Online Discussion Forums in Higher Education: Is 'Lurking' Working?

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Abstract

Online discussion forums are increasingly becoming a key part of the Higher Education curriculum. Much has been written about the benefits of these and how, via participating in these discussions, students are facilitated in their learning. However, relatively less attention has been paid to students who 'lurk'. This 'non-contributing' behaviour is perceived as negative, yet whilst it may not create or encourage discussion, it does not necessarily follow that students who are not engaged will not go on to learn from this activity. This research explored the experiences of a group of 18 students who were required to contribute to a discussion forum as part of their Education Studies course. The extent of, and reasons for 'lurking' are reported. It was found that students 'lurked' largely due to a lack of academic confidence, and those who did lurk, actually learned from the activity. The implications of these findings for educators and forum design are discussed.

1. Introduction.

Asynchronous discussion forums are increasingly becoming a key part of the Higher Education curriculum. Much has been written about the benefits of these and how, via participating in discussion, students are facilitated in the development of higher order thinking skills. However, relatively less attention has been paid to students who 'lurk'. This 'non-contributing' behaviour is perceived as negative, yet whilst it may not create or encourage discussion, it does not necessarily follow that students are not engaged, and will not go on to develop their learning. The benefits of online forums have been well documented; for example students have continuous access to the materials; they permit individual as well as group learning, and they can assist in the development of written communication skills. Additionally, they can facilitate the development of higher order thinking skills [1], for example the time delay permitted for responses allows more time for reflection. Also, composing written replies helps to free up cognitive space for 'online' thinking. Further to this, the forum complies

with the collaborative, constructivist model of learning its capacity for fostering dialogue – this which is argued to be one of the most important aspects of the learning process [2]. Given these features, the forum can be viewed as well placed to facilitate quality student learning, however there appears to be a general assumption that direct, written contributions are necessary for this to occur.

A review of literature in this area seems to suggest that students must actively contribute to discussion forums to reap the benefits. Certainly if they do not, then they are perhaps missing out on an opportunity to develop their writing skills. However students who are not seen to be participating (i.e. those who 'lurk') are generally given a rather bad press. Indeed it has been pointed out how such students have been viewed as 'free-riders' [3], and who 'drain the community of social capital' [4]. Although this is a harsh view, there is perhaps some truth behind it. Yet there is growing evidence to suggest that there is perhaps less truth in the belief that these students themselves are missing out on valuable learning opportunities.

In a survey of discussion forum users, Nonnecke, Preece and Andrews [3] found some evidence to support this. Out of a sample of 1188 users, 18% were found to be lurkers. This sub-sample responded to a set of 20 'reasons' for their lurking behaviour. The most frequently cited reason (from 53.9% of lurkers) was that "just reading the discussion forum was enough". The second largest response (from 29% of the sample) was that they were "still learning about the group". Thirdly, (from 28% of the sample) was that they "were shy about posting". This social theme continued throughout the list, also revealing that 15.1% "wanted to remain anonymous'; 7.8% stating that they "don't know how to post to this group"; 7.3% stating that this was "the wrong group for me"; 5.9% being concerned about "hostile/aggressive responses", and 1.4% reporting that the "group treats members badly". In terms of being satisfied with just reading the forums, there was some further evidence from the sample that they were lurking simply to acquire information, for example 11% stated that the forum was "of no value to me", and 7.8% reported that they had experienced "poor quality of messages, or group". Continuing with this theme, 18% reported that "others respond

the way I would", and 4.6% reported that there were "too many messages already".

These findings suggest two things. Firstly, it appears that 'lurking' is not a passive activity, and secondly, that lurkers may feel they have good reasons for staying hidden in the background. To address the first of these, it seems that lurking is actually goal-directed behaviour – these individuals are actively seeking information, and may not feel the need to post if they find what they are looking for. Or indeed if they do not, they may similarly (and sensibly) avoid contributing to a topic they have no interest in or know nothing about. Secondly, it seems to make equal sense to avoid entering into a discussion if the individual is unsure about contributions being ill-received or unwelcome. Especially if the group is unknown to the individual, then "entering" (or contributing) may pose any number of social 'risks'.

