

Mandatory Participation as Examination

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ABSTRACT

This paper discusses examination, focusing on the possibilities available in ALN based learning. ALN is an acronym for asynchronous learning networks and in this research this means a web based learning environment supporting anywhere/anytime learning. The notion of mandatory participation in learning activities is argued to be more viable in ALNs rather than traditional classrooms. Mandatory participation as the primary examination criteria is used and evaluated in a higher education ALN based course, resulting in several key experiences which are presented and discussed. These experiences contribute to a richer understanding of problems and difficulties involved in ALN based courses.

KEYWORDS

Examination, ALN

1. INTRODUCTION

The post-industrial society requires, more than previously, skills and abilities such as communicating and working well with other people, complex problem solving, reasoning towards deep understanding, and being able to express perspectives and reflect on others' perspectives. When information is abundant in society the goal of learning is no longer memorization of facts. Instead we learn to learn, and engage in a life-long learning process. As a result, learner-centered education has emerged as a contender for the dominating learning philosophy (Norman and Spohrer, 1996).

Constructivism and collaboratism are two related learning models which are learner-centered. Constructivism denies the existence of an objective reality; reality is a unique world-view related to each individual's mind. Rather than absorbing transferred knowledge, knowledge is created, or constructed, by each learner. The collaborative model of learning differs from constructivism by focusing on learning as a result of interaction among individuals. Through discussion and information sharing learners construct a shared understanding, and also improve communication and listening skills. See for instance Leidner and Jarvenpaa (1995) for a more detailed discussion on different learning models.

Collaboratism stresses active participation in the learning process. Passive learners do not learn, so learners must be motivated and engaged, and instructors should support rather than control the learning process. Course organization and incentives must facilitate and promote active participation. It is easy to assume that students naturally should participate actively, but reality is complex and students often choose other learning strategies.

Perhaps the most important influence on learning strategies and outcomes is the examination procedure. Courses have an official curriculum, but the examination procedure constitutes an unofficial hidden agenda. For meaningful learning to occur, examination, i.e. the hidden agenda, must be congruent with the learning philosophy (Ramsden, 1992). If examination procedures in practice promote different learning strategies than intended, official curriculums have little, or no effect.

This research attempts to bridge the gap between collaborative learning and examination. Net based learning environments offer possibilities unavailable in traditional classrooms, possibilities which are discussed below, and make active participation a realistic option for examination criteria. We propose mandatory participation as the primary examination criteria in net based collaborative learning. The idea of mandatory participation was used to design a higher education course which was realized and used for the evaluation. 85 students participated in the course, where the authors were teaching assistant and course coordinator respectively, and key experiences from the

evaluation are presented to give a rich understanding of problems and difficulties involved in net based collaborative learning.

2. ASYNCHRONOUS LEARNING NETWORKS

For the remainder of this paper, instead of using the term net based learning environment we will adhere to the established concept of asynchronous learning networks (ALN). An ALN is a net based learning and teaching environment where possibilities and problems are different from traditional classrooms. A distinct characteristic of an ALN is the notion of anywhere/anytime learning. ALNs are often built using different tools for computer mediated communication (CMC), for example email, bulletin boards and newsgroups, synchronous chat systems, computer conference systems, group decision support systems, and most recently, the World Wide Web (Hiltz and Wellman, 1997).

In an ALN, learners form a community engaging in collaborative learning at the time and place of the individual learner's convenience (Bourne et. al., 1997). By slowing down interaction, learners are given time for reflection, and ideas, questions, comments, etc. can grow and mature before being shared with other learners. Articulating and making opinions and understandings explicit is a learning process in itself, and knowing that ones work will be available for other learners, i.e. peer-to-peer review, is motivating and brings out high efforts. Active participation in learning activities, for example discussions, is crucial for successful learning; this is proclaimed in most research on ALN based collaborative learning.

