

Cyber-communities: Idle Talk or Inspirational Interaction?¹

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Abstract

Based on the idea that community is a basis for the development of the scientific mind and that collaboration, discussion and self-correction are essential to the advancement of scientific truth, research was conducted in a large online community to establish to what degree intellectual challenge, inspiration and collaboration can be found on the Internet in such communities. An online community in The Netherlands was used for a case study, results were gathered through participant observation and a questionnaire directed at the users. The results showed that, although there appears to be agreement that the community is a learning environment, there is insufficient evidence that this particular community inspires collaboration and discussion to a degree where the advancement of scientific truth is sought. The discussion deals with some of the issues that may have influenced these results, and suggestions for further research.

Key words: scientific mind, informal learning, computer mediated communication.

Point of departure

Point of departure for this study is the exploratory thinking on the issue of The Scientific Mind (TSM). J. Visser (2000) suggests that collaboration and co-operation are important conditions for fostering the development of a scientific mindset, curiosity, inspiration and the search for unity being among the defining dimensions of the scientific mind. Assuming, then, that discussion and self-reflection are essential to the development of TSM, the question arises whether online communities may be the 21st century's answer to the extra-curricular "hobby-clubs" and "science-clubs" that have somehow become obsolete. Considering that such extra-curricular collective activities were a source of inspiration and collaboration and often specifically aimed at fostering scientific (problem-based) thinking in their participants, one may wonder if, and if so, how, online communities may similarly inspire their participants seek solutions to problems through collaboration, to wish to increase their knowledge and expose their ideas to the criticism of others in a constructive atmosphere. To what extent do community members in the virtual world engage in meaningful discussions and self-correction, two aspects that are crucial to the advancement of the scientific enterprise (Bronowski, 1978).

As an active participant in various forms of online communication and interaction, such as through instant messengers (IRC, ICQ, MSN, Trillian) as well as in the context of online communities, I have been in the position to see first hand, and - through my participation in the crew of a large online community in The Netherlands - to make a modest contribution to the development of this type of communication in recent years. From my combined interest in the Internet as a virtual meeting place and in lifelong learning in informal settings, arose the questions explored in this study.

Introduction

Whether we are in favour of the Internet, welcoming the not-so-new technology as a means of broadening our horizons and increasing our access to information, or opposed to the Internet, deeming it a cold, heartless and anarchistic substitute for "the real thing", the reality of this day is that the Internet and the World Wide Web are entwined in our existence to such an extent that most of us can no longer imagine a world without it. The Internet provides access to information and immediate communication over long distances; it is also changing society: New social venues have evolved, virtual

¹ I would like to extend special thanks to Jan Visser, whose ideas not only prompted the questions raised in this article, but whose patient support, detailed feedback and valuable input in discussions have helped me in my personal scientific enterprise.



communities have emerged. Enthusiasts consider virtual communities a liberation from traditional constraints and boundaries like time and place (Utz, 2000). Or, in the words of Howard Rheingold (1994):

People in virtual communities use words on screens to exchange pleasantries and argue, engage in intellectual discourse, conduct commerce, exchange knowledge, share emotional support, make plans, brainstorm, gossip, feud, fall in love, find friends and lose them, play games, flirt, create a little high art and a lot of idle talk. People in virtual communities do just about everything people do in real life, but we leave our bodies behind... (p. 3)

In fact, communication between individuals or groups has been one of the main uses of the Internet since the very first networked mainframe (Sproull & Kiesler 1991, cited in Kraut et al., 2002). What is the big attraction of the online community? And how is virtual reality affecting our daily lives? And, more to the point in the light of this research: to what extent may participation in online communities foster meaningful and deep discussion? Intellectual challenge? Does online interaction increase our knowledge? If so, does it also increase our wisdom²? How do the users of this medium perceive this type of online communication and how does it, in their minds, compare to more traditional means of interaction?

While it has long been entirely acceptable to present oneself in the virtual world with an alter ego that was almost entirely a creation of one's wishes and imagination, users creating multiple identities and easily interchanging real-life and fantasy (Turkle, 1995), nowadays, this behavior is less and less tolerated, particularly within moderated communities. Consequently, real-life names, phone numbers and even addresses are frequently and easily exchanged. Some communities even bar users from registering using Web-mail and/or they use IP checks to ensure easy identification, allowing users to register only one username per IP address and actively discouraging the use of so-called clones³. And although seriously disturbing tales of teenagers being tricked into meeting chat-palls behind whom lurks not the expected teenage friend but a middle aged paedophile may lead one to believe the contrary, the actual fact is that, in the large majority of the cases, Internet users and online community members are often more willing to show their 'true self' than they may do "in real life". The anonymity of the Internet community makes it easier to express one's true self, and the greater readiness to do so results in relatively rapid formation of deep and lasting friendships and relationships (McKenna, 2002). This more serious approach to the Internet as a means of communication suggests that we are becoming increasingly aware of its value as a means of real-time communication and interaction across geographical borders, and less intrigued by the assumed advantages of anonymity, anarchy and, what forum users often term organised chaos.