The above findings give some valuable insight into lurking behaviour. However, the authors carried out this research with users of non-academic forums. The next question is to look at how far these findings could assist educators in understanding why students 'lurk', and to explore what, if anything, they may gain by doing so. Webb, Jones, Barker and van Schaik [2] carried out research with 513 undergraduate students who were required to contribute once to a discussion forum as part of their course. There was a small percentage of their overall course grade afforded to this. Using BlackBoard, the authors were able to record not only the number of students' posts to the forum, but also the number of 'accesses'. A multiple regression analysis found that 'Accesses' and 'Postings' were both significant predictors of students marks (t (445) = 3.15; p = 0.005, and t (455) = 3.760; p = 0.001 respectively). This suggests, as the authors assumed, that students who accessed the forum were reading the contributions and were therefore engaged with the materials. This was borne out in a follow-up evaluation survey of the module. Survey items relating directly to the discussion forums found that 14% of students actively contributed, 60% used them to read and find out new information, and 26% used them to find answers to specific questions.

These findings give further support for the idea that lurking is active, goal directed behaviour and that students can benefit (as measured by their course grades) by the activity. To add weight to this, Webb et al [2] also examined the marks of 65 students who made no contributions and did not access the forum, and found that 60% of this group's marks were below 40% (fail). It can of course be suggested in this case that 'non-participation' is a characteristic of poorer students who may not engage at a wider level, however this would also suggest that both posters and lurkers are equally engaged albeit at different levels. Nonetheless it seems that lurking should perhaps not be viewed as wholly negative behaviour – at least not in terms of assisting the individual student who is looking to learn. In any event, this demonstrates that whilst lurking and non-participating students are both invisible groups, they are actually engaging in different activities and have different intentions.

In light of this, lurking can perhaps be viewed more positively as help-seeking, or information seeking behaviour, and notwithstanding, whilst lurkers may not contribute to the learning of others, it can be questioned as to how far this activity is different to reading books, journal articles or any other text-based source. 'Help-seeking' and 'information seeking' behaviours have been distinguished in so far as 'help-seeking' is an activity in which the learner intends to understand (and possibly apply) information as opposed to seeking out information, or 'answers', to complete an assignment for example [5]. However it seems that lurkers have intentions of doing both. Nonnecke et al [3] found that both posters and lurkers 'join' discussion forums for similar reasons – to gain understanding. Similarly both posters and lurkers were seeking out answers to their questions (62.1% lurkers v 70.3% posters).

Assuming then, that lurkers 'lurk' with the intention of learning, attention needs to be paid to the factors which may be acting as barriers to more direct participation. More understanding of, and dealing with these issues could assist their learning further. The above suggests that lurkers will not post if they do not feel the forum material is relevant or useful to them, but what might be preventing them when it is? Nonnecke et al's research suggest that social factors can play an important part in deterring individuals from posting, and it seems that this can also be the case for students in an academic setting.

Hew and Cheung [6] carried out research to look at ways of increasing contributions to discussion forums. They explored the efficacy of 'students-as-facilitators' in attracting their peers to participate in discussions. A discussion was deemed 'successful' if it had six or more 'responses' to the original post, and following, the authors examined the facilitation techniques that had been employed in these cases. Seven successful techniques were documented, some of which are useful in providing an insight not only into what may encourage posting, but also why certain students may choose not to post.

The most successful technique found was for the student facilitator to give an indication of their own opinions or experiences when either responding directly to a post or making general statements. For example, such posts began with "I think that…" or "I totally agree with…" The authors found that this not only kept the discussion going, but encouraged students to participate by putting them at ease if they could see that others shared their views. This may

well be a successful technique in some cases, however it may only be applicable to those already posting. Accounting for the findings of Nonnecke et al it could equally be suggested that this could deter others from contributing if they are (a) not familiar with the group, and (b) do not share these views. It was also found that 'Questioning' was a successful technique, in terms of asking students to elaborate or clarify points they had made. Whilst this may be successful in maintaining existing posters willingness to post, it may also be successful in attracting lurkers (who have not yet decided whether to post) by creating a climate of valuing members' contributions. This becomes more evident when it was found that 'Establishing ground rules" and 'Showing appreciation' were successful in maintaining discussions. Establishing ground rules sets the context for appropriate behaviour, helps to prevent hostile and aggressive responses and gives guidelines as to expectations of participants. 'Showing appreciation' to posts (for example, thanking posters for their information) could be especially valuable in sending out positive messages to those reading and watching the forum activity and considering 'joining in'

Hew and Cheung, (2008) [6] further report that students are more likely to participate if they are 'personally invited' to contribute, are asked questions directly, and responses to their posts are relatively undelayed. Whilst an advantage of asynchronous forums is that students are not constrained by time, delayed responses could effect that others are disinterested, and lead to students feeling that contributions are of little value. This is especially important for those who may be lurking as a result of having low academic confidence, and it may become especially problematic if the forum group is large and the individual recognises that a wide body of people will be able to access and evaluate the post.

