sans font, the size of the font and permission for up to eight participants during a session. These discussions continued throughout the development phase at appropriate intervals.

The data set for the chat interface design was taken from the results of semi-structured interviews with twelve interviewees. Twelve was a suitable number as it represents the point at which there is some evidence of recurring themes (Anderson & Herr 1999:130-131) and to which further research would only add 'tiny bits of new information'. Using semi-structured interviews allowed themes to be covered as shown below but without restriction (Sambell et al 1997:354). It also allowed the interview to have steering towards topics that were of most interest to the research (Mann & Stewart 2000:75). Care was taken within the interviews to fully consider their interpretation and categorisation as chat for pastoral support within bounded environment was new and therefore, this makes the process more difficult (Murray & Macdonald 1997:336).

The open-ended questions used in the semi-structured interviews were categorised into eight key areas as below (see Appendix 4 for a list of the questions posed to students).

The eight key areas of semi-structured interview categorisation

1	Baseline Data
2	Understanding / perception of synchronous communication
3	Previous experience of IT and Internet Usage
4	Potential role for support (emotional and pastoral)
5	Barriers to Access
6	Enablers for Access
7	Recommendations for communication tool/design
8	Guidelines for policy making re use of chat

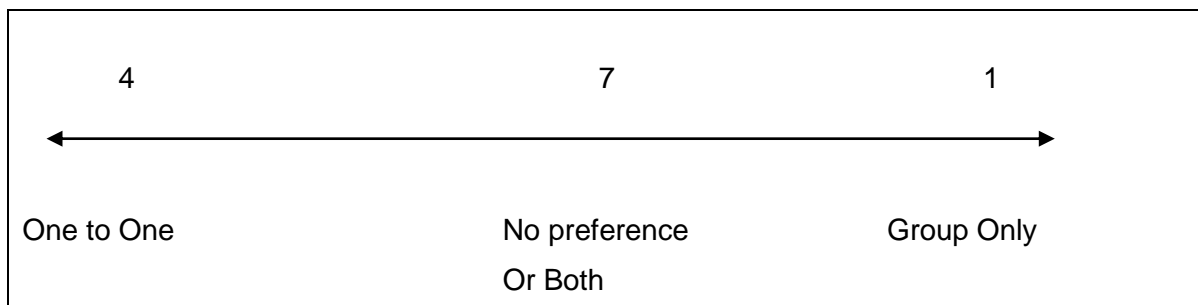
The questions were categorised in this way to ensure coverage of all the relevant emerging areas was made through initial exploration of the use of chat. Within the conceptual framework of technical, pedagogical and pastoral research questions, themes were allowed to emerge from the questions and be grouped together.

The results of the questions are presented below in the three key research question areas.

In terms of pedagogy, students were using chat for a variety of purposes including communicating with friends and strangers. Students felt that chat allowed them to interact with strangers and with people they knew. There was evidence that 'gender swapping' was taking place in chat as both male and female respondents outlined that they had changed gender to explore the role of the opposite gender. This allowed them to be able to express themselves without embarrassment. There was also evidence that students were using chat to experiment with how they dealt with the opposite sex and relationships, for example a female respondent expressed feelings for a male student in a chat system without the fear of rejection. Chat was being used as part of the dating process. Interviewees revealed that chat was used for dealing with sensitive subjects that could be embarrassing and that pressure was taken away from the students unlike face to face interaction with a tutor. From a pedagogic perspective there were two key ways that chat could be used; as one to one and as group chat, known as one to many or many to one. The results show that students preferred to have some element of one to one within their chat interactions or ideally both. There was a distinction between the extent to which chat was seen to be 'private' or 'public'. One to one chat was viewed as private and consequently one to many chat was viewed as public (Tu 2000:28). Therefore, the chat interface was to be designed with the ability to work in a group situation amongst peers

and on a one to one with the moderator as necessary. The results shown below show the spectrum of answers drawn from the semi-structured interviews. These are categorised into three areas; one to one, group chat or no preference for use or either or happy to use both.

The spectrum of responses to pedagogic chat communication use



The variety of experimentation purposes for chat use did negative feedback towards it from both students (including their parents) and teaching staff. Reference was made to paedophiles and concern about safety in chat rooms by a respondent during interview *'loads of people have died quite recently because of people on chat rooms'*. Student attitudes towards chat were shown to be influenced by reported inappropriate behaviour. Expectations of students towards chat also showed that they wished to access a chat service as and when they needed to.

From a technical perspective there was evidence that students were using email as a form of chat when they communicated almost instantaneously through this medium with their peer group. When comparing using chat to email one respondent suggested *'I might do but... it is exactly the same as email really isn't it'*. There was some confusion in the sample group about what was meant by chat as MSN was not seen to be using a 'chat room' because friends were invited in. Access was a key factor in the research as students felt that privacy was critical to success and therefore, access should be permitted in college and from home via the intranet. These findings suggested that privacy could be a problem per se across the college campus as students feel that private college work cannot be completed without fear of being watched by others. Interviewees revealed that access by IT staff was accepted and not feared. Technical support through a moderator was a key issue as access could only be permitted times when a moderator could be present to field enquiries and support. The role of the moderator was seen as key for control of behaviour and action taken against those who do not behave appropriately such as excluding them from a session. Confidentiality was a critical driver for success within the results as it showed that students were extremely concerned that any exchanges should remain confidential. This suggested the need for codenames to be

given to students when making exchanges within the chat and that these should be allocated in order to avoid 'guessing'.

Pastoral support findings suggest that students felt able to express feelings in a chat situation that were not possible during face to face interaction, *'I think it is quite a good idea really. I like the anonymous part really, nobody knows you, gives you a bit of confidence as well I think to actually say things'*. This shows that students felt able to deal with more difficult areas within chat and therefore, were helping to satisfy their own pastoral needs due to the anonymity. This was particularly important as anonymous text has been shown to lead to uninhibited text use when facilitating problem areas such as drug addiction (Koivusaari 2002:238; Harasim et al 1995:265). Disclosure of pastoral issues, whereby third party agencies can be involved as part of the duty of care for those under eighteen, was accepted by respondents in the study. There was an expectation of students that access should be given as and when they have pastoral support needs. This expectation needs to be managed as the interface will only be available at limited times. Pastoral support can be viewed from two distinct research perspectives; support in terms of social interaction amongst peers and support for particular issues such as bullying, sexuality and financial issues. Both were viewed as important within the research.

Factors informing the design

The results of the key elements that needed to be taken into account from the user and technical perspectives when designing and implementing the interface are presented as a summary table for simplicity and ease of discussion. The next stage was presenting this data for discussion with the IT Technician responsible for building the system. These factors were drawn from observations made by the potential users and IT technician. A Simple Draft Interface Proposal was used as part of the development.

Taking the design proposal forward for interview and discussion with the IT Technician was a critical part of the research and allowed any technical issues to be highlighted and analysed. The discussion was prompted by the use of the Summary Table. The results of the discussion are not available on tape at the request of the technician but handwritten notes were taken. Key findings from the discussion are given by categorising them into four main themes; simplicity and security, anonymity, control and support. As a result of the discussion a number of key changes were identified. These ensured the specification satisfied both technical and research perspectives as much as possible.

There was recognition, however, that not all aspects of the user needs analysis could be satisfied in the final interface build due to technical and time limitations.

Simplicity and security

In order to satisfy the need for simplicity and security within the chat system it was proposed that the chat vehicle was web-based and able to run within Internet Explorer. This allowed students access without having to go through an official log in procedure and password as they were using their own log on ID. Using web based technology allows students to seamlessly pass from the institution's intranet into the chat system without further need for verification but prevented external parties from entering as they did not have an allocated a college user identification name and password.

Summary table of the key elements of the chat design and implementation from user and technical perspectives

<p>Must have</p> <ul style="list-style-type: none"> • Logging at all times for coding • Access from home • Allocated temporary code names • 2 rooms (max 6 students in each room) • Ability for students to chat one to one with moderator with logging • Facility to 'boot' and ban for inappropriate behaviour • Automatic allocation of code names with ability to exclude students behaving inappropriately 	<p>Must NOT have</p> <ul style="list-style-type: none"> • Private one to one chats between students
<p>Would ideally have</p> <ul style="list-style-type: none"> • Bad language filter • Ability to invite in an off site visitor outside college • Ability to activate on moderator entry • Some advertising mechanism linked to email to alert students moderator is online and system is available • Comic Sans text at least 14 points • Light blue background with black text • A limit to the number of moderator one to one chats (max 4) • A facility where a support moderator could also be present to take one to one interactions 	<p>Would ideally NOT have</p> <ul style="list-style-type: none"> • Complicated logging on procedure for code name • Advertising or pop-ups linked to the chat

As the system was accessible in this way it could also be used from home by logging on to the intranet. This attempted to minimise student fears that undesirable outsiders would be able to enter the chat area. As the chat was web based it needed to be refreshed every three seconds and opened in a new window for simplicity so there was some time lagging between typing a message and it being received the other end. This could not be avoided due to the time taken between message and receipt to communicate.

