

Investigating the assessment of learners' participation in asynchronous conference of an online course

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Abstract. *A lot of courses applied through the web use a traditional assessment method, based on questions corrected by the teacher or automatically (like multiple choice questions, true or false questions, etc). However, these assessment methods are not sufficient if the online course uses a collaborative strategy of learning. In the collaborative learning, the student is responsible to the own learning and collaborates with the learning of the other group members, constructing knowledge while reflecting on the group discussion.*

This paper discusses the assessment of learners' participation in asynchronous conference. The main influences of the assessment carried throughout 15 editions of an online course taught through AulaNet are presented. The influences on quality and quantity of the messages sent by the learners are analyzed in face of the educational dynamics and the evaluation method. Research is carried out on data of grade, comments, criteria evaluation, and quantity of messages and learners' statements. The improvement of the conferences dynamics and assessment method has increased the quality and the frequency of the learners' participation.

Although the assessment strategies of learners' participation are still being improved and the AulaNet environment is being modified to support these new strategies, it is possible to conclude, analyzing the interviews and the past experiments done by the AulaNet research group, that the students are dependent of their grades. For this reason, the absence of assessment, even of few messages, generates anxiety and discourages the learners' participation.

Keywords. *Web-based Instruction, Assessment, Groupware, Collaboration, AulaNet.*

1. Assessment of the Online Collaboration

Many web-based courses use traditional assessment methods, based on questions corrected by the teacher or automatically (multiple choice, true or false, column association, etc). However, these methods do not cover all learning aspects of an online course that uses a collaborative approach of learning.

A collaborative learner is responsible for her own learning and collaborates with the learning of her colleagues, constructing knowledge through reflection and group discussion (Lucena et Fuks, 2000). The active information exchange instigates the interest and critical thinking, allowing learners to reach better results than studying alone. In the collaborative learning, the teacher changes her role from authority to supervisor. The main differences between traditional and collaborative learning are shown in table 1, adapted from (Harasin, 1997).

Table 1. Main differences between the traditional and the collaborative learning

Traditional Learning	Collaborative Learning
Isolated study	Group Study
Teacher – authority	Teacher – supervisor
Reactive, passive learning	Active, investigative learning
Memorization of information	Discussion and construction of learning

In this paper, we discuss the assessment of messages exchanged during the activities of a collaborative learning course, taught totally online through the AulaNet environment. In Section 2, we present the AulaNet environment and the ITAE course (Information Technology Applied to Education). In Section 3, we analyze the declarations of learners from ITAE 2005.1 (first semester of 2005) related to the assessments. In Section 4, we discuss how the assessments can be improved with collaborative assessment. The conclusion of the paper is presented in Section 5.

2. The ITAE Seminars and the Assessment Method

The ITAE course is a discipline offered by the Computer Science Department of the PUC-Rio University since 1998. From the second semester of 1998, the course has been ministered totally online through the AulaNet environment (Fuks et al. 2002). Although the course dynamics has been changing through its successive editions, its subdivision into two phases is the same since the first edition: in the first phase, learners study and discuss the course topics through seminars, that take place in a asynchronous forum-like tool, and debates, that take place in a synchronous chat-like tool; in the second phase, learners generate new contents to the course.

<i>Friday</i>	<i>Saturday</i>	<i>Sunday</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>
1. Readings (Lesson Plan and Internet search)						
			2. Seminar (Conference) 12hs		14hs	3. Debate (chat) 13 - 14hs

Figure 1. ITAE Dynamics

The ITAE topics are studied in the first phase, one topic per week, like shown in Figure 1. The learners must read the selected contents related to the topic, do complementary research and participate on a seminar where they discuss specific questions about the studied topic. After the seminar discussion, the topic is wrapped up with a synchronous debate. Regarding the debates, the evolution of the dynamic and assessment method were previously presented on (Pimentel et al. 2003). In this paper, we present the evolution of the seminars dynamics and its assessment method.

Currently, in each ITAE seminar, a learner is elected to play the role of seminarist, responsible to elaborate the seminar text and three questions to be discussed by the class. Each message is evaluated by the mediators after analyzing the text. Mediator attribute a grade based on three criteria (Relevance, Content and form) and comments each message. The average of the grades of the learner's messages on each seminar is, then, pondered by the quantity of messages sent by the learner on that seminar.