Learning processes and the role of educators and learners in ALNs are radically different from traditional classrooms (Harasim et. al., 1995). An important issue to remember is that ALN based learning is a social process, or in other words: "though the classroom is virtual, the relationships and the learning it supports are real" (Hiltz and Wellman, 1997). Social skills, status, preferences, traditions, etc. affect the success of individuals and groups. See for instance Wegerif (1998) for a discussion on the social dimension of ALNs.

The next section will discuss the difference between participation and presence, after which we suggest an integration of learning and examination relying on the unique possibilities offered by ALNs.

3. PARTICIPATION VERSUS PRESENCE

A somewhat controversial discussion about participation versus presence highlights some weaknesses of traditional classrooms and strengths of ALNs. To be present is simply to passively attend group sessions, and to participate is to actively contribute to group sessions. Attendance does not imply active participation and this is where traditional classrooms are, we claim, weak. In a traditional classroom learners can attend, not be active participants, and seemingly participate. In an ALN one cannot just attend; lurkers are invisible and to be visible participation, that is interaction with other learners, is necessary.

Participation versus presence is more than an issue of control; it is also an issue of equality. Learners who try to actively participate can be hampered by various social factors. Whereas in traditional classrooms learners must be allowed into the discussion before speaking, in an ALN learners are part of the discussion at all times; there is no slow turn-taking which keeps ideas and comments on the sideline. Time passes quickly in real-time discussions and many learners have difficulties to find ideas under such extreme time pressure. In ALN based discussions ideas can grow over a longer time period and also, considering that contributions are situated in a discussion context, the moment where the contribution is suitable is longer. In traditional classrooms discussions change direction rapidly and the right moments are brief. Other social factors are for instance gender issues, nervousness and self-confidence, and language differences. ALNs do not always have a positive impact on equality, for instance the permanent nature of text in discussions can be considered uncomfortable and limiting as opposed to casual talks.

Considering the importance of active participation for collaborative learning the discussion of participation versus presence leads us towards a starting point for the evaluation: The notion of mandatory participation in learning activities is argued to be more viable in ALNs rather than traditional classrooms.

4. MANDATORY PARTICIPATION

This paper has discussed why ALN based courses are well-suited for active participation in learning activities. This makes it viable to consider active participation as the criteria of examination. Current educational practices intend for examination forms to support, or at least not hinder, learning, but in practice the examination forms are unaligned with the learning philosophy. An alignment of learning philosophy and examination, thus making examination an integrated part of the learning process, is suggested: Collaborative learning stresses active participation; ALNs support active participation. Therefore this paper proposes mandatory participation as the primary examination form in ALN based courses.

Mandatory participation seems to offer an integration between examination and learning, which is in line with the notion that one cannot separate examination from learning. Demanding active participation is a bold and radical move considering that in most cases participation in ALN based discussions is optional and examination consists of assignments such as essays at certain times.

As discussed above anywhere/anytime learning is a key issue for ALNs. Work wherever and whenever you want but participation is mandatory. It sounds like a paradox but it is not. Learners are used to mandatory attendance in physical spaces but mandatory participation, not only attendance, in virtual spaces is very different, or at least new. Certainly voices will be raised about inequality concerning computer access. We however consider the time has come when computers are widely available, like any other transportation means. Large investments have been made to increase the number of campus computers and many people have computers at home. Just like learners living far away from campus are required to take care of transportation to campus, we require that learners take care of computer access issues. As it is accepted with mandatory lecture attendance, we say: If you cannot participate, then why are you taking this course?

This of course sounds harsh and perhaps naïve but it is a main ingredient if participation is to be mandatory. In the next section we will discuss the evaluation of the concept of mandatory participation in an ALN based course.

5. EVALUATION

The idea of mandatory participation guided the design of an ALN based course. Mandatory participation is a continuous form of examination where learners must be "reasonably" active throughout the course. Therefore, learning activities must be evenly spread over the course duration; learners can be more or less active over time so the total participation determines examination outcome, not large assignments at certain times. In order to achieve this flexibility in participation the course was structured using thematic modules (TM).