Anonymity

Anonymity could be given within the chat facility by having no code names displayed at all rather than giving numbers or other temporary names. This was a significant desirable change as it avoided complex allocations of code names and tracking. The chat facility only had text showing and could not be linked to any particular name. As there were only a maximum of eight participants permitted in a room there was discussion about the text of each participant being displayed in a different colour so that the students could follow the thread of conversations between the group. Part of the tool bar could show how many students were online at any one time. As one student left another was able to join using a new and different colour of text.

Control

In order to avoid issues of control there was no one-to-one facility between students. This was to avoid the difficulty of monitoring such exchanges but ideally there should have been some kind of facility between the moderator and students. Initial thoughts on this show it was too technically difficult for the IT technician during the first stages of the research and as a consequence this was delayed for review after testing with a pilot group of students. It was proposed to have two chat rooms therefore, giving the capacity for 16 students to be participating at any one time with the moderator being seen to be a central part of the chat system itself due to the age and potential vulnerability of the student group. This was outlined in the student responses relating to behaviour within the room. Therefore, it was suggested that the system operated as and when the moderator logged on and ceased to function as the operator logs off. It was proposed to have an email alert sent round automatically to all the student mail group stating that chat was now in session. A bad language filter was to remain in place at all times. This supported college policy whereby inappropriate use of IT including bad language is not permitted.

Support

The purpose of the facility was to allow students to communicate with each other and a moderator to give and receive support. This support may have involved participation and non-participation by the individuals concerned. This was because students may benefit from vicarious learning and reflection in that they can see others express their emotions and feelings and learn from that whilst not actually typing into the chat room themselves. The concept of being able to remain within a chat facility without participating is known within chat terminology as 'lurking'. It was proposed to have the ability to lurk within the chat for 20 minutes without contributing after which time the person will be asked to leave. This allowed people to vicariously learn during those 20 minutes but not be able to continue longer term. To force a person to leave the chat is known as 'booting them' by logging them out. It is standard practice within chat rooms to 'boot' 'lurkers' within a short amount of time as they are not seen to contribute anything to the discussion. If they wish to participate they need to log in again but in order that participants are able to learn in this way 20 minutes was allowed as for support purposes. This should have also avoided participants logging on, taking one of the limited places within the chat room and then leaving their machine logged on for long periods of time. After 20 minutes without participation they were to be removed for new participants to log on.

The design included the ability to monitor the presence of individuals in chat sessions regularly as the chat logs retained the details (including the date and times) of those students adding comments to the chat or remaining in the room without comment.

As the research centred on the idea of pastoral support the capacity for expressing emotion through the use of emoticons was also to be retained and a toolbar detailing such expressions included. This was particularly critical when considering the use of the tool for exploration of pastoral support and self reflection. In line with this, ease of access was also important including the appropriate design specification. Originally it was proposed to use Comic Sans Size 14 but through discussion and testing on screen it was proposed to retain Comic Sans font but reduce the size to 12 in order to allow students to be able to increase the characters available for them to type. 100 characters was proposed as the message length for typing and presentation as one or a maximum of two lines across the screen as this should allow them to be able to express their feelings in full.

Logging and administrator functions were retained by the moderator. The system would work only when the moderator was present and automatic logging would take place. The chat logs themselves should include the user IDs of students in the college so it was

possible for the researcher to identify who had used the system and how many times. Part of the college's IT policy makes it clear to students that by using IT within the college their behaviour will be monitored and logged on the college's network. Therefore, logging the student ID and chat conversations together did not present an ethical problem as this was current practice. There was a need to amend the existing IT Policy and logging on information in conjunction with the Network Manager and Deputy Principal as external chat was not currently permitted.

The moderator also retained the ability to ask any student to withdraw, known as 'booting' and ban any student who does not work within the college guidelines in chat for example inappropriate wording, language or behaviour. The logs were to be available to show when the user was booted and there was to be a list of those banned in order that they could be reinstated at a later date. The logs were also show demand for the system as records could be stored of students trying to access a 'full' chat room that could not get in at that time and also be able to show if any banned student has attempted to get in.

Simple draft interface proposal

A very simple draft version of the proposal following the IT Technician's feedback on how the chat system would look was presented below. It was proposed that the system be divided into 3 key areas – the display of text, the entry of text and a separate area with previous chat information or guidelines. The function to update the notice board was to be retained by the moderator. Comic Sans Size 12 font was proposed on a pale blue background. This was chosen to assist with ease of reading as pale blue backgrounds using such a sans serif font have been cited as making written material more accessible (www.dyslexic.com). The moderator's GUI was proposed to look the same but have additional functionality in that there will be the ability to switch to the logs and administrator function buttons included at the top of the screen. The design itself was an evolving structure that was likely to be amended through feedback from management, the IT technician during coding and the students themselves at first stage testing. Future amendments were to be implemented in order to increase the functionality and include a one to one facility.

[illegible]

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Management approval and first build

Receiving approval from the college management team was a critical driver for success as without management approval implementation could not take place. Management approval during the student interview phases was more informal as it was an acknowledgement of the research taking place. This meeting represented the first formal setting. The feedback from the meeting centres considered the IT Policy amendments required, time constraints placed on the IT Technician and researcher and the link between the research and pastoral support.

The IT Policy was reviewed before the system went live. This was due to a change of permissions to permit 'internal chat' in college. External chat was still to remain banned. During this meeting the role of asynchronous as well as synchronous communication was under examination as the former was seen to be 'safer' and well known in college. It was important to do further testing and exploratory work with the management team in order to fully explain the concepts involved and draw comparisons with such alternatives to confirm the appropriateness of the chat device. It was proposed to conduct initial pilot testing in order to gauge likelihood of success but with management approval to then amend the policy before full implementation in September. The final graphical user interface was presented to the senior management team before student testing for final approval.

Time constraints were an issue for both the IT Technician and the researcher. The IT Technician and researcher needed to take time out of core duties, management approval was sought at this meeting to support the use of time in this way. It was suggested that if the time allocation became disproportionate to the amount of time needed on other duties that the IT Technician would make the Deputy Principal aware. This was proposed to avoid the IT Technician being put under stress during the research.

The technical ability of the IT Technician was subject to scrutiny and throughout this research technical facilities were limited by this ability and the time constraints. In the first stages of implementation the moderation of the chat system was to be conducted by the researcher. If the chat received wide scale support and was seen to be an important tool for pastoral support, further moderators were to be sought from the student support team taking into account their training needs and role within the college. This was due to constraints of the researcher's workload within college. The alternative and muted idea was to have an un-moderated chat at a later date but this would depend on student participation and behaviour in the system.

Pastoral support is a strategic aim for many schools and colleges so the desire to think of differing ways to do this is strong. Therefore, the link between this chat system and pastoral support was clearly outlined in this meeting to legitimise chat's position in college and as part of new research into the use of such communication within the educational environment. The chat facility, therefore, linked to targets aimed at meeting this aim and was seen as valuable and useful. It also legitimised research into pastoral support from a management perspective.

Adaptations and testing

During the testing phase of the research it was important that adaptations took place. This ensured that the live system was matched as closely as possible to the user needs of students in the college. Adaptations were influenced by user feedback and time constraints that limited changes being made. Key adaptations that were made included the use of one chat room, logging and messaging when a user entered or exited the system.

Adaptations

It was proposed to have regular feedback and interviews during the design implementation phase. These were in the form of emails, telephone calls and face to face meetings. Each adaptation was to be placed into context during this phase as these changes may have affected the acceptance and usage of the chat facility during implementation. The first follow up interview highlights that a list of moderators was to be incorporated into the system and these could be adapted over time thus allowing time allocation to be managed and co-ordinated. The use of one moderator in the chat at any one time was suggested to avoid confusion and to allow a greater amount of peer support rather than moderator to student support.

Time constraints meant that the chat facility first needed to be tested with one chat room and then subsequent rooms be added at a later date after testing. This was due to the design being implemented in two stages; the chat facility itself first and then the notice board was to be added in another frame. The second follow up interview revealed that although the room was to be set up as a single room, during pilot testing the ability to set up another chat room according to student need was to be included as part of the administrator function. Logging in the chat was to be kept in a database rather than a text file and was only be accessible at moderator level during and after the chat was taking place. This allowed the data to be easily stored and manipulated for ease of coding. This

should assist the organisation of the logs as searches could easily be made allowing coding to take place.

It was proposed to have the facility for 100 characters of text, as previously outlined in the research, to allow full reflection by participants when communicating and to have a different colour of text for each participant in the chat. As participants remain anonymous there needed to be a facility for distinguishing them from each other. Scrolling was to be from the bottom of the screen up. This was done deliberately in order to allow participants to read messages from the bottom of the screen and then add their message on top. This goes against industry standards but was designed to help students reflect on what had gone before but the GUI facility itself was to emulate the type of interface presented by MSN and including having emoticons available and a send button to send the message to the room. It was important to make the system appear as accessible as possible in order to encourage its use. Feedback was to be taken on all aspects of the working system during pilot testing.

During the build it was apparent that there could be some confusion caused amongst chat participants as users join and then leave the facility. The design outlined at the start of the research suggested different colours were used for each participant to identify their thoughts and feelings. As a participant arrived they were to be allocated a colour and then as they left that colour was to be made available again. During the discussion, the difficulty of identifying one person leaving and a new person joining was noted.

To avoid any confusion over identities it was suggested that an automated message was presented on screen to highlight that a user had logged out and then another message saying that a new user had joined. The exact content of this message was to be agreed and implemented at a later stage.