Through previous investigations about the participation assessment at the ITAE seminars, we concluded that evaluating the messages, even only attributing them a grade, promotes learner's participation and increase the quantity of messages. We also notice a progressive improvement of messages' quality during the course seminars. But the simple grade attribution is not enough to guide the learners. The commentaries of each evaluation are necessary too: it is recommended to follow the criteria set to guide the assessment, but this is impossible at the moment given the amount of work it consumes. The pondering of the quality by the quantity of messages encourages the learners to send more messages without loss of quality, and makes the quantity of messages sent by learner more homogeneous

(Pimentel et al., 2004).

In this paper, learners from ITAE 2005.1 were interviewed, to investigate possible solutions to problems that occurred on the seminars assessment. The results are presented in next section.

3. What learners said about the seminars

The learners of the ITAE 2005.1 were interviewed using open questions, following the method described at Nicolaci-da-Costa et al. (2001). We asked open questions like: “What do you think about the seminars assessment?”, “What should be changed?”, Open questions take all kind of answers and, looking at the unpredictable answers, we seek to deep the investigation through questions like “Why?”, “How?”. After the interviews, the testimonials were analyzed to identify recurrent declarations.

All 11 learners regularly subscribed at ITAE 2005.1 were interviewed. The interviews were one-to-one, after learners finished of all course seminars. The participants' names, on the transcriptions on this section, were replaced by pseudonyms. The analysis of recurrent declarations are presented at the subsequent subsections.

3.1 Assessment is necessary

In a first glance, it is possible to consider that evaluation can discourage, censure or inhibit spontaneous discussion, and that the motivation would be enough to guarantee participation. However, we have verified on ITAE course that the absence of the evaluation generates an irregular and below than expected participation (Pimentel et al 2004), a question that was also investigated on ITAE 2005.1 edition. In this edition, some messages were only evaluated at the end of the seminars, letting the learners experiment zero evaluation. When they were questioned if the messages should not be evaluated, the majority (81,8%) were against it. Pamela said: *“if the messages are not evaluated, I would be disappointed to see a message written by me not assessed and the others', assessed. I would ask myself why they corrected the others, but not mine.”*

We can even notice a dependence between learners and assessment, looking at Fabio's testimonial: *“an empty feeling... that my messages were not important... that I have to send messages only for course bureaucracy. I felt like: Someone is reading, someone is giving importance to my contributions”*.

This declarations indicate that learners like having their messages assessed and feel more motivated with the assessment, confirming the conclusions reached at previous ITAE editions.

3.2 Qualitative assessment: grade, criteria and commentaries

The seminars messages are evaluated using grades since 2000.1, first systematic procedure to assess messages' quality. The majority of the ITAE 2005.1 learners (81,8%) judged adequate the grades application. Fernando, however, complains about some grades: *“some evaluated messages did not represent my efforts. This frustrated me a little.”* Fernando's declaration indicates that the grade needs to be justified.

To justify the grade, since the 2001.1 edition, we added commentaries to the assessment. The majority of learners said that the commentaries really help them to understand the grade, as declared Rafael: *“the commentaries are important to learn with the error. Only the grade would be something like: You have a mistake, but I do not tell where or how to fix it”*. This kind of declaration confirms that commentaries are necessary to guide the learners.

Since 2003.2 we started to analyze messages' quality based on criteria. These criteria aim to lessen assessment subjectivity. When questioned about what they think about the criteria, 63,3% of the learners judged them very rigorous. João Marcos complained about the rigor of the Gramatical Correction, one of the items of the criterion form: *“Sometimes I felt as if I were at a Portuguese class”*. Commentaries like this are frequent because, differently from other subjects of the Computer Science Department is used to take, most of ITAE's activities are based on the textual discussion, requiring that messages are well-written. As learners are not used to perform this kind of activity, that demands good expression in writing, learners feel uncomfortable. Maybe this kind of criteria would not create problems if the course was applied to another department, like History or Philosophy.

Another criterion that learners complained about was the need to citing references. The arguments from the conferences messages must be based on references to avoid the “I think so” expression and to help the reader that wants to look for more information about the discussion. This writing style is used on scientific papers, but as long as most of the ITAE 2005.1 learners are undergraduate students (and they are not used to write scientific papers), it is natural that this criterion is somehow alien to them, illustrated by Marcelo's testimonial: *“Sometimes I would like to criticize, but it is almost impossible to find references about my idea”* and Rafael's: *“I had the impression that criticisms were not allowed... sometimes I put something that was not pure suessing, but I must put a John Doe name, only to give credibility... It seemed as if I did not have credibility.”*

On ITAE 2004.1, learners complained that assessment was too long, because we used to analyze thoroughly each message. After that edition, we simplified the analysis criteria and the commentaries were reduced to one paragraph. Learners of ITAE 2005.1 were questioned about commentary size. All of them think that the current size is good. Bruno explained that

“a big size would discourage learners from reading the results. And a small one would not contribute much to the understanding of what should be improved”. These declarations indicate that the current assessment method is adequate.

