

# Relationships with peers enable 1st year students to negotiate and surmount social and educational challenges within online learning communities

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## Abstract

This article identifies social and educational challenges of students engaged in a 1st year, online, communication course. An understanding of the learners' experience is based on the perceptions of learners who completed the course and from an analysis of how students interact as they participate in collaborative learning activities. Learners identify a range of factors which enhance and impinge upon their learning experience. The analysis of student contributions during online discussions reveals a range of self initiated communication strategies and behaviours which appear to provide learners with the support they require to negotiate and surmount the challenges they perceive within the learning context. The supposition is that relationships with peers provide learners with an effective means of social and educational support and are a key factor in the development of a learner's sense of community. The thesis has important implications for teaching, learning and curricula development as it places emphasis on the relational aspects of interpersonal communication over activity and frequency of interaction and emphasises the need to facilitate and promote the development of learner-learner relationships within online learning contexts.

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## Introduction

Today's rapidly expanding Internet connects more than a billion people worldwide and affects human communication in profound ways (Luppicini, 2007a). Online environments present an educational domain unique in their potential for interaction, participation and collaboration (Kumpulainen & Mutanen, 2000) and universities are increasingly adopting online contexts for teaching and learning purposes. Many online courses provide learners with the ability to interact with each other and it is not unusual for educators to encourage and in some cases require a certain amount of participation, often the success of these courses depends upon the nature of the interaction (Picciano, 2002); however, online environments present a number of challenges for both students and educators (King, 2002). The context itself is significant because it creates a social climate that impacts upon learner interactions and group dynamics (Gunawardena et al.,

2001) and the interactive use of technology is difficult to achieve because it takes time, practice and support to be effective (Andrews & Crock, 1996). Meyer and Muller (1990) contend that;

Higher education is all about students who succeed and those who do not, and the pressures to explain how this happens and how it can be improved are very real. It seems self-evident that students who succeed are able, by definition, to orchestrate their approaches to studying successfully while those who fail are less able to do so, for whatever reason. (p. 149)

This article offers a review of literature to introduce the concept of online learning communities, emphasise the educational value of interaction and highlight the association between perceptions of the learning context and approaches to learning. Vygotsky's theory of development serves as a theoretical framework in the analysis of the learning experience of students engaged in a 1st year, online communication course. Learners identify a range of factors which they believe both enhance and impinge upon their learning experience. Examples are presented and discussed in conjunction with an analysis of student contributions during online discussions. The results reveal a number of, self initiated, behaviours and communication strategies which appear to provide learners with the support they need to surmount the social and challenges they perceive within the computer mediated context of the course.

## **Literature review**

### ***Online learning communities***

Definitions about what constitutes a learning community continue to evolve in response to the diverse needs of learners and the communities in which they learn (Kilpatrick, Barrett, & Jones, 2003). Current definitional themes (Rovai, 2002), suggest that a learning community may be described as a group of individuals who share a common purpose or goal, collaborate to address learning needs and draw from individual and shared experiences in order to construct knowledge and enhance the individual and collective potential of community members. As these characteristics resonate with the purpose of the course, the perceptions of participants and the results of the analysis of interaction and knowledge construction the communication course was conceived an online learning community.

The community construct is widely accepted as a sense rather than a tangible entity (Wiesenfeld, 1996) and, although it has been argued that physical separation reduces the sense of community and gives rise to feelings of disconnection, in today's society the concept is perceived more relational than geographical (Brook & Oliver, 2003). Despite theoretical debate about the role communities play in the learning process, there is little doubt as to their value to learning (Hung, Tan, & Koh, 2006) as strong feelings of community have been found to increase persistence in courses, the flow of information among learners, the availability of support and commitment to group goals (Wellman, 1999). While the core business of learning communities is to share knowledge through collaboration (Kilpatrick et al., 2003), there is concern that computer mediated interaction may not be a sufficiently rich mode of communication to sustain a sense of community and engender trust relations (Haythornthwaite & Aviv, 2005).