Testing

The first phase of testing was crucial to the development of the interface as it provided the opportunity to gain feedback from students on their perceptions of the interface itself and the extent to which they might use such a facility in the college. The testing and evaluation took the form of two mini chat sessions during a curriculum session with students known to the researcher and the completion of a follow up questionnaire.

Fifteen students were selected to take part as it gave the opportunity for testing in a safe environment from a non-supportive perspective. That is to say, students were encouraged

to chat about the tool itself and to make suggestions for how it might be used but without being encouraged to use it for support purposes at this stage. Students were asked to make suggestions about the interface and indicate whether or not they would use such a facility.

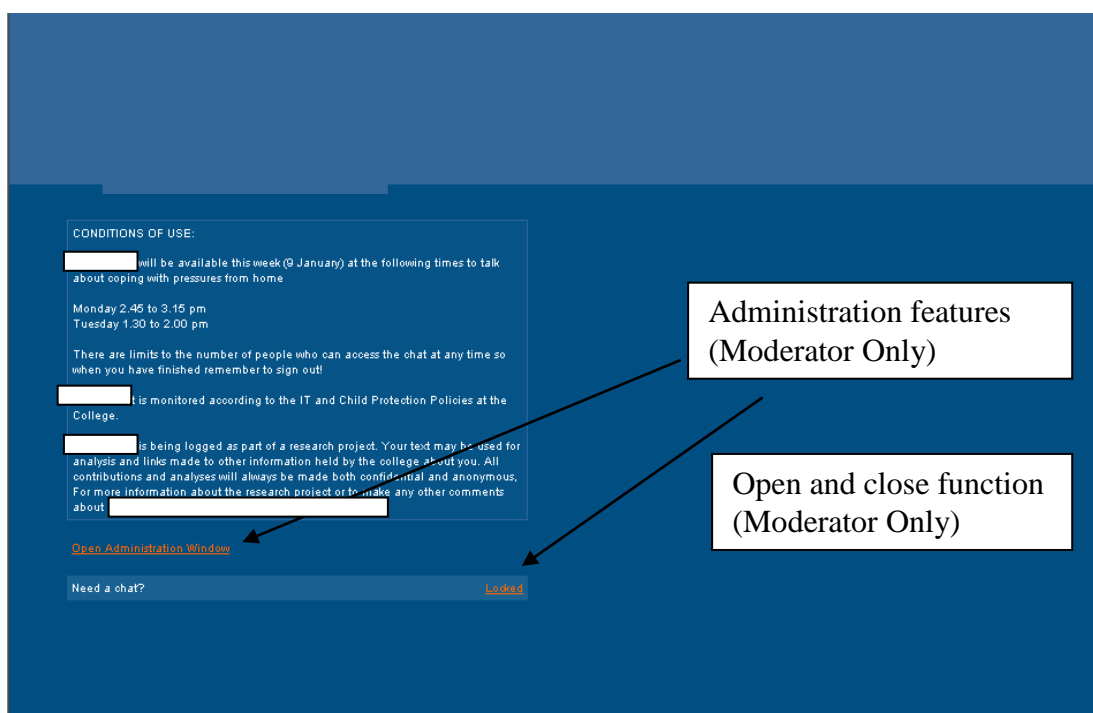
To avoid students feeling under pressure to give answers they felt the researcher wanted, the questionnaire was anonymous. Anonymity could not ensure honesty and prevent biased responses but by making it anonymous there was the capacity for students to not behave in the way that they felt the researcher would want them to (Cohen et al 2007:68). The key themes that emerged from the data were that the interface appeared to be meeting the needs of the students and that moderation allowed the students to feel 'safe'. The chat anonymity was thought to be good as it allowed students to write what they liked although the thread of conversation was difficult to follow at times. Students suggested adding colours, numbers or nicknames to help with this but technically this was not possible at this stage of the research. Expectations of availability were high with students asking for 24/7 or all day access. Managing such high expectations was a key element of the study as the interface could only be available when a moderator is present. Students reported that they thought the system was fun and that they and their friends would use it to 'make friends and get problems off their chests'. Each of these areas was further examined and developed as part of the evaluation and adaptation of the interface outlined more fully in the next section.

Appendix 4 System Features

The chat system collecting the data is a web based application that only operates within the college network. This means that it is inaccessible to users who are not students. This is particularly important as a safety precaution to alleviate concerns by staff and students about access to inappropriate adults. It is hosted within the college intranet site and has its own web page <http://chat.college.ac.uk>. The key difference between the way that students and staff view this screen is that the moderator also is able to open an administration window for updates and logging and they can also choose whether the chat facility is open or closed.

When students access the web page they are presented with a 'Conditions of Use' page with details of the research given. They are reminded of the monitoring of their activity as part of the IT and Child Protection Policies. The page also gives details about the research and access to an email address chatmail@college.ac.uk for any comments or further information. Clicking the 'Need a chat?' opens the chat system in a new window. The window scrolls from the bottom up to allow students to be able to see more data at one time to allow them to reflect on submitted text and add their own comment. No user identification is shown. This need for anonymity on-screen was identified as part of the interface development.

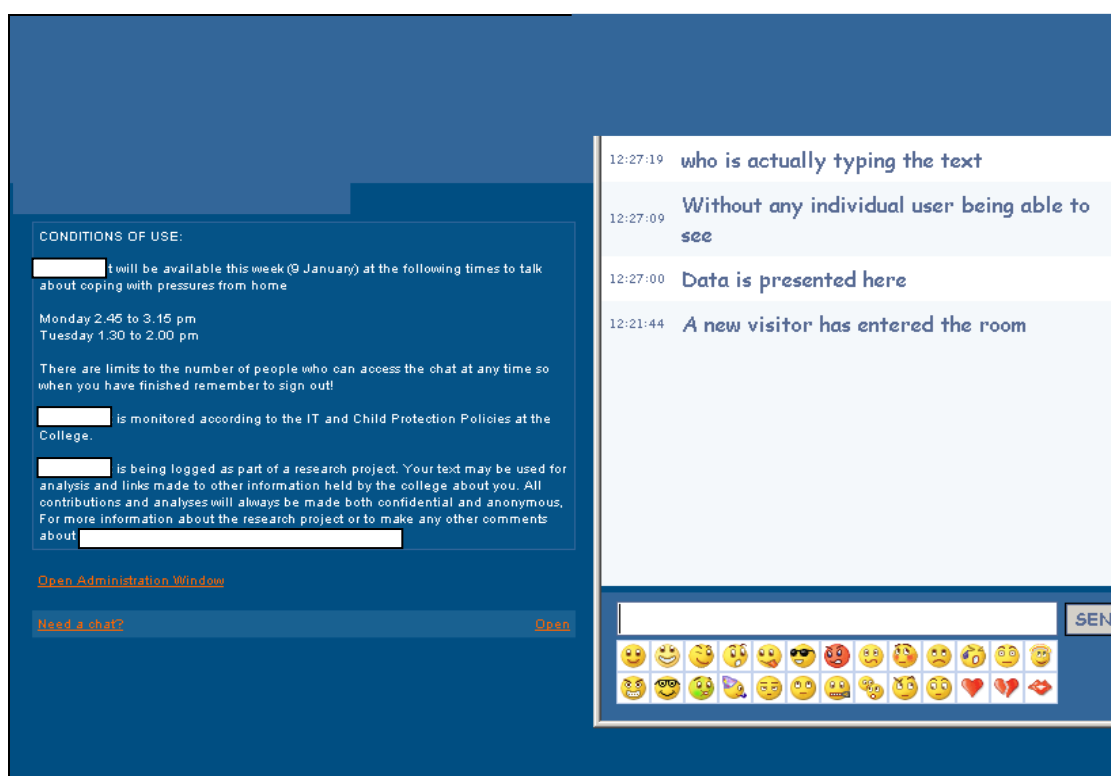
Student and moderator access web page screen



The system is designed so that a maximum of eight users can chat at any time including a moderator. This number was influenced by the work of Driscoll (2002:171) and Surguri et al (2000) who suggest that there should be a maximum limit as with too few users the conversation does not flow properly but too many is chaotic. By limiting the number of participants in any one session users should be able to express themselves appropriately. Giving a limit to the maximum number of users means that not all students who want to access the chat are able to. This is not desirable but giving unlimited access to an unlimited number of users is likely to be chaotic and the quality of the interaction poor. This will result in it not being useful for any groups of people.

As one user leaves the system another is permitted to join. As users enter a room a message is displayed on screen 'A new visitor has entered the room' and as they leave 'A visitor has left the room' so participants are able to see that different users are present in the room.

Screen print showing the interface in use demonstrating anonymity



The moderator also has additional functionality in the administration window. This has five key features; logging, bad language control, change moderator, change welcome message and modify rooms.