Research setting and problem area

Online communities vs. traditional communication

One of the most important distinctive features of online communities is the fact that the people communicating are unable to see or touch each other, and, more often than not, have never even met. In this regard, online communication through messengers or threaded discussion in open fora differs from email, since people who initiate email contact may be strangers in the sense that they may not have met face-to-face or shaken hands, yet they have almost always already established some mutual ground (through a shared profession, acquaintance, or interest) before one of the two parties concerned opens the dialogue. People partaking in online communities are indeed mostly complete strangers, and frequently engage in interaction in order to establish whether common ground can be

² Wisdom in this document is taken to mean not the mere possession of knowledge, but the ability to implement knowledge in order to reach a more thorough understanding of the world around us and our place in it.

³ Exceptions are sometimes made for users wishing to discuss very personal problems, in these cases a clone may occasionally be allowed.



found, rather than interacting on the basis of established common ground. In addition, they are frequently separated by geographical distances and most likely would never have come into contact with each other through any other form of communication.

The differences between the various forms of cyber-communication are best illustrated through a comparison⁴: using an instant messenger may be compared to ringing a completely random number and having a lengthy talk with whomever happens to pick up the phone, with the knowledge that the person attending your call also wishes to engage in said talk. Participating in an online community may best be compared to walking into a room full of people whom you know nothing about, with the sole purpose of engaging in discussions on any number of issues, with any number of people for as long as you like, safe in the knowledge that you are at no time obliged to enter that room again at any time in the future unless you so desire.

Communication programs such as MSN, ICQ and IRC are gaining in popularity, and some 41 million people world-wide now have some form of instant messenger installed on their computer⁵. Online PHP⁶-based communities are also on the increase. Although it requires a good deal of genius and a large stroke of luck for a community to grow, we may expect this form of communication to become firmly embedded in our society.

Research question

Within the above described setting and based on the assumption that collaboration and discussion fosters TSM (see above), in this research I searched for a tentative answer to the following research questions:

To what extent do users of online communities engage in meaningful and deep discussion? How do they perceive this type of online communication and to what extent do they (expect to) find intellectual challenge, inspiration and collaboration on the Internet?

Method

Choice of subjects

In this research, a large, non-scientific community was chosen for a case study. Large because the larger the group, the greater the likelihood of it being a valid and accurate reflection of what happens in a relatively major real-life Internet community; non-scientific because in the context of the study we are interested in possibilities for the development of the scientific mind in ordinary people who are not necessarily particularly attracted to issues studied by professional or amateur scientists.

The researcher has been an active member for several years of the community *Fok!* (<http://www.fok.nl>), both as a user and a crew member. This motivated the choice of Fok! as an environment in which the study could best be conducted. It may take months, or even years, to become thoroughly acquainted with the particularities of an online community. There were thus obvious great practical advantages in choosing an online community already known to the researcher and one in which the researcher had previously established trust relationships that allowed for an effective role of the researcher as participant observer, in addition to the application of an online questionnaire. To limit or eliminate any possible researcher bias, two independent research assistants, unfamiliar with the Fok! environment, were employed to ensure that interpretations of the research findings could be

⁴ This example assumes use of online communication methods for the purpose of "chatting". I.e. not as a substitute for the telephone or similar methods of communication.

⁵ <http://www.webwereld.nl/nieuws/11523.phtml>

⁶ PHP is a server side scripting language used to build guest books, forums, and front-ends for search engines. PHP is widely used and can easily be embedded in HTML (<http://www.php.net/>).



validated through comparison with independent interpretations of the same responses by the two research assistants. The extent to which this validity check gave satisfactory results will be discussed further down.

Case study

The community chosen for this research is the largest (Figure 1) online community⁷ of The Netherlands, registering a record high of 766539 page views on 2002-06-18 (statistic taken from the crew-members forum, limited access). Access to this community is free, anyone may read threads, although in order to post replies a user must be registered by means of an SMTP email address.