## ***Learner interaction***

Despite the number of studies examining the concept of interaction, there is a lack of definitional consensus (Beuchot & Bullen, 2005); confusion arises because the term “interaction” is used interchangeably with “interactivity.” Su et al. (2005) differentiate between the two suggesting that while interaction is process orientated and focused on dynamic actions, interactivity is feature orientated and emphasises system characteristics or the degree of interaction. Thus interactivity could be interpreted as the level of participation. Research suggests that interaction among learners makes a positive contribution towards student learning and is a significant factor in successful online learning (Su et al.); however computer mediated interactions tend to be unusually complex because of the need to mediate group activity in a text based environment (Gunawardena et al., 2001), in this context text, assumes the fundamental form of an exchange representing the dialogue and interaction between speakers.

Although interaction is considered the key to the co-construction of knowledge and cognitive change (Davis & Rouzie, 2002) and technology supports interactive teaching and learning (Leasure, Davis, & Theivon, 2000), student contributions, within online discussions, often lack interactive characteristics (Davis & Rouzie, 2002). Within this article interaction is defined as two-way communication among two or more people within the learning context, with the purpose of task or instructional completion. Two-way interaction is not an inherent part of technology and the outcomes of interaction are tied to instructional design (Chou, 2002). Consequently interaction and learning may not occur if the social structure of the course permits passive compliance. Similarly if interaction is too interactive it may overwhelm the capabilities of some learners which may also be detrimental to the construction of knowledge (Levin, 2005) and successful completion of the course.

## ***Perceptions of the learning context***

The association between perceptions of learning context and approaches to learning has been repeatedly identified and emphasised as significant within research literature (Meyer & Muller, 1990) and although research suggests that computer mediated interactions may be low in social context cues (Berge, 1997), computer conferencing can be perceived as active, interactive, interesting and stimulating by conference participants. Discrepancies of this kind have led to a call for studies to explore online learning from the student’s perspective (Bullen, 1998). Gunawardena, Lowe, and Anderson (1997) point out that participant reports of learning or satisfaction with the learning experience can be found in the transcripts of computer conferences and that a detailed examination of electronic transcripts may provide theoretical and practical insight into the learning context and its outcomes.

## **Theoretical framework**

Current educational perspectives emphasise the social and situated nature of learning and there is renewed interest in social constructivist theories. Indeed, much of the focus on learning communities springs from socio-cultural research (Wertsch, 1995). The constructivist paradigm is based on the principle that individuals and communities construct knowledge based on their experience and are constantly refining knowledge of the world by interacting in social and cultural contexts (Kanuka & Anderson, 1998). Participants actively construct meaning

through language; thus learners learn by engaging in dialogue and the thinking of individuals is influenced by the group in which they are working.

Vygotsky's theory of development serves as a theoretical framework in the analysis of learner experience within the online course. The theory is appropriate to the themes of learning communities, a dialogic model of learning and lifelong learning as it is based on three interrelated precepts: that human activities take place in cultural contexts, are mediated by language and other symbol systems and can be best understood when investigated over their historical development. The underlying assumption within current literature and the premise of the theoretical framework is that learning is a dynamic, interdependent, intrapersonal and interpersonal process.

## **Method**

This paper synthesises two aspects of a larger research study, designed to understand how learners interact and construct knowledge in online environments within a large group, small groups and from individual perspectives. For the purpose of this discussion, understanding of the learners' experience is based on the perceptions of learners who completed the course and from an analysis of how students interact within a large asynchronous discussion group as they complete online learning activities. Within this study the learning community comprised students engaged in a 1st year, online, undergraduate course within a regional university in Australia. The course was core within the Bachelor of Health Promotion and an elective for several different programs offered by the university. Ethical clearance was granted by the university's human ethics committee to investigate learner interaction and knowledge construction in online learning environments. 21 students completed the course and were invited to participate; one learner chose not to participate. Each participant is identified by a pseudonym.