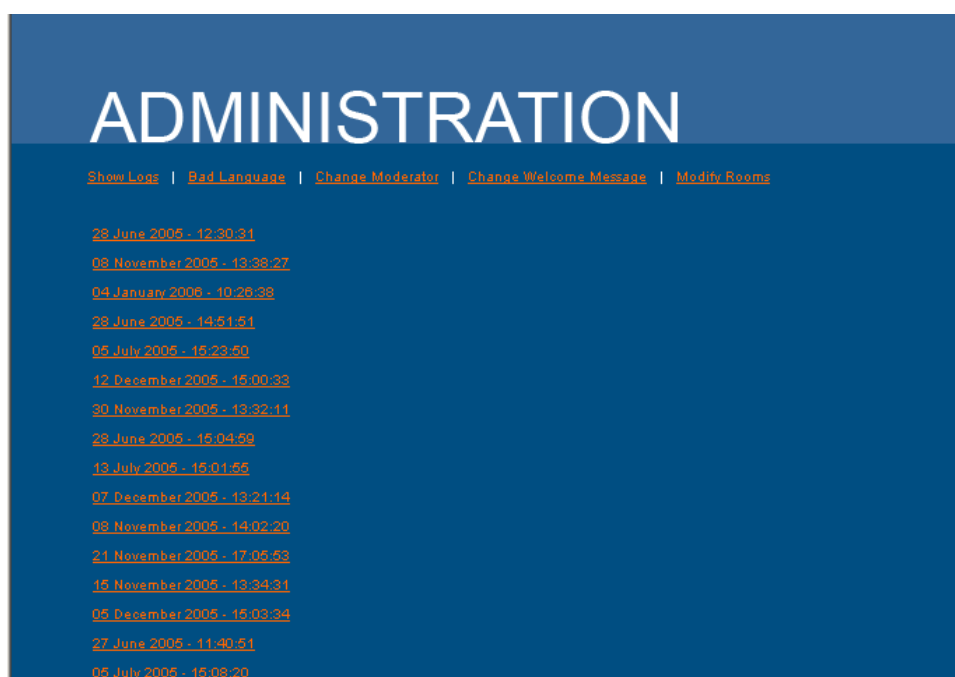
The 'Show Logs', feature allows each session to be logged and links between the participants and the college's user database so that all text entered can be assigned to an

individual student. The system also logs the time of that entry. An example of such an entry is shown below.

13:54:39	a student	but she wont listen. I'm scared. I don't wanna feel like this. I wanna move out so I will be okay
----------	-----------	---

The 'Bad Language' feature has a list of banned words that are removed on-screen. They are shown in the chat logs in full but are shown as asterisks on-screen. The list of banned words can be updated daily and can include both letters and numbers.

Screen print showing the administration functions



The 'Change Moderator' feature enables the current moderator to change the moderator to another staff user of the system. During the introduction of chat only one moderator is allocated to the system using their staff identification username.

The 'Change Welcome Message' is another feature that opens a new window for the moderator to change the welcome message on a daily basis. The message is saved and appears on the chat home page. The welcome message has 5 key functions;

- To give information about when the chat is available – times and days
- To inform students about the topic for that week e.g. bullying or boy/girl friend trouble
- To provide information about the research including the use of information and right to withdraw at any time.

- To remind students of the Child Protection and IT Policies enforced within the college.
- To provide a feedback opportunity and information point on any aspect of the chat system using the chat@college.ac.uk email address.

The interface welcome message

The screenshot shows a web interface titled 'ADMINISTRATION' in large white letters on a dark blue background. Below the title is a horizontal menu with several links: [Show Logs](#), [Bad Language](#), [Change Moderator](#), [Change Welcome Message](#), and [Modify Rooms](#). The main content area is a white box with a scroll bar. It contains the following text:

[] will be available this week (16 January) at the following times to talk about coping with coursework

Tuesday 1.30 to 2.00 pm

Wednesday 10.20 to 10.50

There are limits to the number of people who can access the chat at any time so when you have finished remember to sign out!

[] is monitored according to the IT and Child Protection Policies at the College.

[] is being logged as part of a research project. Your text may be used for analysis and links made to other information held by the college about you. All contributions and analyses will always be made both confidential and anonymous. For more information about the research project or to make any other comments about Itchen Chat please email

At the bottom of the white box is a 'Save Message' button.

The 'Modify room' feature allows the moderator to change the 'Need to chat?' room name and to open other chat rooms as required, each permitting 8 users. There is the potential to have as many chat rooms open as the moderator feels able to monitor. In the initial stages of the research one is being used.

Appendix 5 Coding of Questions for Semi-Structured Interviews

Question	Baseline Data	Understanding / perception of synchronous communication	Previous experience of IT and Internet Usage	Potential role for support	Barriers to Access	Enablers for Access	Recommendations for communication tool/design	Guidelines for policy making re use of chat
1 Subjects and Level	Y							
2 Gender	Y							
3 Previous experience of IT e.g. applications			Y					
4 Previous experience of Internet and what for?			Y					
5 What do you think is meant by online discussion?		Y						
6 What is meant by chat?		Y						
7 Have you ever taken part in a chat session before, if so what was your opinion of it and which system did you use?		Y	Y				Y	
8 Do you know anyone who takes part in chat and if so what do they use it for?		Y						

Question	Baseline Data	Understanding / perception of synchronous communication	Previous experience of IT and Internet Usage	Potential role for support	Barriers to Access	Enablers for Access	Recommendations for communication tool/design	Guidelines for policy making re use of chat
9 How do you think chat could be used for pastoral care								
10 How useful could it be for online discussions on; bullying, self harming, sexuality, sexual health, depression, youth carers, stress, careers, housing, finance, smoking, drugs and alcohol, abuse or homework, health?				Y				Y
11 Are there any other ways you can think of?								
12 Would you prefer to have an online chat as a one-to-one with an adult support worker or as part of a group online chat of up to six fellow students?				Y			Y	

Question	Baseline Data	Understanding / perception of synchronous communication	Previous experience of IT and Internet Usage	Potential role for support	Barriers to Access	Enablers for Access	Recommendations for communication tool/design	Guidelines for policy making re use of chat
13 Which would be the most useful way for you?								
14 Would you be interested in taking part in online group discussions with visiting experts such as Alcoholics Anonymous or ASH?				Y			Y	
12 If you were discussing a topic such as sexual health how important would confidentiality be to you in the chat and why?						Y	Y	Y
13 A possible way to keep your chat more anonymous is to give you a code name for chat use only – how would you feel about this?						Y		Y
14 Are there any other ways you think chat could be used?						Y		

Question	Baseline Data	Understanding / perception of synchronous communication	Previous experience of IT and Internet Usage	Potential role for support	Barriers to Access	Enablers for Access	Recommendations for communication tool/design	Guidelines for policy making re use of chat
15 How would you feel about discussing such issues in a text-based environment?				Y				Y
16 What advantages or disadvantages would there be to using such a system?					Y	Y		
17 If a chat system was available how often would like to be able to access it e.g. daily, weekly?					Y	Y		
18 Where and when would you want to access such a system?					Y	Y		
19 Is there anything else you want to say about this topic that I haven't asked you?		Y		Y	Y	Y		
20 Is there anything you want to ask me?		Y		Y	Y	Y		

Appendix 6 Results and copy of the questionnaire used for testing

The questionnaire on the following page was used to gain initial feedback on the interface in three main areas; technical, pedagogical and pastoral. Organisational issues were not considered at this stage

Fifteen users completed questionnaires and gave feedback on the interface after two exploratory sessions using the interface. Of the fifteen respondents twelve were male and three were female. Users were asked to comment about the system within the chat and immediately after the two sessions. The emerging themes from the questionnaires and as a result of the sessions are shown below.

Technical	Appropriate size and font of text Users did not feel that recording the text was a problem and would prevent people from 'being naughty' – 'makes me feel safe'. Publicity should be through the web, email and tutor bulletin Lagging was a bit of a problem & blank screens Issue about following the thread due to anonymity Filters avoided bad language Want to maximise screens Anonymity good as others would not know you. Use of nicknames or optional nickname would be good – use of initials – use of numbers to identify the person – use of different colours for identification. Should be available from home. An alert to inform the moderator that students are online would be useful
Pedagogical	Would use this service Good fun, good service The publicising of the purpose of the chat and its availability would usefully take place via email, tutorial process, newsletter and as part of induction. Chat could be used for friends to talk regularly Could be used to provide advice and help with work. Students needed further guidance about how to use the chat and be reminded of what was permissible/not permissible Use should be made as often as possible or all the time, 24/7 Access at lunchtimes Every chat needs content moderators/moderators wanted to stop 'something bad happening'
Pastoral	'would help people make friends and get problems off their chest' Good for people to talk on there – good as you can talk but doesn't have to be face to face Could be useful if you are upset People may not use this to talk about their problems.

College Chat Evaluation

Please tick

Male	Female

What do you think of the name College Chat?

Do you have any suggestions for an alternative name?

What do you think about the size and style of font?

What do you think about the being anonymous on screen?

What do you think of the emoticons ☺?

What do you think of the scrolling on screen (writing going on to the page about the last lot of writing)?

Like any other IT service within College, a record of the script of what has happened within College Chat will be stored by the IT Support Team and the Moderator – how do you feel about this?

How do you think students should be told that it is available and online?

Are there any other ways you think College Chat could be used?

How often should College Chat be made available for students to use?

College Chat is designed for students to talk to others about how they are feeling in college – happy or sad – what do you think of this service?

Do you think you might use this service?

Would you be willing to be a chat buddy and be present in a room to offer advice or help?

Any other comments or improvements that you think might be made..

Appendix 7 Extracts from the Technical Issues Diary

Throughout the research period technical issues were noted. These quickly reduced with the change of server.