Figure 1: Comparison of ten largest open Internet communities in The Netherlands

Community	Link	# of users
Plauder	http://plauder.pi2002.de/	2077
Woest	http://www.monno.nl/forum/	435
Magreb	http://www.maghreb.nl	4064
Weerwoord	http://www.weerwoord.nl/cgi-bin/Ultimate.cgi	907
Ijar	http://www.ijar.nl/forum/	11
Babbelz	http://www.babbelz.com/	267
Sportbord	http://www.sportbord.nl/	51
W@ladin	http://www.messageboard.nl/forums/alpha/299/	793
Fok!	http://forum.fok.nl/	33612
Beginnersweb	http://www.beginnersweb.nl/forum/	2643

Fok! has seen a spectacular growth in a little over two years. In July 2000 the site generated a total of 1 067 978 page views, 418 189 on the FrontPage and 649 789 on the Forum. The daily average of page views then was 34 451. Just over two years later, in September 2002, a total of 21 902 914 page views were generated, of which 6 758 627 on the FrontPage and 14 360 224 on the Forum. The daily average of page views reached a staggering 730 097⁸. The Fok! site is moderated by over 100 crew-members (moderators, administrators, news-posters, etc.), all of whom work on a voluntary basis and receive no income or other benefits for their work. Access to the site is free of charge, the necessary income (required for server space) is generated through banners. The community consists of the following sub-sites, all interlinked, and generally frequented by more or less the same users over time:

- Front-page: with daily news.
- Forum: The interactive forum allows users to engage in threaded discussions within 28 sub-domains.
- Photo-gallery: an online photo-gallery where users may activate their interactive personal page.
- Weblog: users provide links to all sorts of Web sites to share and discuss with others.
- Shop: budding commercial hardware store affiliated to, and hosted by, Fok!
- Dating: interactive dating site.
- Manager: interactive sports site.

⁷ Please note: Due to the continual appearance and equally frequent disappearance of communities, and the lack of an 'index' of online communities, it is impossible to say with absolute certainty that a community is the largest. However, an extensive google-search yielded a list of a number of comparative communities (the key criterion being that access should be free of charge) in The Netherlands, all of which are significantly smaller than Fok!

⁸ http://www.fok.nl/~arjen/stats_month.php holds all the statistics on page views per month.



The current research focused on the *Forum* part of Fok!, because it is the largest sub-site and is frequented by almost all users. Moreover, for the purpose of determining whether an online community allows for in-depth discussion, it is essential that the users should be fully able to initiate a discussion on the topic of their choosing, and this is not always the case within the other sub-sites. In the Forum section users can both participate in discussions initiated by others, as well as initiate discussions themselves. Although all discussions are moderated by crew members, threads are seldom closed except in cases of blatant violation of policy⁹.

Research from two perspectives:

This research was carried out from two perspectives. One of these is through the eyes of the researcher, who, as a participant observer frequented the community on a daily basis and actively participated in discussions, both at user level and at crew-member level, over a period of several years. The other perspective is from the point of view of the registered users. In order to obtain their views on the issues raised in the research question, a topic containing a short explanation of the research and its purpose was posted in a selection of different forums.¹⁰ The topic contained six open questions (see Figure 2) directed at the users and a request to answer these. The questions were formulated in such a way that the reactions could be given in a threaded discussion, allowing users to react to answers provided by other users in addition to providing their own answers. The topic was posted on a Friday evening and moderators were asked to keep the topics open for the duration of five days. The questions were posted in the following sub-forums: Digital corner, General chat, Arts and literature, Science, Philosophy and theology, The truth is in here, History and culture, School and study, Relationships and psychology, News and Media, Fok! Island, Lifestyle, Music, and Politics.

The 96 reactions obtained were subsequently filtered of all posts containing no answers to any of the questions, after which a total of 50 posts remained that were relevant and usable¹¹ for the purpose of this research. These reactions were then coded according to a five point scale, ranging from ++ (representing a very positive rating of the issue under consideration) through +, +/- or 0, - to - -, the latter signifying a very negative rating. Because the questions were open, coding the reactions required the researcher to 'translate' the question into a statement, consequently 'translating' the answers given by the users to signify: "agree totally" (++) through "agree" (+), "neither agree nor disagree" (+/- or 0), "disagree" (-) to "disagree totally" (- -). In addition, each answer was coded in accordance with the depth of content: user reactions to a question containing a motivation for