The size of forum groups has been noted as having an impact upon contributions. If the forum is to be viewed as a community, then it makes sense to suggest that especially in the case of 'shy' lurkers, larger groups could be perceived as more intimidating. Research has found that shy students tend to contribute more to virtual communities than to traditional [7], which could possibly be due to the relative lack of social cues (e.g. body language; emotions) and thus release their inhibitions. However shyness of interacting with others is not the same thing as retreating or hiding as a result of low academic confidence. This could be exacerbated if a discussion forum, as with any social group, has a few dominant and more outgoing members who communicate frequently with each other, tend to be argumentative and are not afraid to express their opinions of others views.

Finally, and on a related note, any participation in any community requires a level of apprenticeship before full membership is achieved. Lave and Wengers' concept of legitimate peripheral participation [8] explains this well. Lurkers, especially those who are socially and academically shy may be wary of entering a new community, even if they find that discussions are relevant to them, and the forum appears well-structured and friendly. They may be unsure how to behave and how to communicate with existing members. They may indeed 'lurk' for a time, and then eventually decide to participate if the forum appears 'safe' and they are less likely to 'get things wrong'. That this may occur is one thing, as research suggests that it can. But it also leads to a new understanding of lurking, which is that the behaviour is not an all-or-none phenomena, and that any student, at any given time may be construed as a lurker. Indeed, Dringus and Ellis [9] found that participation in student discussion forums tended to peak at certain points in the week, suggesting that there is every possibility that all students will 'lurk' some of the time.

The above suggests several things. Firstly, it seems that 'lurking' can be working for learners, in that the reading of forums is purposeful, goal directed and can lead to facilitating development. Secondly, lurkers may have good reasons for lurking in terms of their perceptions of a given community and the behaviour of members (either expected or witnessed) who comprise them. Thirdly, it could also be asked that if learning can be facilitated by lurking, then should educators seek to prevent it?

2. Method.

With these questions in mind, a study was carried out which explored the 'lurking' behaviour of a group of Level C students who were required to post on a weekly (non-assessed) discussion forum over a 7-month period.

18 Level C (first year) undergraduate students took part in the study. They were all completing a course in Education Studies which entailed, as part of its learning outcomes that they all contribute to a weekly discussion forum. Forum topics followed on from lecture materials and were designed to encourage follow-up study and debate. The average age of the students was 23, and was largely biased towards females. The gender bias however was broadly representative of the wider cohort.

The study was mainly qualitative in nature, using an open-ended questionnaire. The questionnaire included seven open-ended questions and students were asked to write as freely as they wished in their responses. The questions asked:

(1) Please indicate the approximate number of posts you have made to the discussion forum this academic year.
(2) If you prefer to post, please give your reasons.
(3) If you prefer to read, please give your reasons.
(4) What would deter you from posting on a discussion forum?
(5) If you prefer to read, is there anything that might encourage you to post?
(6) What do you feel you have gained academically by participating (posting or reading) on the discussion forum?
(7) Please provide any additional comments you may have regarding discussion forums.

Students were invited by email to take part. They completed the anonymous online questionnaire in their own time. Quantitative data (Question 1) was collected in order to create 'frequency groups', so that qualitative comments could be explored and compared to see if there were any differences in the reasons given as to why students opted to post or not. Given the sample size, no inferential analyses were carried out.

3. Results.

The 18 participants were first grouped according to the number of posts they had contributed over the duration of the course (*see Figure 1*). Frequency counts demonstrated a fairly even spread with the highest numbers of students observed in the group who posted least and the group who posted most. Whilst it is noted that there were only 18 responses, this suggests that there may be some considerable variation across students in terms of posting activity. To a fair extent, this could be seen as evidence that all students may 'lurk' at some time or other as the course was 25 weeks long. As responses were anonymous, it was not possible to check how many 'visits' to the forum that each of the students had made without them having actually posted.
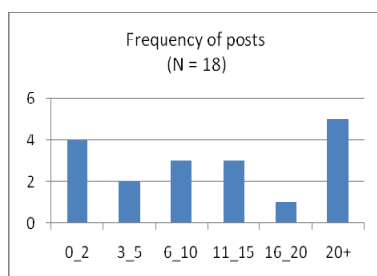

Figure 1. Categories (by number of posts) (x) and number of students in each (y).