Date	Observations
28 June	Emoticons not working Lagging a real problem due to number of users – long delays with white screen
7 Nov	Email account set up for use by College Chat to publicise it was unable to send global emails. It was set up as a student account and therefore, needed to be changed. The Chatmail Account was set up to disassociate the chat from a particular person or individual The Chatmail account itself is a moderator account information students about times and increasing awareness.
Sessions 7 Nov to 9 Nov	The first chat sessions were plagued with lots of technical problems. The emoticons were not working and it was hoped that students would be allocated different coloured text when they were communicating. This is to be rectified by the technician. Discussion around whether or not it is important for there to be a focus or should the focus develop around what the students want to chat about. This is an area that needs to be further explored. By not having a focus it is possible to give students the sort of support that they are seeking rather than a prescriptive version as offered by the college. May need to use some topics to get things moving The chat was placed on the same server as the Intranet but this caused the intranet to crash in the college so had to be moved. The chat was placed on its own more elderly server in college.
Sessions 14 Nov to 16 Nov	Lap top frozen during session and actually left moderator excluded during the session. This did not lead to any problems. Students seem to be getting the hang of it. Several key points arose that are needed <ul style="list-style-type: none"> • Nicknames or colours to help thread • Hit counter to monitor traffic volumes • Conditions of use page During this week the elderly server started to have problems and the chat began to crash therefore, making it impossible to use. Technical issues and the vulnerability of the live sessions to technical problems have been a real issue.
23 Jan	Problem with server – was reset by Tony am to quieter server

Appendix 8 – Change to the Acceptable Use Policy when students log in to College Chat

Unauthorised or improper use of the system may result in administrative and disciplinary action and civil and criminal penalties.

By continuing to logon and use the system you indicate your awareness of and consent to College's IT Acceptable Terms and Conditions of Use Policy.

Do not attempt to logon if you do not agree to the conditions stated in this warning.

A copy of Terms and Conditions is available from IT Support.

You are reminded that computer activity is monitored at all times.

The playing of games, copying of music or using chat rooms other than College Chat is not permitted at any time!

Students are required to accept these conditions before they are able to log in to the College network. The change was to include College Chat as a permissible chat room and is highlighted above.

Appendix 9 Extracts from the Child Protection Policy

The full Child Protection Policy is not included within this Appendix but useful sections have been replicated. This Policy has since been amended by further updates in legislation.

General Policy Statement

The College has a statutory and moral duty to ensure that the College functions with a view to safeguarding and promoting the welfare of children receiving education and training at the College.

Throughout these policies and procedures, reference is made to “children and young people”. This term is used to mean “those under the age of 18”. The governing body recognise that some adults are also vulnerable to abuse. Accordingly, the procedures may be applied (with appropriate adaptations) to allegations of abuse and the protection of vulnerable adults.

The governing body is committed to ensuring that the College:

- Provides a safe environment for children and young people to learn in
- Identifies children and young people who are suffering, or likely to suffer, significant harm, and
- Takes appropriate action to see that such children and young people are kept safe, both at home and at the College.

In pursuit of these aims, the governing body will approve and annually review policies and procedures with the aim of:

- Raising awareness of issues relating to the welfare of children and young people and the promotion of a safe environment for the children and young people learning within the College
- Aiding the identification of children and young people at risk of significant harm, and providing procedures for reporting concerns
- Establishing procedures for reporting and dealing with allegations of abuse against members of staff
- The safe recruitment of staff

The College will refer concerns that a child or young person might be at risk of significant harm to the relevant Social Services department.

Physical Abuse

Physical abuse causes harm to a child's person. It may involve hitting, shaking, throwing, poisoning, burning, scalding, drowning or suffocating. It may be done deliberately or recklessly, or be the result of a deliberate failure to prevent injury occurring. Also, a parent or carer may feign the symptoms of, or deliberately cause ill health in a child or young person. (Fabricated and induced illness – formerly Munchausen's syndrome)

Neglect

Neglect is the persistent or severe failure to meet a child or young person's basic physical and/or psychological needs. It may involve a parent or carer failing to provide adequate food shelter or clothing, failing to protect a child or young person from physical harm or danger, or failing to ensure appropriate medical care or treatment.

Sexual Abuse

Sexual abuse involves forcing or enticing a child or young person to take part in sexual activities and may include physical contact, or non-contact activities such as involving children or young people looking at pornographic material or watching sexual activities. It is not necessary for the child to be aware that the activity is sexual and the apparent consent of the child is irrelevant. Young people may also be at sexual risk if they abuse one another.

Emotional Abuse

Emotional abuse may involve conveying to children and young people that they are worthless or unloved, inadequate, or valued only in that they meet the needs of another person. It may involve causing children and young people to feel frightened or in danger, or the exploitation or corruption of children or young people. Domestic violence can cause long term emotional abuse.

Designated staff members will

- Report to the senior member of staff with lead responsibility
- Will know how to make an appropriate referral
- Will be available to provide advice and support to other staff on issues relating to child protection

- Have particular responsibility to be available to listen to children and young people studying at the College
- Will deal with individual cases, including attending case conferences and review meetings as appropriate.
- Have received training in child protection issues and inter-agency working, as required, and will receive refresher training at least every 2 years

Dealing with Disclosure of Abuse and Procedure for Reporting Concerns

If a child or young person tells a member of staff about possible abuse they should follow the procedures recommended by Education Welfare Services

- Arrange a time and place where the child or young person can talk privately as soon as possible after the child has initiated contact.
- Always reassure the child or young person and appear calm
- Listen the child or young person, believe what is said, however difficult it is to understand.
- Try not to display shock, horror, anger or disgust
- Tell the child or young person that you are pleased he/she has decided to tell someone, and that it was right to do so.
- Do not press for details. Allow the child or young person to disclose in the way he/she wants.
- Tell the child you know it is difficult to talk about such experiences.
- Reassure the child or young person that they are not to blame.
- Explain that you cannot keep it a secret and that you will have to contact someone else to help – explain who is appropriate.
- Never promise that you will do something that you may not be able to fulfil e.g. accompanying to interview; saying it will be 'alright'.
- Make a detailed note of the date, time, place, what the child said, did and your questions etc.

- Staff should not investigate concerns or allegations themselves, but should report them immediately to the Designated Person, who can assess the information, seek advice, and refer to Social Services.

Records

It is important that documents relating to an investigation are retained in a secure place, together with a written record of the outcome and, if disciplinary action is taken, details retained on the member of staff's personal and confidential file.

Appendix 10 Extract from the College's IT Acceptable Use Policy

2. Conditions of Use

- a. The use of College computing facilities is conditional on prior registration with, and granting of access rights by IT Support. In the case of services provided by IT Support, the granting of access rights is normally restricted to current College staff and College students.
- b. Registration to use computing facilities or the use of computing facilities constitutes acceptance of these regulations.
- c. Authorisation and access may be withheld, withdrawn, restricted or suspended at any time by IT Support or the relevant department in the interests of safety or security, for the purposes of maintaining facilities, in the interests of preventing or investigating possible abuse or misuse, or other infringement of Computing Regulations.
- d. The granting of access rights to most computing facilities will be by the provision of a username and password. Users must not use another user's username or password, nor allow any password used, to become known to any other person, nor having logged in, leave computing facilities unattended and potentially usable by some other person.
- e. Users must notify IT Support of any change in their status, which may affect their right to use computing facilities.
- f. The use of College computing facilities for commercial gain is not permitted.
- g. The College will not accept responsibility for charges arising from the unauthorised use of facilities at other locations. Any charges incurred in contravention of this rule will have to be reimbursed by the user.
- h. Users must adhere to the terms and conditions of all licence agreements relating to the use of computing facilities. In particular, users must respect the copyright of all materials and software made available for educational use, including packages licensed for home use under the Microsoft Campus Agreement.

- i. Users must not use the College computing facilities to hold or process personal data on individuals except in accordance with the provisions of the Data Protection Act 1998.
- j. Users must not download, install or modify any software nor incorporate any part of the provided software into their own work without permission from IT Support.
- k. IT equipment may not be moved without prior agreement of IT Support.
- l. No equipment may be connected in any way into the network or other computing facilities of the College without the prior agreement of IT Support.
- m. Users must take every precaution to avoid damage to equipment caused by, eating or drinking in its vicinity, In particular eating or drinking in the College 'computer rooms' is forbidden.
- n. Consumables including stationery must be used for the purpose for which they are supplied and their consumption should be minimised as far as possible.
- o. Users are responsible for ensuring that they are sufficiently familiar with the operation of any equipment they use to make their use of it safe and effective and to avoid interference with the use of it by others.
- p. The College will endeavour to secure and protect any computing facility. However it accepts no responsibility for the malfunctioning of any computing facility, loss of data, or the failure of any security mechanism.
- q. Any query or complaint about access or authorisation to use IT services or facilities should be referred in the first instance to IT Support.
- r. ***Users are reminded that under the Colleges Acceptable Use policy any activity on PCs may be monitored at any time. The College will take a very serious view of behaviour that jeopardises the provision of computing facilities and services, or their security and integrity.***
- s. Users must not cause any form of damage to the College's computing facilities, nor to any of the accommodation or services associated with them.