Figure 2: Questionnaire directed at Fok! Forum users

Questions

1. In what ways has your way of thinking or acting changed through your participation in Fok!Forum?
2. To what extent do you perceive the forum as a way to collaborate in solving your problems or helping others solve theirs? Has your way of dealing with problems changed? If so, in what way?
3. To what degree do you feel that your participation in the forum has increased your knowledge? To what degree are you better able to apply this knowledge to solve a problem, for example?
4. To what extent are you willing to discuss issues that are important to you with others in the forum? How important is being able to enter such discussions to you?
5. To what degree do the things you read in the forum inspire you? Do certain threads lead you to read a book or gather more information on a certain topic, for example?
6. To what extent has the forum encouraged you to be more critical, to demand arguments before you believe what is said, to engage in research or to seek argument to support your own opinion? Examples are very welcome.

⁹ <http://forum.fok.nl/misc.php?action=policy>

¹⁰ Cross posting (i.e. posting the same topic in more than one sub-forum is against Fok! policy and, although permission was obtained from the founder and crew of Fok! prior to posting, the cross post led to an initial outburst of negative responses on the issue of cross posting. This caused some difficulties (and much work on the part of the moderators) and may have prevented some users from reacting. Future researchers must be sensitive to policy and custom of the forum they are researching. The negative reactions were in this case underestimated by the researcher.

¹¹ The posts that were omitted generally contained complaints (or reactions on the complaints) over the fact that the topic had been cross-posted.



their response were coded V, unmotivated answers were coded with an X. Answers with particularly relevant explanations were additionally marked with one or two exclamation marks, depending on the level of relevance as perceived by the researcher.

In order to eliminate the risk of researcher bias in judging the various responses, two research assistants were asked to similarly - and independently of each other and of the principal researcher - code a random sample of 24 % of the total of 50 response sheets, each using the same 'translation method' as the researcher, thus validating the coding as performed by the researcher. If the coding as performed by the research assistants would be found to be largely consistent with that performed by the researcher on the same sample, this would suggest that an equal consensus would apply to the remaining results coded only by the researcher. Comparisons made between the outcomes of the three independent coding processes showed that in coding the degree of agreement with the 'statements' embedded in the questions using the five-point scale, the consensus between the researcher and the two independent research assistants reached 87 %. In coding the degree and value of the motivation given by the users in their reactions, the consensus was 76 %. The lower percentage in the latter case can easily be explained by the fact that attributing relevance to the content of a person's response is more subjective than interpreting whether said response is positive or negative and to what extent. For the purpose of this research the results of the comparative test are considered sufficiently positive to allow the assumption that interpretation bias on the part of the researcher is not an issue. Once the responses were coded, a colour code was used to distinguish between the ++/+ and the -/-- responses (where both + and ++ were coded green, and both - and - - were coded pink) and +/- and 0 (both coded yellow). The thus coded responses were analysed as described below.

Results

An analysis of the data yielded the following distribution as shown in Table 1 and Figure 3.

Table 1: Analysis of responses given to questions asked in questionnaire to Fok! Forum users

Question	1	2	3	4	5	6
	%	%	%	%	%	%
positive (++,+)	44	48	64	52	56	42
Neither + nor - (+/-)	20	26	12	24	24	24
Negative (- - , -)	36	26	24	24	20	34
Total	100	100	100	100	100	100

As shown in Table 1, 44% of the respondents felt that their way of thinking or acting has altered through their involvement in the online community. In their motivation, many respondents who indicated they saw a change in this respect, attributed this change to the interaction with a wide variety of people. Many respondents stated they felt the interaction with different ideas and opinions increased their respect for others. In the words of one user: "...It changes the way you perceive others. It increases your respect for others because they are able to motivate their opinions. This makes you more critical toward yourself and can even alter your own opinion. Summarising: more respect and more self-criticism."¹² Another user says his participation has increased his tolerance toward others. However, this opinion is certainly not shared by all. As Table 1 shows, some 36% of the respondents feel they have not changed through their participation in Fok! Forum, whereas 20% indicate either that they have not changed or that they may have changed, but, if so, are unsure of whether this can be attributed to their involvement in the online community or not.