Next, the qualitative comments were explored in order to look for reasons why students were choosing not to post. The comments from the group who contributed the lowest number of posts (0-2) were looked at first. Two students gave no response to Question 3: "If *you prefer to read, please give your reasons*". The two other students commented:

"It gives better and deeper insight into peer views and also gives me direction to research aspects of my education that I had not thought to do before".

"I enjoyed to read the controversial posts of other students that often went against the 'I agree' posts on the forum. I felt that I was able to learn more when the different opinions were presented, allowing me to better inform my own opinions and look at things from a number of angles".

Whilst this did not give too much insight as to why these students preferred to read rather than post, it does indicate that they are *learning* by reading. A clearer picture was gained by looking at the responses of these students to Question 4: "*What would deter you from posting on a discussion forum?*" All four students responded as follows:

"Sometimes when points were made other contributors just dismissed them as incorrect when forum posts are supposed to be individual contributions and personal opinions."

"No benefit in terms of marks at the end of the year".

"Other people regarding my opinion as ludicrous, because they are my peers after all".

"Over opinionated people posting constantly".

Apart from the view that forum contributions were not 'assessed', three of these responses suggest that students may be concerned about what others may 'think' of their comments; that their comment was not valued, or even lost amongst other posters contributions. This may perhaps exacerbated if there are others on the forum who these students perceive as having more academic confidence than they themselves have. A lack of academic confidence was also evident in comments provided by students who had contributed between 3-5 posts. For example:

"…previous posts, if they seemed very academic and long I would feel under pressure to do the same, so not to post".

"You are not missing out on information as you are still reading about the subject but you avoid the embarrassment of your peers not agreeing with your views and not having to feel aware that EVERYONE (*sic*) can read what you feel on that subject and there is no privacy".

These two groups of students (who gave either 0-2 or 3-5 posts) were also asked "*If you prefer to read, is there anything that might encourage you to post*?" (Question 5). These responses seemed to give further support to the idea that academic confidence was a barrier. The most frequently cited reason was that of being able to 'post anonymously'. Four out of six students commented upon this. In this particular forum, students' names and photographs (if they chose to add one) were visible beside all contributions made. However in terms of "lurking", there is some more evidence here via the final comment above, that 'lurkers' are actually gaining from the activity – and that lurking can lead to learning without the fear of being ridiculed or criticised.

This gave some initial insight as to why lurkers (or at least those who make minimal contributions) choose to lurk. Yet this theme of academic confidence was also apparent in the groups who posted more frequently. Students from the two groups who between them contributed between 6-15 posts, also gave similar responses. When asked what would deter them from posting, the following comments were observed.

"I feel that people might judge me by my contributions or that my ideas might be silly. I don't like other people reading what I write".

"Peers seeing my posts".

"I will always read all the other posts before I start, I always look who else has posted something first".

"Feeling like my comment wasn't good enough and knowing that people are reading my work and sometimes criticising it".

More interestingly, even the group who posted most frequently (20+) had the same concerns. Example responses to the same question were as follows:

"In the earlier months of the course, I was very wary of the fact that whatever I posted would be on the forum for life. Any misunderstanding of discussion points could make me look daft and this could create a bad image for myself. Also, the use of academic language on the forums acted as a big deterrent (*sic*) in the early months of H.E. as I was not confident in the language that I used in the online discussions".

"Knowing that forum members actually meet face to face in class sometimes makes me wary of being completely open online. Comments made online are sometimes used to judge someone socially, and not as an academic exercise".

The second comment above, also gives further support to students concerns that discussion forums perhaps need to be anonymous if 'lurking' is to be avoided. In this case it seems that where students are aware that they can be identified, then their comments can be used to make wider inferences about them as individuals. This then becomes more worrying for them if - as indeed they do – go on to meet their peers face to face in the classroom. This then begs the question that if these students do have such concerns, what leads them to post as frequently as they do? Three students revealed that they did so because they felt that it was 'compulsory' to post. This then suggests that 'posters' may not necessarily be those individuals who choose to post as a preferred activity, but simply to do whatever takes to be a 'good student' and follow the course requirements.