- t. Users must not deliberately introduce any virus, worm, trojan horse or other harmful or nuisance program or file into any computing facility, nor take deliberate action to circumvent any precautions taken or prescribed by the College to prevent this.
- v. Users must not exceed the terms of their registration in the use of computing facilities. In particular they must not connect to any other computing facility without the permission of IT Support.
- w. Users must not copy, examine, amend or delete the data or data structures of other users without their permission.
- x. The copying of software is illegal. The consequences for staff/students not complying with this regulation are outlined in section 3. Penalties and Sanctions
- y. Users must not create, store, exchange, display, print or circulate offensive material in any form or medium (including abusive electronic mail and pornographic material).
- z. ***Users are not permitted to use resources for inappropriate purposes (e.g. game playing, chat rooms (including MSN Messenger), printing for private purposes, sending abusive email messages or inappropriate web browsing).***

3. Penalties and Sanctions

In the event of any infringement of these regulations IT Support, the IT Network Support Manager or the College Principle as appropriate, may take action as follows:

- Restrict, suspend, or withdraw the use of computing facilities or issue a warning for minor offences.
- Refer the case to the College authorities to be dealt with in accordance with the appropriate disciplinary procedures for students and staff. This could result in suspension of students or dismissal of staff.

- In the event of a serious infringement the College may also decide to institute legal proceedings under civil or criminal law relating to the appropriate Acts e.g. The Computer Misuse Act.

4. Scope of Regulations

These regulations apply to all staff and students of the College (including all other authorised users by the College, i.e. contract support, visitors etc) using any computing facility of the College (including all servers, computers, laptops, communication networks, software and all computer-based information systems) for any purpose (including teaching, research and administration.) The regulations also apply to any user accessing the computing facilities of another institution using College facilities or by means of their own equipment, when connected to the College network directly or indirectly.

The Computing facilities provided by the College include; those run by IT Support which may be used for academic research, teaching and administration by any member of the College; departmental computing facilities whose use is usually restricted by departments to their own staff and students.

The College has an obligation to abide by all UK legislation and relevant legislation of the European Community.

5. Acts most relevant to this policy

These regulations apply subject to and in addition to the following laws:

Data Protection Act 1998

Copyright, Designs & Patents Act 1988

Computer Misuse Act 1990

Data Protection Act 1998

Human Rights Act 1998

Disability Discrimination Act 1995.

Special Educational Needs and Disability Act 2001

Appendix 11 Choice of topics

The choice of topics is influenced by the work of Owen-Yeates (2005:43) as topics are chosen that were discovered through the use of a research questionnaire to be causing stress among Year 11 students. As the students in college are in year 12 and 13 it is felt that these issues may still be relevant them but should also include issues specifically related to college. Further influence on the choices came from the pastoral influence of the researcher's role and also from the interface development interviews.

- Smoking
- Needing to talk to someone
- Sexual worries
- Pregnancy
- Tiredness/lack of sleep
- Drugs
- Fear of failure
- Teacher being ill
- Behaviour of others in your class
- No friends – or have moved in to the area recently or going to college outside area
- Expectations of teachers too high
- Lack of time – too much coursework
- Pressure from family/parents on work expectations
- Revision
- Coping with coursework
- Bullying
- Boyfriends
- Money problems
- Housing
- Going to college in a new area/away from your friends
- Appearance – clothes, actually physical attributes, weight
- Pressure from home – parents
- Feeling down/depression
- Balancing home and work life
- Health and sleeping
- Bereavement
- Self-harming
- Caring for others – family, brothers and sisters
- Exam stress

Appendix 12 Diary of chat sessions including additional information and notes

Date	Time	Day	Topic	Session (mins)	Users	M	F	Emoticons	Notes	Malicious/ Noise Issues
7 Nov	15.20	Monday	Not given	23	12	6*M3 2*M2	2*F3 2*F1	:D :@ ☺ :# :L :\$	1 Lurker (male Level 3) No nicks	None
8 Nov	13.38	Tuesday	Not given	55	14	8*M3 1*M2	2*F3 1*F2/3 2*F2	☺ :s (k) :p ☹ 1 student used them all several times, level 2/3	1 Lurker (male level 2 63 secs) Use of nicknames Ref to wanting nicknames	Homophobic (M3)
14 Nov	14.55	Monday	Not given	35	11	6*M3 2*M2	2*F3 1*F2/3	(H) <:o) (K) :D ^o) (A)	1 Lurker (Male Level 2 41 secs) Nicknames	None

15 Nov	13.34	Tuesday	Not given	24	12	7*M3	4*F3 1*F2	☹	4 lurkers (1 male level 3 – 90 secs, 3 females, all level 3 (20 secs;276 secs;78 secs) Nicknames	None
16 Nov	13.59	Wednesday	Not given	28	5	3*M3	1*F3 1*F2	☺	1 lurker (female level 2 98 secs) No nicks	None
21 Nov	15.09	Monday	Not given	21	14	10*M3	2*F3 2*F2	(l) (L) (D) :D :' ;) ;-) ^o) :S :@ (H) (A)	2 lurkers (1 male level 3 7 secs & 1 female level 3, 36 secs) Nicknames and lots of use of real names	Homop (M3) Sexual (M3)
21 Nov	8.49	Monday	Access without moderator – accidental –	56						
22 Nov	13.33	Tuesday	Bullying	63	20	14*M3 2*M2	1*F3 2*F2 1*F1	:(' &o| :D (^_^) (L) :@ :('	2 lurkers (both male level 3 31 secs & 109 secs Nicknames	Swear (F2) Swear (M3) Swear (M3) Homop (M2) False Allegation (M3)

28 Nov	15.06	Monday	Boyfriend/girlfriend trouble	22	3	2*M3	1*F2	:@ x2 ;)	No lurkers No nicks	None
29 Nov	13.32	Tuesday	Boyfriend/ girlfriend trouble	45	16	10*M3 2*M2	3*F2 1*F1	:@ (U) x2 (L) x3 :@ x4 :'(x4 (k) x4 |-) (A)	3 lurkers (1 female level2, 1 male 22 secs level 3, not real lurker male level 3 2 secs Nicknames	Silly behaviour e.g. breasts etc (F2) Swear (F2) Swear (F2)
30 Nov	13.32	Wednesday	Boyfriend/ girlfriend trouble	33	4	3*M3	1*F3	:-*	No lurkers No Nicks	None
5 Dec	1503	Monday	Stress	38	14	8*M3 1*M2/3 1*M2	2*F3 1*F2 1*F1	<:o) :-# :(8-| *-) :@ :\$	4 lurkers all male level 3; 26 secs, 24 secs, 98 secs & 26 mins 58 secs (overseas) No Nicks	Swear x 3 (M2) Male stating he is pregnant, has been raped and thrown out of home (M3)

7 Dec	13.22	Wednesday	Stress	37	10	5*M3	3*F3 1*F2 1*F1	8-| :@ : '(	No lurkers No Nicks – use of one real name	Student announced pregnant (F1) but some disbelief by others & then silly statements e.g. parents are Martians (F3)
12 Dec	15.00	Monday	Christmas	30	8	8*M3		8-((K) x2 (U) (L) 8-| :)	No lurkers No nicks	Swear (M3) Impersonation of moderator (M3) more 'silly behaviour'
14 Dec	10.26	Wednesday	Christmas	32	11	5*M3 1*M2/3 2*M2	2*F3 1*F2	(L), <:o) (K), :) : '(:@, :P (H) :-#	No lurkers No nicks	Swear (wtf – M3) Swear (M3)
4 Jan	10.26	Wednesday	New Year	25	6	1*M2/3 4*M2	1*M3	*-) 8-) :O :P :@ ^o) 8-| :-O	No lurkers Nicknames and request for nicknames	Swear *3 (M2) Homophobic (M2)

5 Jan	12.30	Thursday	New Year	26	5	2*M3	3*F3	;) x2 :) x2 :(:-D	1 minute gap and student is asking 'is nobody talking' 1 lurker male level 3 2 mins 18 secs No nicks	None
9 Jan	14.46	Monday	Pressure from Home	31	15	5*M3 1*M2/3 1*M2 2*M1	5*F3 1*F2	(K) x2, (H) :@ x5, +o(:D x5, (L) :(:'(:P	1 lurker female level 2 103 secs Nicknames	Talking about names and locations (M1 – 2 students, several interact interactions)
10 Jan	13.37	Tuesday	Pressure from Home	21	10	3*M3 1*M2	5*F3 1*F2	(k) +o(:@ :P x2 <:o) :-O	No lurkers No Nicks	None
17 Jan	13.30	Tuesday	Coping with coursework	38	19	9*M3 2*M2	4*F3 4*F2	:@ (U) :\$:S :(:'(:@ :-O	3 lurkers – 2 males level 3 30 secs, 24 secs, 1 female level 3 17 secs – till end of session so unable to participate – previous contributor Nicks & request for nicks	Silly behaviour (M3) about death of pets Rude (M3) Homophobic (F2) Silly (M2)