## **Procedure**

Ethical clearance was granted by the university's human ethics committee to investigate learner interaction and knowledge construction in online learning environments. Participation and interaction in online activities accounted for 25% of the total grade awarded for the course. 21 students completed the course and were invited to participate; one learner chose not to participate. Each participant is identified by a pseudonym. Student perceptions of the learning context were obtained from electronic transcripts of responses submitted by learners to the class discussion board (large group), during week 3 and week 8 of the course. The relevance of responses during these weeks relates to the nature of the discussions which revolved around the development of online relationships and student perceptions about online learning groups. In order to understand how learners interacted within the large asynchronous group data were organised into 12 networks, each reflecting one academic week within the course. Based on the results of a social network analysis of the large group weeks 2, 6 and 11 were identified as having the potential to offer significant insights about the nature of learner interaction (Rossi, 2008b). The content of transcripts from the weeks identified were inductively categorised and thematically coded; data were managed with the assistance of qualitative software (NVivo, 2006); and statistical data was retrieved from Blackboard, the learning management system, which served as a technological platform for the course.

## Results

The 1st year course has been identified as an online learning community. From a Vygotskyian perspective the course represents a semiotic mechanism for learning, because student interaction and learning take place in a text based, computer mediated context. Although discussion within this paper revolves around the challenges that learners perceive within the online context of the course the positive aspects of the learners' experience provide significant insights about the type of support learners appreciate and draw attention to the importance of the learning context. A summarised description of factors that enhance the learning experience is provided here, for a more detailed discussion see Rossi (2008a).

### ***Learner perceptions of factors that enhance the learning experience***

Based on learner perceptions, the factors that enhanced the learners' experience reflected the dimensions of community identified by Rovai (2002) as spirit, trust, interaction and goals and expectations.

#### **Community spirit: trust, unity and support**

Learners spoke positively about their sense of unity within groups and the availability of peer support.

**Belinda (W8LGD)**...I am enjoying the OLG [online learning group] more-so with each passing week, due to the support of my fellow group members and the sense of unity that's evolving over time.

**Rena (W8LGD)**...I also feel connected with others and assured that help is available as everyone is so quick to respond in answering queries or problems on the discussion board.

**Jenny (W8LGD)**...Even though I don't like working online I have found all the members have been very supportive and go out of their way to help. It doesn't take long to achieve a sense of unity especially with the small groups.

#### **Mediated interaction: power, voice and understanding**

Learners believed that the computer mediated context enabled them to assert and express themselves in a way that they could or would not in face-to-face environments in effect the learning context afforded them power and a voice. The textual mode of communication and interactions with others were perceived to enhance the learners understanding of theoretical concepts.

**Kirin (W8LGD)** When communicating online I can assert myself more, and I have time to think about my response and not sound like a goof...

**Nari (W8LGD)** I find that meeting online allows me to express my feelings more openly. I don't feel threatened by others opinions of me, as they cannot see my lack of confidence in my kinesics (as they would in face to face meetings) and I cannot see their non-verbal feedback to my comments...

**Alaine (W8LGD)**... We have all learned from each other because through interacting we have had the opportunity to expand the concepts within the theory. We have done this by offering examples that we think relate these theories back to communication we have experienced. Our group then uses our collaboration sessions to discuss this further, giving even more clarity and helping each other to grasp the concepts.

### **Goals and expectations: Sustainable outcomes**

The ability to practice skills and apply knowledge enabled them to develop sustainable, personal and professional learning outcomes.

**Fiona (W8LGD)** The fact that this course is based on group work is entirely understandable given that in the workforce operating in groups (and teams) is commonplace; and the major requirement is good communication skills, not only in groups but in one-on-one relationships. The more practice we have and the more prepared we are for it, the more successful we'll be. Of course the spill over and application of these skills into our personal lives can only benefit us.

### ***Learner perceptions of factors that impinge upon the learning experience***

Negative perceptions were associated with institutional expectations and the time required to communicate in online groups. Learners' expressed frustration provided examples of miscommunication and drew attention to their general distrust of people they did not already know in online contexts. There was consensus that most of these challenges were due to the absence of non verbal cues.