The above gives some indication of why students in this study were choosing not to post. The next step was to look at 'lurking', and to establish further, how much academic value the activity might have. Again the responses from those who had made the lowest number of contributions (0-2 and 3-5) were explored first. These data were collected from their responses to Question 7; "*What do you feel you have gained academically by participating (posting or reading) on the discussion forum?*" Findings suggest that these students did feel that they had made some academic gains in terms of direction for carrying out further independent learning. For example:

"Some interesting links are posted by other students."

"Extended ideas and places to look for research."

"More understanding of the topic but sometimes comments can be difficult to understand".

"I have seen other sides to topics that I may not have come across if I didn't read others views."

"I prefer to read other suggestions made by people as I can learn some things that I did not already know".

"I like to read other people's opinions to help form my own".

The two groups who posted between 6-15 posts gave similar comments, although this seemed to be more in terms of learning about other students personal views:-

"I learned more about others views and experiences".

"I feel I have learnt a lot of knowledge I could not have gained from lectures about other people's experiences".

This suggests that there may be a relationship between the number of contributions made, and what is being looked for (and gained) from the forum. However there is insufficient evidence in these data to establish if this is the case. However in any event, it appears that students did learn by reading the forum, and whilst it cannot be clearly established from these findings if the activity was 'help-seeking' behaviour in the first instance, students did actually perceive that they had 'received' help by visiting it.

A broader finding, which could go some way towards understanding why students 'lurk', came from looking at all students responses to the same Question 7. Irrespective of how many contributions students had made to the forum, their wider comments about forums in general were insightful. There were mixed views about the usefulness of these as a tool for learning. Out of 16 responses to this question, six were quite negative, suggesting that nothing had been gained by posting or reading the forum. The following examples summarise these views: -

"Nothing, what could of (*sic*) been gained from the forum; i.e. - sharing of opinions, would of (*sic*) been much better in seminars when there was a chance to discuss things."

"I am sure that the discussion forum is only used by many people because they have been told it is part of their course. Their comments therefore lack depth and background, which does not encourage proper discussion and leads to repetitive posts along the lines of 'yes, I agree."

This suggests that some students may simply have different learning preferences and feel that they gain little from using forums. So for some, lurking (and even posting) may not be 'working'. On the other hand, it could be that students do visit the forum but find it is of little use to them because of the paucity of the comments they find there. This in itself could be the result of many students lack of academic confidence that seems to be preventing them from posting –and it does add some weight to the view that lurkers 'drain' the community of academic- if not social - capital. Yet it is important to note that the students in this research were in the first year of their studies, therefore it is possible that the lack of academic confidence is not unique to forums. Rather it could be something that extends to the wider University context that these students are unfamiliar with and are unsure about.

On a more positive note, there is evidence to suggest that at least some students who 'lurk' will eventually go on to post. An earlier comment provided suggests this:-

"In the earlier months of the course, I was very wary of the fact that whatever I posted would be on the forum for life. Also, the use of academic language on the forums acted as a big deterrant (*sic*) in the early months of H.E. as I was not confident in the language that I used in the online discussions".

Another student commented: -

"I have gained more confidence when using Moodle. I even started a forum which has had many replies. I think I will now contribute more in the coming academic year."

However, it is unclear what may be responsible for this. It could be that students grow in academic confidence over time, yet it could also be due to the fact that discussion forums are subject to the same rules as any other social community, and the more familiar with the context students become, the less likely they are to feel that they are taking academic and social 'risks'. The comments provided previously would certainly indicate that students are wary of others, and of being 'judged' at a personal level. Nonetheless, this small study clearly suggests that whilst lurking may be working for some, it is the lack of confidence – either social, academic or both – that can lead to lurking in the first place. Secondly, 'lurking' should perhaps not be viewed as negatively as it is, as it seems that not only do some students learn from the activity, it may in and of itself, be an important, and possibly crucial first step towards making more direct contributions to forums.

4. Discussion.

These findings provide a starting point for answering the question 'is lurking working?' and it also gives some important clues as to why 'lurkers' may be choosing to 'lurk at all. It appears that lurking is 'working' in the sense that students feel that they are gaining from reading the forum, and that they find the contributions of other students helpful and informative. It has not been possible to establish clearly from this study whether or not as Webb et al [2] found, students lurking behaviour was actually goal-directed, as it seems some may have only visited the forum as it was a requirement of the course. It could have *become* goal-directed at a later stage as students found that they were actually learning by 'lurking', but more research would be needed to clarify this.