18 Jan	10.25	Wednesday	Coping with coursework	32	6	1*M3 4*M2	1*F2	:-* , :@ :-#, :D ^o) 8-) : '(	1 male level 3 61 secs Nicknames and identify the moderator	Homophobic (M2) Swear (M2)
24 Jan	13.29	Tuesday	Feeling down or depressed	18 Pt 1	10	6*M3 1*M2	2*F3 1*F2	:@ (L) +o(	No lurkers Nicknames	Distracting (M2) Silly behaviour (M2/3) Naming (M2 & M2/3) Silly behaviour (M3) Chat closed
24 Jan	13.47	Tuesday	Feeling down or depressed	23 Pt 2	10	4*M3 1*M2/3 2*M2	1*F3 2*F2	:D ;)) :O	No lurkers Nicknames	After chat closed and student ban, much less, minor distraction (M2)
26 Jan	12.31	Thursday	Feeling down or depressed	26	11	7*M3	3*F3 1*F2	^o) :@ :S |-)	2 lurkers both male & level 3 – 20 & 229 secs Nicknames and real names	Swear (F3)

8 Feb	10.20	Wednesday	Drugs and Smoking	31	11	4*M3 2*M2 2*M1	2*F3 1*F2	:) :P	1 lurker – male level 3 24 mins 31 secs Nicknames and real names	None
9 Feb	10.20	Thursday	Drugs and Smoking (just before half term)	17	4	3*M3	1*F3	(L) :(	1 lurker – male level 3 290 secs No nicks	None
22 Feb	2.01	Wednesday	Home life and Housing	33	5	2*M3 1*M2	2*F3	(L) (A) :)	No lurkers No nicks	None
28 Feb	1.00	Tuesday	Divorcing or separating parents	41	4	2*M3	2*F3	:@ :(:p	1 male level 3 11 secs he then came back later and then fully took part in the discussion Nicknames	None
2 Mar	12.21	Thursday	Being or feeling different	27	4	3*M3	1*F3	:(+o( :| (U), (L)	1 male lurker level 3, 300 mins No nicknames	None
7 Mar	12.36	Tuesday	Tiredness and unable to sleep	33	4	3*M3	1*F3	:( , :| ., :S :p, :D (L) (K) :D, :@	No lurkers Nicknames	Silly (M2) Silly Text (F1)

9 Mar	12.29	Thursday	Sexual worries e.g. pregnancy, sexuality etc	31	7	5*M3	1*F3 1*F2	None used	No lurkers Nicknames	Homophobic (M3)
14 Mar	12.31	Tuesday	Caring for others – brothers, sisters, parents, children	29	14	7*M3 1*M2	4*F3 2*F2	*-) |-) :P (H) (K)	1 lurker male level 3 60 secs No nicknames	None
16 Mar	12.30	Thursday	Any other worries or concerns	30	4	1*M2/3 1*M1 ?	1*F1	: (	No lurkers No Nicknames	None
21 Mar	12.20	Tuesday	Balancing work and college	24	7	6*M3	1*F2	None used	No lurkers Real names	None
22 Mar	11.03	Wednesday	Friends	24	15	5*M3 4*M2 2*M1	3*F2 1*F1	: (:@ :\$	2 males; level 2/3 60 secs Level 3 100 secs Nicknames and real names	Dog impression (M3) Silly behaviour (M2) Silly behaviour (M1) Higher number of level 1 users led to more confusion

27 Mar	12.16	Monday	Alcohol	33	10	6*M3 2*M2	2*F3	:@ :S (L) +o( :| :D (L) :@ :((K)	No lurkers Nicknames	Distraction * 2 (M3) Excessive use of emoticons (M3) Distraction (M2) Homophobic (M2)
28 Mar	13.04	Tuesday	Violence	34	5	5*M3 1*M2/3	1*F2	(H) :@ <:o) (L) ^o)	1 lurker – male level 3, (first visit 4 secs then 21 mins of lurking) No nicknames	Possible lie about anal rape but then amended in to discussion about being attacked (M3)

Appendix 13 Samples from the Reflections Diary

A selection of different entries has been included from the Reflections Diary to demonstrate how it has been used throughout the research process.

Date	Chat Topic or Reflection Situation	Reflection
24 Feb	Chatting about chat with 2 colleagues from another college	Colleagues from another college called it 'innovative' but were worried about security. Were interested to see that the type of student using it was very much the sort of student who would not speak to their tutor, tending to be male students on level 2 courses, about their problems. Consideration of whether the chat should take place more one to one or group. Consider whether allowing fewer participants in to a session would be better. Discussed issues about availability of staff and problems of being unable to do anything else when a session was taking place, even talking on phone and face to face conversations in same room virtually impossible. Discussed issue compared to message boards e.g. time for reflection before speaking – is it better to do this or not?
22 Feb	Coding Observation	There needs to be link between session length and lines of input – are some topics more popular than others e.g. bullying appears to have most contributions – how do we measure a quality session 'by lack of off-task behaviour'? – length vs contributions vs quality is it possible to have a shorter session but better quality contributions – what is the ideal session time for moderator and for students – expectations? Availability etc?
8 Feb	Chat Obs	Felt like a different atmosphere with moderator this time – much more policed but noticed that 'regular' people are attending so building a form of community. Also have been to a talk this week and am considering the link to Every Child Matters to get feedback from students about how things are going – ways to improve, health etc
26 Jan	Chat Obs	use of language within chat – very much on student level – problem of interruption today – student wanting attention meant that chat got left and doesn't work well like that Got asked lots of questions about what I do - interesting
25 Jan		Considered misuse of chat compared to email – many students are banned from using email for inappropriate behaviour – do students who misuse email also misuse chat or does this happen in a different way. Another teacher observing saw equality issues – who has the balance of power within the chat – students and staff equal – issue over how students speak to staff within chat – perception of rudeness – do students realise the moderator is a member of staff? Problem of barring individual students – acceptable and non-acceptable behaviour policy – do not allow playing games or other chat – what should a student be banned for – poor behaviour/swearing/silliness?

19 Jan	Pastoral Team Meeting	Again felt perception of the team was that chat couldn't work for emotional literacy and pastoral care. Feel the need to defend the system and felt very defensive – remembered that teachers are often seen as the most critical of new technologies. As a result of these criticisms and through meetings before with supervisors – decided to write a clear set of acceptable use guidelines for students – ideally would like to have a separate window shown in the chat giving details during each and every session that could not be removed but could be updated.
18 Jan	Coping with coursework topic	'Zen: He probably could lol' - I found it fascinating that a student automatically assumed that the (mod) was male without any specific reference ever having been made to the gender of the moderator Also interesting knowledge of the rules i.e. that the moderator would say 'NO NAMES PLEASE' – set of norms developing A student also became distressed when some others came into the room and did not behave appropriately – she told them to 'get out of my chat room'
17 Jan	Coping with coursework topic	Feeling of annoyance at the start of the chat and lack of empathy amongst students for person whose dog had died. Also feeling of helplessness of what to advise – need to consider role – airing of views or giver of advice or both – where does one stop and one start? Difficulty of student typing in 'I fancy a teacher' – why would they want to put that? Someone said 'sorry' for inappropriate behaviour. Interesting use by some students of (nicks)
10 Jan	Pressure from home topic	Felt positive about chat today – lots of giving of information – problems at home, talking about parents and pressures – still some issues around students making up 'silly' stories for effect – maybe this will reduce as the chat goes a long – recurring theme – do these users come back and if so – why do they?
22 Nov	Bullying	Feeling of boredom for moderator – needs to have limit as over 1 hour too long and find myself itching to get involved – interfering more (Whitty suggested about half hour is good)
21 Nov	Reflection	Could ask for feedback on college – could ask for discussion on topics that relate to the tutorial programme e.g. drugs, date rape – talk about it...issue around ability of chat to give best advice as not experts in these areas. Potential for further work/research by linking to a school... part of development of EL in schools to colleges – risk of technical problems but potential funding from Aim Higher.
21 Nov	Not Given	Issue around scenarios – do you give them and then ask them to comment or ask them to bring scenarios?

Appendix 14 Lists of feeling words according to Faupel & Sharp (2003), Hein (1996) and the Matrix of Emotional Literacy (Haddon et al 2005:9). The list includes actual words used and the possible words that could be used