TM is a structuring philosophy which divides the course into several self-contained units (Nulden, 1999). This is different from traditional modular structuring where a large topic area is divided into subtopics small enough to digest for learners, like chapters in a book. In TM each module introduces a separate issue or problem, like tiny islands in a vast ocean of knowledge. Every module has a well defined beginning and ending. Because each module is self-contained learners can be more or less active in different modules according to interest and outer circumstances, as long as the total participation is satisfactory.

An introductory course in Informatics, given for undergraduate business administration students, was designed on the basis of mandatory participation and TM. Each module was initialized with a, hopefully inspiring and challenging, two hour lecture. The rest of the week-long module consisted of discussion in groups in the ALN and an end-of-module summary provided closure. The course

lasted for 10 weeks, that is covering 10 modules, and awarded 2 credit points. 85 undergraduate students were entered in the course and they were divided into five groups, each having a teaching assistant (TA) to facilitate and support online discussions. One of the TAs' responsibilities was to inform the course coordinator about students who were not fulfilling examination requirements. The course coordinator would then judge the students effort and take full responsibility for any final decision to fail the student. Deciding if a student's participation fulfilled the examination requirements was in some cases difficult. Some limited tools, i.e. visualizations, were available to make it easier to understand each individuals participation level but these were apparently not enough. The issue of technology support for TAs is however beyond the scope of this paper but is an important area for future research.