### **Time miscommunication and lack of non verbal cues**

**Emily (W8LGD)** I have found working in a group in an online environment very challenging. I love the social aspect of having a group with common goals, but find communication online to be a little frustrating and sometimes hard to understand. Miscommunication happens so easily, whether due to spelling mistakes, the inability to place emphasis on specific words to enhance understanding, or the inability to use nonverbal behaviour to communicate meaning such as a joking comment. The task of making a simple decision such as organizing a time to chat can become a long drawn-out process, which can be frustrating as I like to do things quickly. Groups take time to deliberate about alternative courses of action. It takes a substantial time for each person to describe ideas, clarify misunderstandings and respond to questions or criticisms.

### **Expectations 'social loafing' and group size**

**Kirin (W8LGD)** An online learning group is a great way to learn, but I think there is a bit too much expected of us (that's uni for you though). If this was the only subject being studied it wouldn't be an issue, but for those that are doing 2, 3 or even 4 subjects it is a struggle...

**Morgan (W8LGD)** ...online groups are worth the effort that is as long as all members put in equal effort. When working in any kind of

group, in particular online group it is important to be aware of social loafing (learner emphasis). Social loafing is "the tendency of group members to do less than they are capable of individually" (Robbins et al., 2001, p. 289). When social loafing is evident it makes it hard for groups to function efficiently and is often the cause of many group conflicts. So I think it is an important role of all group members to "pull their weight" and contribute equally. It is also a responsibility of other members to monitor the contribution of other group members and encourage them when they are not fulfilling their role.

**Alaine (W8LGD)** One of the group members in our small group has not participated in any group work and has been a threat to the cohesion of our group because he sees his goal of passing the subject as autonomous rather than realising that the group work of weekly summaries is a common goal that we need to share. Groups also require good communication and as he has not replied to any of my emails urging and encouraging him to be a part of the group, we are left wondering what the problem is. We have a good group in the 3 that do communicate though and thus we have been able to work around changes in our schedule due to his non-participation. As opposed to operating solo, it takes more time for all members of a group to put forth ideas, clarify misunderstandings and then respond and answer to criticism. However, when creativity and thoroughness are important the values of groups may be more important than the time they take.

**Avril (W8LGD)** I feel no cohesion within a group this large as nothing seems personalized or related to me. There is less contribution from each member due to the large group numbers. The way the group members can sometimes submit their work can also be a very time consuming...some online groups are worth it like my small team as we seem to have a 'common aim'... However it is not worth the effort when trying to learn in online environment's like the class discussion board. I would rather read different perspectives out of the online resources materials.

Group size was perceived as a factor which inhibited and promoted participation in learning activities, the diverse opinion stemmed from the fact that learners were members of a large and small group. There was, however, considerable agreement about the ways group size affected participation and the learners' connectedness with others.

### ***Learner behaviours and communication strategies***

A comparison of the number of hits to the large group discussion board (LGD) and posts to the LGD revealed considerable discrepancies (see table 1). Without exception the number of hits exceeded the number of learner contributions to the discussion. For example Carol accessed the LGD, reflected by 32 hits, but she did not participate in discussions within the large group during the 12 week term, thus she was active but not interactive. While Alan and Rose accessed and participated in LGD, the extent of their participation is reflected by few hits and correspondingly few contributions. By contrast Mary and Rena were among the most active in terms of the number of hits to the large group discussion but these learners posted relatively few contributions to the discussion. What these findings

emphasise is the difference between learner access (activity) and participation (interaction) within the learning context. They also substantiate student claims that some group members do not contribute to the same extent as others in learning activities.