Topic	Words
Not given	annoying,
Not given	good, boring, shy, nice, x (kiss), lovely
Not given	tired, boring, quiet, hate, disrespect,
Not given	love, leave
Not given	like, boring, 'your help', miss her, sad, feel down, feel well bad, nice, good, loved,
Not given	good, help, bored, like, love, needs me, guilty, boring, friends, happy, (includes access without moderator)
Access without moderator – accidental –	sad, jealous, helping, beat, different, hate, like, scare, friend
Bullying	good, bad,
Boyfriend/girlfriend trouble	like, good, pleased, love, crying,
Boyfriend/girlfriend trouble	cried, row, nice, caring, bad, devastated, hurt, love, happy,
Stress	stressed, feeling down, scared, bad, good, annoying, ignored,
Stress	sex, cheated, bad, harsh, shame, buff (meaning good looking), cope, beat, help, scared, happy, depression,
Christmas	nice, good, help, hate, bored, sexy, hate, depressing, loser, like,
Christmas	good, love, nice, like, friend, lovely, happy, sexy, caring
New Year	good, worry, funny, obsessed, nice
New Year	good, desperate, difficult, grateful,
Pressure from Home	here for you, feeling down, boring, need, stressing me, good, feeling,
Pressure from Home	hate, scared, that sucks, stress me out, scared, out of control, scary, help, have got no one, don't want to feel like this, silly me.
Coping with coursework	sad ☹, lazy, relief, unhappy, nasty, love,
Coping with coursework	embarrassing, like, brave, distracted, distracting, hurt, pressurises, isolated
Feeling down or depressed	depressed, horrible, love, happy, confident, feeling down, cool, lovely, been dumped
Feeling down or depressed	good, rubbish, annoying, cool, boring, exciting
Feeling down or depressed	like, relax, hate, take it easy, good, self-harm
Drugs and Smoking	help,
Drugs and Smoking (just before half term)	frantic, good, love, different,
Home life and Housing	get rid, bitching, hate, hurt, it sucks, annoyed, feel down, feel closer, I need him, love, immature, fallen for,
Divorcing or separating parents	annoyed, like, sorry, good, rejected, depressing, bitching, it sucks
Being or feeling different	tired, need, stupid, nice, no one wants me, loner, lovely
Tiredness and unable to sleep	nice, intimidated, help, pathetic, don't like, harsh, who am I to ask them to move (inferior), good, like
Sexual worries e.g. pregnancy, sexuality etc	bored, trapped, nice, help, worry, used, hurt, love, cool, worried, feel, differently
Caring for others – brothers, sisters, parents, children	help, miss, feeling down, sad, love, happy, well bad, nice, kind
Any other worries or concerns	good, fine, getting to you, help

Balancing work and college	love, helper, cool, silly, good
Friends	help, like, feel better, 'lock things up', trust, love, loss, violent, scared, laugh,
Alcohol	violence, push, threaten, fighting, prod, leave, love, hurt, kanes (hurts), respect (used in the context of brave), beating, provoke, had it coming, glad

Feelings Vocabulary (Faupel & Sharp 2003)

abandoned abused accepted adamant acquiescent
 adequate affectionate affirmed afraid agonised
 alarmed alienated ambivalent annoyed anxious
 apathetic appreciated astounded attractive avaricious
 averse awed awkward bad balmy
 beaten beautiful bewildered bitter blissful
 bold bored brave burdened butch
 callous caddish cagey cantankerous chided
 churlish comfortable concerned confident cop-out
 cowardly creative curious cut off deceitful
 defeated dejected delighted dependent depressed
 deprived desperate destructive determined different
 diffident diminished disappointed discontented distracted
 distraught disturbed divided dominated dubious
 eager ecstatic elated electrified embarrassed
 empty energetic envious evasive exasperated
 excited exhausted exhilarated fabulous fantastic
 fawning fearful flustered foolish frantic
 free fretful friendless friendly frightened
 frigid frustrated full funky glad
 good grateful gratified greedy grieving
 groovy guilty gullible gutless gutted
 happy hateful helpful high homesick
 honoured hopeful hopeless horny horrible
 hostile hurt hysterical ignored immobilised
 impatient imposed upon impressed inadequate incompetent
 infatuated inferior infuriated inhibited insecure
 insincere inspired intimidated involved isolated
 jaded jealous joyous judgemental jumpy
 languid lazy left out lonely loser
 like lovable loving low loyal
 manipulated mawkish miserable misunderstood nasty
 needy nervous nice odd opposed
 optimistic outraged overlooked overwhelmed panicked
 paranoid peaceful persecuted petrified pleasant
 pleased possessive preoccupied pressured putrid
 quarrelsome quiet randy refreshed rejected
 relaxed relieved remorseful repulsive restless
 restrained sad sapped satisfied sexy
 scared screwed up settled shallow shocked
 shy silly sluggish sorry spiritual
 strained stunned stupid sure tempted
 tense threatened thwarted tired torn
 touched touchy trapped truculent unctuous
 upset used useless vacuous violent
 vivacious vulnerable wilful wishy-washy wonderful
 worried zany

Common Negative Feelings List

Steve Hein 1996 www.equi.org

Hein, S (1996), EQ for Everybody: A Practical Guide to Emotional Intelligence, Alligator, Grainsville

Dignity/ Respect/Self- Worth	Freedom/Control	Love/Connecti on/ Importance	Justice/Truth	Safety	Trust
Ashamed Beaten down Cut down Criticized Dehumanized Disrespected Embarrassed Humiliated Inferior Insulted Invalidated Labelled Lectured to Mocked Offended Put down Resentful Ridiculed Stereotyped Teased Underestimated	Bossed around Controlled Imprisoned Inhibited Forced Manipulated Obligated Over-controlled Over-ruled Powerless Pressured Restricted Trapped	Abandoned Alone Brushed off Confused Disapproved of Discouraged Ignored Insignificant Invisible Left out Lonely Misunderstood Neglected Rejected Uncared about Unheard Unknown Unimportant Uninformed Unloved Unsupported Unwanted	Accused Cheated Falsely accused Guilt-tripped Interrogated Judged Lied about Lied to Misled Punished Robbed	Abused Afraid Attacked Frightened Intimidated Over- protected Scared Terrified Threatened Under- protected Unsafe Violated	Cynical Guarded Sceptical Suspicious Untrusted Untrusting

Matrix of Organizational Emotional Literacy (Haddon et al 2005:9)

Domains	Values
Communication	Transparency Warmth Engagement Dialogue Development
Organization	Cohesion Alignment Support Reflection orientation
Relationship	Empowerment
Emotional experience	Trust Openness Empathy Respect Valuing Safe Accepted Included Listened to Competent

Appendix 15 College Chat Guidance for Use

College Chat Guidance for Use

The purpose of College Chat is to provide an anonymous and confidential service where students discuss and share ideas, using text, issues that may be affecting them at home or college.

All students accessing College Chat need to be aware that all contributions made within College Chat are monitored according to the IT and Child Protection Policies of the College. In addition, the following guidelines are given for use.

- ❖ Students accessing the system should contribute to the topic of the day or other relevant topic area that is affecting their support needs at college.
- ❖ Anonymity within College Chat means that no names or personal identifiers are to be used on-screen but all individual contributions are linked to student logon IDs.
- ❖ Confidentiality within College Chat means that all communications are logged and kept within a secure area. This area is only accessible by TTM's to be used for awareness raising and contributions are not linked to individual students. Chat logs are not shared with anyone else unless relevant to the above IT and Child Protection Policies.
- ❖ A moderator will be present within each chat session and can be identified by the use of (Mod) at the start of their contributions.
- ❖ No follow up to any contributions will be made unless a student specifically asks for this to be done (except for all IT and Child Protection issues)
- ❖ All contributions must be made in line with the policies of the college including the appropriate use of language and behaviour.

Appendix 16 Checklist of Eight Heuristics for College Chat

User Question	Usability Concerns	Sociability concerns
Why should I join this community?	Clear and meaningful name – College Chat Description of purpose given on website Content attractive and use of message screen and emoticons Weekly/bi-weekly updates	Use of email for communication of purpose – i.e. to be used as someone to chat to about topic of the day. Attracted 150+ students whilst only be available at specific times during the college week.
How do I join or leave?	All college students are able to join – short procedure – need to be aware that information is linked to contributions Open access by all students at specified times. Statement given of privacy and confidentiality issues in line with IT policy and Child Protection Policy.	Closed community to students. Sensitive participants as under 18 and issues of an emotional nature so also sensitive. Access for all students but clear penalties given including ban for students displaying inappropriate behaviour e.g. swearing, homophobia, sexism, racism.
What are the rules?	Clear College Chat Guidance for Use – positioned on chat and within each email sent out.	Moderator present in every session to guide students and enforce rules – also to instigate ban. Unknown member of staff to students – anonymous.
How do I read and send messages?	Students able to use text similar to MSN and use of emoticons – recommendation to add FAQ section but not currently available	No private messaging available to avoid sub-groups that cannot be moderated. Little support needed as virtually all students are either using email or MSN and are able to communicate in text.
Can I do what I want easily?	Easy access for 8 students at one time. Ability to drop in and out of the system and add text.	Students can talk about what they want in a protected environment only accessible by other students and within the boundaries of college policies.
Is the community safe?	Personal information protected – anonymous transcripts are placed with a secure area to be checked for child protection issues.	Communication via chat@college.ac.uk to enable anonymous communication with the moderator at the college. Security needed is provided by direct link to student data as only student community can access the system.
Can I express myself as I wish?	Emoticons present for expressing feelings as linked to emotional literacy	Chat web page communication linked to student ID and support given via email system as needed. Follow up for child protection issues via Child Protection Officer.
Why should I come back?	Twice weekly bulletin giving topic of the day to secure interest – open community to allow returning or new students depending on the topic	Both regular and one-off students attracted, depending on the topic.

Appendix 17 Nicknames chosen by students.

Name	Detail about student
Zen	Level 2 Male
Gold	Level 2 Female
Dr X	Level 3 Male
Gawny	Level 3 Male
Crazee1	Level 3 Female
CraZgal	Level 3 Female
Spex	Level 3 Male
Crazyfrog	Level 3 Female
Daymonkey	Level 3 Male
Anon1	Level 3 Female
Tiff	Level 2 Female
BigDave	Level 3 Male (not named Dave)
BigBoy	Level 3 Male
Bill	Level 3 Male
Bob	Level 3 Male
Z	Level 3 Female
Sniff	Level 2 Female
Natz	Level 2 Female