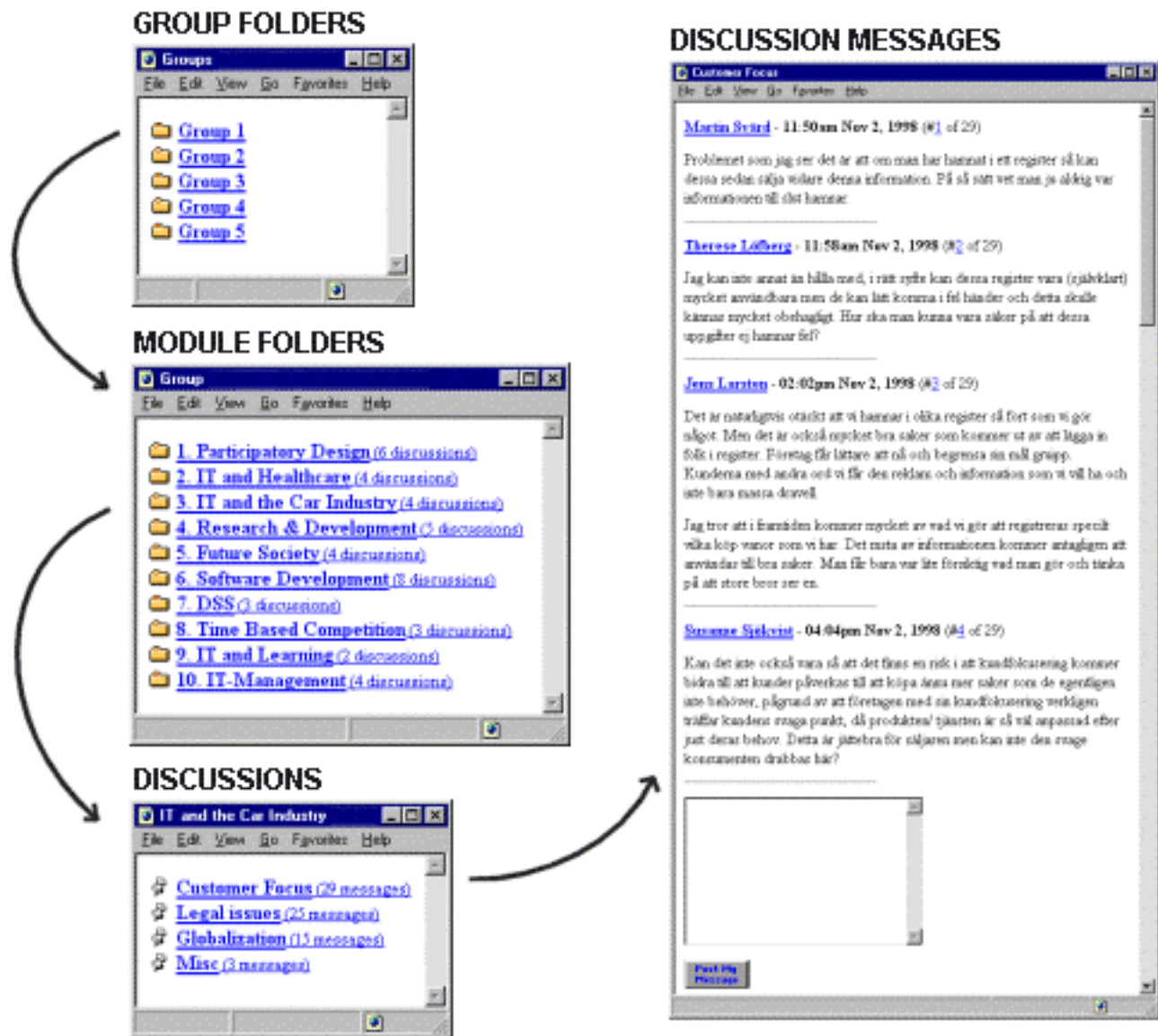


Figure 1. The ALN

The ALN used for the course was very structured, ordered, and hierarchical. Figure 1 shows screenshots of the ALN interface. Each group had a separate area, i.e. folder, and within the group folder there were 10 folders, one for each module. During a module the group would create appropriate discussions in the current module folder. Discussions are containers for messages and, as we can see in figure 1, new messages are appended to a vertical list of existing messages. New

messages were also sent to the students with e-mail as a notification service. In this case the ALN was highly-structured but this is not a requirement for TM in general. TM is a flexible structuring philosophy and can be adjusted to different settings and intentions.

Half-way through the course the course coordinator and TAs thoroughly discussed students' participation and five students were judged to be non-participant and as an effect of being failed they were no longer allowed to access the ALN. For the second half of the course none of the remaining students neglected participation and so they all passed the primary examination. Having passed the primary examination they were allowed to complete an end-of-course assignment determining the final grade: pass or high pass.

In practice, mandatory participation as the primary examination criteria turned out well. There were some complaints on problems in accessing computers, as expected causing a conflict with the mandatory participation demand, but this was a minority of students and they managed alright despite this handicap. Many students wanted us to reserve campus computers for them regularly but we did not since this conflicts with the notion of anywhere/anytime learning. It should be noted that the learners were judged leniently; only very apparent cases of low participation were failed. This does not mean students passed for free; only that, because determining reasonable participation is difficult, we decided to rather pass than fail the uncertain cases.

6. EXPERIENCES

We will share some of our experiences, or anecdotes if you wish, from the evaluation which are related to mandatory participation. These experiences serve to give some depth in the understanding of problems and difficulties involved in ALN based learning and mandatory participation.

New and different

The ALN based course proved to be in sharp contrast with regular courses which the students had experienced previously. The shift from teacher-centered to learner-centered education was somewhat of a revolution.

Technology-wise it was certainly a change in that the course was ALN based but students were relatively familiar with computers and the Internet. The students were given a brief manual for the system, a short demonstration, and an optional half-day workshop. The few computer novices learned quickly and some of them remarked afterwards "oh, was it that simple...".

The revolution concerned the learning philosophy. Students were not used to collaborative learning, unstructured tasks, open-ended discussions, and the notion of producing knowledge for themselves rather than the teacher. They were hampered by a textbook focus and lack of initiatives. Roughly they were asking: "What are the exact examination criterias and where is the final written exam?"

Many of the lecturers, especially those who were teachers, were also stuck in the traditional view on learning. Their lectures were not perceived by the students to serve as a motivating starting point. Understanding the lecture as a starting point instead of an overview or summary is a difficult change process. Interestingly, the most appreciated lectures were those performed by professionals from the industry.