Almost half the respondents agree that the forum is a way to collaborate so as to help others solve problems. As one user indicates, she has learned to communicate more and seek the help of others

¹² All responses from the audience have been translated from Dutch into English by the researcher. While they can be seen on the Fok! Forum Web site, they are presented here anonymously.

when struggling with a problem. Another user asserts: "Because of the large number of opinions on any issue, it is easier to form your own opinion... drawing conclusions based on all the pro's and cons. On the other hand, with the wisdom thus acquired, you may be able to help others in turn, by sharing a perspective they may not yet have seen. I feel I have learned to look at a problem from more angles now, while, prior to my involvement in Fok! I assumed my view was the only truth." Just over one quarter of the respondents feel the online community has not changed their way of interacting with and solving of problems, or they indicate that they do not seek to solve their problems through collaboration with fellow community members. An equal percentage (26%) are unsure of any change, or state they may help others but do not solicit the help of others in solving their own problems. In the motivation a salient detail was that quite some users were positive about the possibilities of helping others, and agreed that collaboration is a good way to do so, but made a point of stating that they themselves did not attempt to discuss their own (personal) problems online. There appears to be a degree of inhibition here, as can also be seen from the frequent use of clones to post personal problems.

The large majority of the respondents feel their knowledge has increased through Fok! According to one of the moderators: "A forum like Fok! is a good reflection of society, you may meet people that you would otherwise not have met. This may lead to vigorous discussions, good friendships and occasionally to strange occurrences. I believe there is much to be learned from Fok!... on different religions, for example. This is something that is important in a multicultural society like the Netherlands'. I agree that much can also be learned from books and the experiences of others, but here you can learn from a Muslim, how he or she experiences his or her religion. ... this could ultimately lead to preventing conflicts." A total of 24% feel there is nothing to be learned in an online community, and 12% were unsure or indicated that their knowledge had increased but were not sure this could be attributed to the forum.

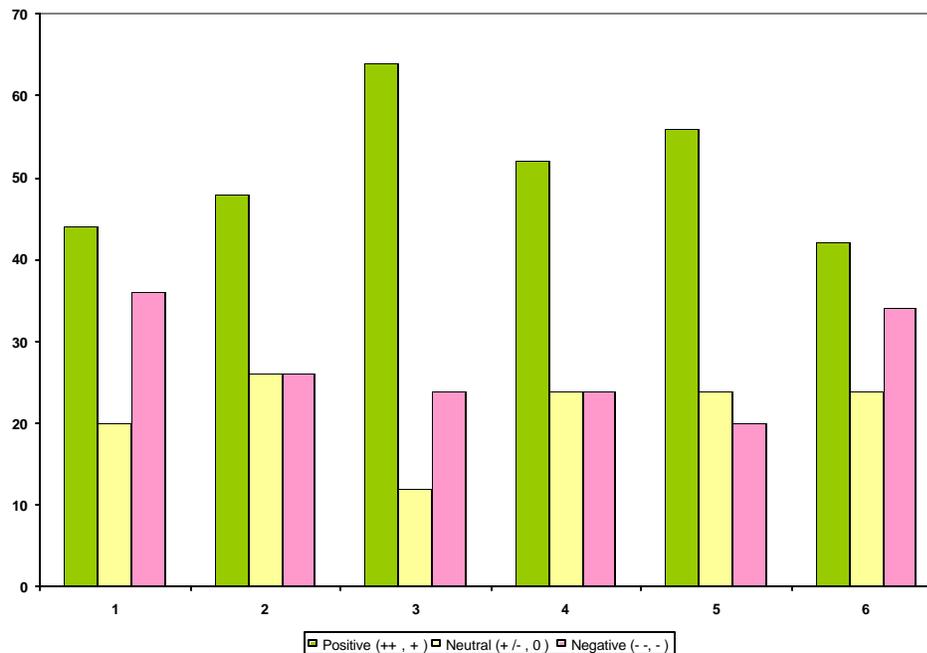
The idea that Fok! is a place for debate and discussion is contested by 24% of the respondents, who see it more as entertainment, or who feel that an online forum is not suited for in-depth discussion. An equal number of respondents is unsure, or they indicate that they are only willing to debate to a certain extent, or else they state that they will enter a discussion if the situation arises but that debate is not particularly important to them. A little over half the respondents do feel that the online community is a place for debate and they indicate that this is important to them.

Do users become inspired to read books they may otherwise not have touched, or seek further information on a subject they stumble upon in one of the threads? According to 56% the answer is yes, they have been inspired by things they read on the forum, or through exchange of opinion with others. For 20% of the respondents this has not been the case, while 24% are unsure or feel they would have just as well been inspired through other means.