3.3 Quantitative assessment: quantity of messages sent by seminar

After the 2004.1 edition, learner participation in each seminar is a pondered average, considering the quality and the quantity of messages (Pimentel et al., 2004). It was established that each learner should sent between 4 and 6 messages on each seminar.

On ITAE 2005.1, we investigated what learners felt about this demand. All learners declared that to stipulate a fixed interval of messages to send is fundamental. Ana Clara explains: *“The obligatoriness is fundamental. If it would not exist, I would not have written even half.”*

This demand is a point that all learners agree, but there is not a consensus about what would be the ideal minimum number of messages. To 45%, the number should be lower than 4. Besides they think that the seminar time period is short one to write the messages and they said that after some messages are sent, they find it difficult to write new stuff. The majority complained about idea repetition, stating that many learners send the required 4 messages just to reach the weekly goal. Diana said: *“in some weeks I started to write the messages at night and I could not write more than one. It seemed like everything that should be said had already been said.”*

This declarations show that a stet minimum number of expected messages helps learners to participate in the way expected by mediators. However, the testimonials alerted that it happened subject repetition, difficulting the sending of 4 weekly messages.

3.4 When to publish the assessment

On ITAE 2005.1, we experimented publishing messages' assessments on different times. On seminaries number 1,2 and 8, assessments were published during seminar period. The messages of seminaries 3,4 and 5 started to be assessed during the seminar period, but some of them were published only after the end of all seminaries. All the assessments of the 6th seminar were published after the end of all seminaries. The assessments of the 7th seminar were published after the discussion period, but before the 8th seminar.

When questioned about the assessments publication time, 81,8% of the learners think that it is important to evaluate all messages before the next seminar, to avoid the repetition of the same mistakes. Besides, previous assessments help learners to write the following messages. Many learners feel anxious to receive their grades, like Ana Clara: *“I used to*

reload the pages to see the grades and I was anxious. I do not know, but the feeling was that I was all the time writing to ITAE and to know my grades promoted me to write even more."

Some learners complained about the uncertainty of the publication time of the assessments. Luciana did not understand that learners were *"pressured to answer the seminars on a fixed date, without delays, and the assessments did not have fixed deadlines."* Pamela's testimonial enforces that: *"in the same way that they ask our presence, our deadlines, and how we are always assessed, the feedback should be faster."*

These declarations show that it is important to assess all messages of a seminar before the following one. Besides, the absence of the information about the publication date of the assessments generates anxiety and discourages learners.

4. Collaborative assessment: Possible way to improve the assessments

On ITAE 2000.1, when course messages started to be assessed, the learners suggested a collaborative assessment. A learner said: *"To assess is a very interesting activity. It makes it possible to think, analyze... other good reasons could be mentioned to justify this activity: to assess the other and to assess yourself. I do not understand why this delicious cognitive activity - to assess - is restricted to the teachers. (...) See how would be simple if on the AulaNet environment was available, at the end of each message, a field to you (learner) evaluate it and add your comments."*

After this edition, collaborative assessment is being suggested by learners at almost all editions, as can be seen by Fernando's testimonial, learner from ITAE 2005.1: *"it would be a chance to the learners to develop their critical sense. It would force us to read more the other's contributions, etc. This would make easier the understanding about how do you have to produce the messages and reach a GOOD grade. To know how to assess a message would help us to define how I would produce mine."*

The use of this assessment strategy is being investigated on this on the current ITAE edition. In each seminar, some learners are selected to assess messages. Mediators assess all messages, and the author receives the average of the assessments as her grade.

5. Conclusion

The current traditional assessment strategies are insufficient to the collaborative learning that take place through online education environments,. In this paper, we discussed the assessment strategies that have been developed and investigated on the ITAE seminars.

After the interviews and past case-studies, we conclude that learners think that the

assessment is important. The lack of assessment generates anxiety and discourages the learners. To assess only with the grade is better than not to assess, but it is necessary to justify the grade using criteria and to complement it with a comment. The uncertainty of when the assessments will be published discourages participation, making it necessary to establish a publication deadline.

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