**Table 1: Overview of learner activity and participation in large group discussion**

Learners	Hits LGD	W1	2	3	4	5	6	7	8	9	10	11	12	Posts LGD
Kirin	1223	1	1	1	1	2	5	1	3	2	1	1	3	22
Karen	841	1	1	1	1	1	2	1	1	2	1	3	2	17
Rena	2938	2	1	1	1	1	1	1	2	3	1	1	3	18
Yasmin	1098	2	0	1	1	4	11	8	3	1	3	1	2	37
Rose	353	1	0	0	1	1	0	0	0	0	0	1	3	7
Emily	2510	3	2	1	8	6	12	4	2	3	5	3	4	53
Morgan	2610	2	6	2	3	4	6	4	4	5	3	4	3	46
Jane	2916	3	2	1	2	6	12	4	11	5	9	9	11	75
Jenny	2283	1	3	4	7	11	18	8	15	6	7	6	10	96
Ruth	887	3	3	3	2	3	3	6	5	3	5	3	1	40
Simon	551	2	1	1	1	1	1	1	1	1	1	1	1	13
Carol	32	0	0	0	0	0	0	0	0	0	0	0	0	0
Alaine	2398	3	4	5	5	5	2	0	3	1	0	4	0	32
Avril	730	4	3	4	1	2	1	1	2	0	1	1	0	20
Mary	1445	2	2	1	1	1	1	0	1	1	1	2	1	14
Kelsie	820	3	0	1	1	1	0	1	3	2	1	1	1	15
CC	1889	10	15	3	4	9	6	3	1	3	1	6	1	62
Nari	1893	3	4	4	7	6	8	4	1	0	2	0	0	39
Fiona	2327	7	2	3	2	3	12	10	4	2	6	7	9	67
Belinda	1247	2	0	0	0	5	6	2	2	4	1	3	1	26
Alan	175	0	1	1	0	0	0	0	2	1	1	0	0	6
<b>Totals</b>	<b>31166</b>	<b>55</b>	<b>51</b>	<b>38</b>	<b>49</b>	<b>72</b>	<b>107</b>	<b>59</b>	<b>66</b>	<b>45</b>	<b>50</b>	<b>57</b>	<b>56</b>	<b>705</b>

While informative statistical data of this type provides little to no insight about the characteristics of learner interaction, however, a detailed examination of the content of learner contributions to the LGD revealed further differences in learner behaviour. Based on findings learner interaction was subsequently categorised as; independent, interactive, interpersonal or intrapersonal. An interaction was considered independent when there was a singular post that did not relate to other messages, interactive when there was two-way communication between two or more learners, interpersonal when content contained personal information or a relational dimension and intrapersonal when the post reflected self-talk. The majority of posts to the large group discussion in weeks 2, 6 and 8 were categorised interpersonal.

The content of learner contributions also revealed a range of self initiated communication strategies, which included the adaptation of text to convey non verbal communication, the use of brackets to contextualise content and the use of humour, which was frequently used to limit or reduce the potential negative impact of a particular comment. A number of these strategies are acknowledged in Jenny's response to the contribution of a group member.

**Jenny (W8LGD)** What I find interesting about the online group is the ability for emotion to still come across even though we cannot see the nonverbal language. We also have a couple funny characters in our group who help to alleviate the seriousness of the tasks and amount of work involved. There have been a couple of incidences of miscommunication that have caused some poor feelings but through constructive discussion the poor feelings went and were replaced with connection and unity which as you said have enhanced our work. I also find it quite challenging to put my thoughts into words that reflect exactly what I am trying to say otherwise I find I get taken out of context easily.

## Discussion

We build, refine and transform relationships through interpersonal communication (Wood, 2004). Relationships develop over time may be viewed on a continuum with the impersonal at one end and highly personal (interpersonal) at the other (DeVito, 2004). The variation between these two poles is reflected, to a certain extent, by categorisation of different types of interaction evident in learner contributions. From an educational perspective, there are considerable similarities between the dimensions of a learning community, identified earlier, and the characteristics of close relationships, which include investment, commitment trust and comfort (Wood, 2004).

Investment relates to the time, energy and thoughts and feelings we put in to the relationship and inequitable investment tends to lead to resentment. Table 1, which provides an overview of learner activity and participation in LGD, also illustrates variations in learner investment in weekly discussions and commitment to learning activities over the academic term. The number of posts by learners each week is indicative of the extent of their investment, as learners themselves point out interaction and collaboration in online learning contexts take time can be frustrating and miscommunication often occurs. Morgan and Alaine's comments about 'social loafing' illustrate the type of resentment that can occur when learner investment in collaborative learning activities is perceived to be inequitable; but they also highlight that providing there is sufficient time and effort expended by

other learners the goals of the group can still be achieved. Learners identified social loafing as a negative factor in their learning experience, in order to achieve group goals they implemented the following strategies. First, they accepted responsibility as individuals and a group for their learning, they attempted to communicate with and encourage the non participant to contribute and when this approach failed, together they negotiated changes in the group schedule in order to compensate for the lack of responsibility and investment by the social loafer.