Users are also divided over the question whether they have become more critical, through their participation in Fok! Forum. A total of 42% feel this is the case, while 34 % feel they have not become more critical. Just under a quarter (24%) are unsure, or, as stated by one user, "I have learned to broaden my vision, and accept the opinion of others with more ease. I have become less critical in this way, because I realize different people have different values and norms." The latter assertion indicates that some respondents may not have fully understood what was meant by the term "critical."

The percentages shown in Table 1 above are graphically shown in Figure 3 below.



Figure 3: Graphical representation of distribution of responses given to questionnaire

Based on the researcher's observation over time, it is noted that there is a slight difference between the degree of discussion (and the depth of discussion) in the crew member sub-forums and the general forums. This may be the result of the especially high degree of involvement in the online community that is required of crew members, but may also be partially due to the fact that crew members not only interact within the context of the forum but also actively use IRC and ICQ as separate channels of communication among themselves to keep in continual touch with each other, since the exchange of opinions on how to moderate and improve the forum is an important part of crew membership.

Disussion and recommendations

The study showed that the variety of opinions on the value of Fok! as a place for debate, discussion, collaboration and as a source of information and inspiration is as large as the variety of users who participate in the forum. A reasonable agreement among respondents was found regarding two issues: participating in this online community increases one's knowledge, and, the interaction with different people with all sorts of different opinions and ideas increases tolerance and respect. Both these conclusions represent important gains, as well as positive issues in any interpersonal relationship. In the light of the research question, however, there seems to be insufficient evidence that this particular community inspires collaboration and discussion to a degree where the advancement of a spirit of scientific inquiry is sought. Although certainly a learning environment, it does not appear from these results that Fok! is a place where self-criticism and collaboration and a sense of unity are key aspects of how the community works. The entertainment value of the community appears to be of at least equal importance to the users as its non-entertainment value.

Several comments can be made based on these results. First of all, it is important to remember that this case study deals with an extremely large community, where the crew may best be seen as a community-within-a-community. The sense of unity in this very large community may be negatively affected by its size. In fact, the researcher's observations show that the sense of unity is far stronger among crew members (a community of approximately 120) than among the general users. A study of smaller, more specialised communities may therefore yield very different results.

In the second place, due to the heated discussion on the issue of cross-posting at the start of the data collection, it is recommended that in future studies of these communities researchers be particularly sensitive to the rules, regulations and norms of a community. Had this debate not arisen, more respondents might have taken the trouble to answer the questions, the impression being that quite some potential respondents were discouraged from reacting due to the negative impulse from the discussion on the issue of cross-posting at the beginning. On the other hand, it is noted that the number of responses received, despite this initial set-back, was relatively high as compared to the participation in the average threaded discussion on Fok! Forum.

Although the depth of discussion revealed through this study does not suggest that virtual environments of the kind represented by Fok! Forum are places that are particularly suited to foster TSM, the study certainly does not exclude that they may. However, for this to be the case, it should be assumed that specific factors need to be present in such environments. The determination of such factors is recommended as an object of further research. The study also suggests that there is at least agreement among users regarding the value of an online community such as Fok! as a learning environment where one can expand one's knowledge, discuss and debate one's ideas and theories, and seek help in solving one's problems. The question thus arises whether online communication in this form could substitute or supplement a facilitator in certain learning environments. It is known from the practice of distance education that the absence of a physically present group of classmates and facilitator may negatively affect motivation (e.g. L. Visser, 1998). Creating an online community (PHP-based forum or an IRC channel) may thus be an answer to the emotional needs of students in a distance education environment. While many Internet-enabled distance education programs already include closed, dedicated, and usually moderated chatrooms and threaded discussions as part of their offerings, one may think here also of an extension beyond the institutional setting. This would mean that distance education institutions should actively encourage their students not only to interact within their own - closed - virtual environments, but also to partake in open fora that facilitators and students may together identify, to broaden the scope of their learning-related social interaction. This is particularly of interest as it allows students to collaborate, discuss, debate and interact with likeminded learners (and anyone else if they so chose) across geographical boundaries.

There appears to be much that we do not yet know about a medium that is rapidly gaining importance in our daily lives and changing the way in which we look at the boundaries of society. Perhaps it is time to change the way we look at the boundaries of our class-rooms, teachers, and even learning institutions, and adapt our interaction to the multidimensionality and versatility of the Internet. After all, with a whole world of information just a key-stroke away, and so many people online (with their numbers steadily increasing) why should we limit ourselves to a physical learning environment, a single teacher, a pre-determined number of class-mates? Why not seek to transform all that information into knowledge, and perhaps even wisdom, through discussion, collaboration, mutual support....and a little fun on the side.

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