A second issue to consider is that lurking may be the first step towards actively participating in forum discussions. There is some evidence here to suggest that the more familiar students become – at least with the use of academic language – then they will go on to participate in discussions rather than lurk. This could be suggesting for educators that the discussion forums are, at least as perceived by students, just another social community. As Lave & Wenger (1992) [8] contended, new members of any social community typically remain on the sidelines until they become more familiar with what is expected of them. It is only when they know how to 'behave', that they take a more active and participative role. In the case of the students in this study it is not easy to say whether it is actually social or academic confidence which is preventing students from posting, especially given that the community *is* actually an academic one. It is not easy to separate the two. But it could be argued that this is something that simply compounds the worries for students if they have concerns at both levels. It could of course be argued that students have the same pressures and concerns if they are required to speak in seminars and that if they are able to respond in this context, then they should be able to do similarly in others. Yet this is not the case. In seminars students respond verbally, and not just to written messages, but to a wider range of social cues such as 'encouraging' facial expressions from both tutors and peers. The fact that tutors are present also provides a sense of 'boundaries', adding a sense of control for students in terms of 'what' can be said and 'how'. These things are either less visible or completely absent on discussion forums. Similarly, students are aware of who is in the classroom at any given time – the audience is always visible rather than unknown, providing clearer guidelines with which to formulate a response. Thirdly, there is a considerable difference in responding verbally, and having to compose a response in writing. This means that on a forum, it is not only the 'idea' or 'viewpoint' itself that is open for judgement, but also the students' actual writing skills. It is perhaps hardly surprising then that students, at least in their first year of study, can have real issues with confidence.

Thirdly, some students in this study claimed that they learned very little from either lurking or posting on the forum, and that they preferred actual (classroom) discussions as opposed to virtual. There is perhaps little that can realistically be done about this as there are always going to be differences in the learning styles and preferences of individual students. However this reported lack of learning could perhaps be unique to this research as many of the students in it admitted that they did not post frequently. Therefore this specific forum could have been perceived as providing limited material for some of them to learn. Again it has not been possible to establish whether this was the case or not in this particular study, but given that many felt that they *had* learned it is perhaps unlikely. Yet this is still a possibility that cannot be ruled out. If, given that the forum is by and large simply a group of people, it has to be recognised that groups will vary. Some groups may comprise of members who have more confidence than others, or some students may be disinterested in a given topic. Individual students may find that they can integrate and work with one group but not with another. So 'lurking' may occur if students find themselves in a group who make few or small posts, or they feel the topic has little relevance for them.

Fourthly, this small study supports the findings of Nonnecke et al's [3] research with users of non-academic forums. It seems that whether the context is academic or not, lurkers may lurk because they have concerns about how others may respond to them. Students in this study also echoed the comments of those in Nonnecke et al's research, in that they would like to remain anonymous. It seems that this is an important barrier to posting, and it is something that educators may wish to take into consideration when designing forums for students in the first year of their courses. Whilst students may indeed 'get there' in terms of confidence, making forums anonymous might help speed up the academic enculturation process. Students may feel that they are risking far less in terms of being judged by others when their posts cannot be identified.

To conclude, it seems that more thought should perhaps be given to the design of discussion forums – at least for students in their first year of studies. If they are – perhaps understandably so – lacking in academic confidence, then the first thing to consider is that perhaps discussion forums should not be assessed if it is not absolutely necessary. This may just be adding to pressure that students are already facing in an unknown environment. What we are essentially asking students to do in such cases, is to

'display' their competencies in front of their peers, at a time when they themselves are unsure of how competent they are. This is very different from writing an essay when no-one but the student and tutor can see it. We may also want to consider making forums anonymous for first-year students, as this may go a considerable way towards removing the element of 'social risks' for them. This way, only the post itself is open for judgement, and not the student. In this research it was found that students had a very real concern about their posts being used to make personal judgments about them as individuals. If this is in fact occurring then it is something that educators themselves can actually do very little about. They may actively try to dissuade the practice, but they can do relatively less in terms of what students may be thinking.

Finally, it seems that whilst the activity of 'lurking' itself is not an all-or-none phenomenon, neither should discussion forums be seen as a one-size-fits-all model. Students have different levels of confidence and capabilities over the course of their studies, and tutors should be mindful of this when designing forums. We should also be mindful of the fact that each discussion forum, no matter how well thought out it may be, is perhaps only ever going to be as good as the group members who comprise it. Therefore we may always have to expect 'lurking' to a greater or lesser degree, and we should perhaps as suggested earlier, be *encouraging* this as a first step to participating on discussion forums. We should certainly not be condemning it outright.

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