Commitment is considered less affective, than investment, and is associated with decision making, which is often based on perceptions about the future of the relationship (Wood, 2004). Commitment is reflected by the consistency of learner contributions throughout the term and Table 1 identifies those who could be relied upon to contribute regularly to the LGD. Avril draws attention to her lack of commitment to the large group, drawing comparisons between the large and small group she was a member of. Commitment is one aspect of relational development with the potential to be problematic in learning contexts, because the connection between learners tends to come to a predetermined end. Although compulsory participation in online discussions may dictate the frequency of interaction the creative design of collaborative learning activities and assessment may enable and encourage learners to demonstrate investment in and commitment to the learning community or group, thereby promoting the development of peer relationships over task orientated interaction.

Trust, which is also a dimension of learning communities (Rovai, 2002), has to be earned and is often based on a belief about the reliability of others. Consequently investment and commitment contribute to the establishment of trust in learning contexts. The concerns learners raised about the development of trust within this course were primarily related to the absence of visual and non-verbal cues. Yet despite their initial misgivings learners did overcome these barriers by posting photographs and using electronic text, textual emphasis and emoticons. Through their photos learners were able to project a visual image and a social presence by providing peers with cues generally absent in textual contexts. The use of abbreviated text, bold fonts and emoticons also enabled them to convey their emotions in an implicit, 'non-verbal' way. Learners were consistent in their use of brackets to provide contextual information. This strategy provided a means of clarifying the situation, to enhance the understanding of others and facilitate shared meaning. Jenny's response indicates that these self-initiated communication strategies were successful as emotions were shared, humour was acknowledged and misunderstandings were resolved. Similar strategies could be encouraged in learning contexts, particularly, when it is not technologically possible to display visual images of learners as they engage in collaborative learning activities.

Comfort relates to opposing but normal forces in relationships, for example autonomy versus connection, novelty versus predictability and openness versus closedness (Wood, 2004). Thus comfort within an online learning community is dependent upon investment, commitment and trust. It is recognised that the experience within a community is context specific (Sonn, Bishop, & Drew, 1999) and group size is recognised as an important factor in collaborative learning. For the most part students within this course perceived the learning environment to be a safe and supportive forum for participation and self expression; however, Avril draws attention to the negative impact that group size may have upon a learner's sense of community and perceptions of the learning context. Although much can be learnt from exposure to a diverse range of perspectives and experiences, these benefits may be countered if learners find it difficult to develop personal

connections, or learning relationships within a large group. The inclusion of both large and small group activities may provide learners with opportunities to share a broad range of knowledge and experience and develop interpersonal relationships with their peers.

While acknowledging uncertainty about the function of learning communities in the learning process (Hung et al., 2006), the contention within this paper is that they have the potential to provide a learning context conducive to the development of learner relationships. Moreover relationships with peers provide learners with the support they need to negotiate and overcome the social and educational challenges they perceive within computer mediated contexts. This assertion is congruent within a dialogic model of learning and has important implications for teaching, learning and curricula development as it places emphasis on the relational aspects of interpersonal communication over activity and frequency of interaction and draws attention to the need for teaching and learning strategies that facilitate and promote the development of learner-learner relationships, specifically within online learning contexts.

## Conclusion

This paper introduced the concept of n learning communities emphasised the educational value of interaction and drew attention to the association between learner perceptions of the learning context and approaches to learning. A range of factors perceived by learners to enhance and impinge upon their learning experience was presented. The factors believed to enhance the learners' experience reflected Rovai's (2002) dimensions of community. The analysis of how students interact as they engage in online learning activities revealed a number of self initiated behaviours and communication strategies which appeared to enable learners to negotiate and surmount the challenges they perceive within the learning context. A comparison was drawn between the dimensions of community and the notion of investment, commitment, trust and comfort in learning relationships. The thesis of this paper is that relationships with peers provide learners with an effective means of social and educational support and are a key factor in the development of a learner's sense of community.

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