For the course coordinator and TAs it too was a new and challenging situation. We had little previous experience of this new form of learning and knew it would be a difficult process, for us and foremost the students. Therefore we decided to have a very positive and generous attitude, by for example having extended office hours. Introducing the ideas to the students was not trivial. Convincing them to commit and engage in collaborative learning was problematic and is a key issue for the success of ALN based courses.

Off-topic discussions

We identified two cases where students engaged in off-topic discussions. The first concerns non-serious discussion, i.e. topics not related to the course. The second concerns students posting to serious discussions but with the intent to pass examination, not contributing to the learning process.

Examples of non-serious discussions were sports discussions, tv-show discussions, and music discussions. Each of the five groups created about two such discussions and, unlike the serious discussions, these lasted throughout the course. These discussions were popular judging by the volume of messages they received, for instance one discussion about icehockey received 140 messages. The tone of voice was different compared to serious discussions; more relaxed. One, unintentional, problem was that all messages were also sent as e-mails to participants. The volume of e-mails was already high enough without off-topic messages so this became a source of annoyance. This leads us to claim that non-serious discussions should be kept totally separate from serious ones; not so much where they are placed but more importantly avoiding interference issues such as ours.

The second type of off-topic discussions concerned students feeling the pressure to say something in order to pass the examination. Because we had an open-minded and friendly attitude towards the examination many students dared to admit posting not to contribute to discussions but to meet examination criteria, that is they posted just for the sake of it. Some joked about the need to say something serious quickly in the beginning of the module before everything was said. Especially during the first modules students tended to post similar messages, rather than building on each others contributions. Another reason for low-quality messages was the problems in accessing computers. The affected students simply had to do everything at once when they found a computer, that is read, think, and post. There was no room for reflection since leaving the computer and coming back later to post was unthinkable.

Mature and evolve

Above we discussed how new and different ALN based collaborative learning was for students. During the course we also noticed how students changed attitudes, learning strategies, etc. We feel that at first many students had difficulty seeing the point in collaborative learning but over time some students revised their attitude to this way of learning and realised that one can learn from interaction with other learners. Of course, not all students were convinced and 10 weeks is a short time to change ones perception of what learning is. We do however believe that the new experience will have started a thinking process within most students which will lead to critical and reflective examination of the learning they participate in later. Even if they did not see the point of collaborative learning directly, they might think differently in a year or two.

Also, students at first had trouble with the mandatory participation criteria. As one TA expressed it: "Initially my students thought mandatory participation meant they had to be constantly present in the ALN. This caused frustration and they said: 'Be there all the time? This can't be? We have other things to do!'. Gradually they realised what we meant and eventually they started working as intended with about one visit per day to update themselves, reflect, and post messages."

Teaching assistant frustration

One of the TAs' responsibilities was to stimulate students who were inactive and not participating in a satisfactory manner. The first difficulty was to decide when a student was not reasonably active. All TAs had different personal styles but none wanted to appear bossy or bad tempered, so pushing students was difficult, especially when faced with a borderline case of inactivity. This gives us the second difficulty; how to approach students and give them a friendly push. Another practical issue is being able to contact students. Sometimes reaching inactive students was impossible because they did not participate in the discussions and we did not always have their emailaddress. A TA should always be able to reach all of her students.

The TAs mainly tried to facilitate discussions and help students reach higher levels of understanding. Sometimes a TA might say something really interesting and challenging, only to be disappointed when no reaction was triggered. Either the students were not interested in the new discussion option or they simply lacked the experience to build on feedback which was too

advanced. Giving appropriate feedback is a very complex issue and it is further complicated by the fact that the students all have different backgrounds, experiences, and preferences.

7. CONCLUSION AND FUTURE WORK

This paper has introduced the idea of mandatory participation as examination in ALN based courses. The evaluation indicates that it is viable as the primary examination form in this setting. However, our experiences show that the alignment between learning and examination was not complete since many students took on learning strategies purely focused on passing examination. This was our first evaluation of mandatory participation as examination so of course further research is needed. A multitude of issues need to be explored further, such as facilitating learning processes, technology support for TAs, other ALN based examination forms, and how to further integrate learning and examination.

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