Classroom Component of an Online Learning Community – Case Study of an MBA Program at the University of St. Gallen

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1 GOALS AND MOTIVATION

The Internet not only affects various fields of business but also the educational sector increasingly. The impact of Internet technologies on the way of learning are immense. New learning scenarios arise; learning processes shift; learning methods are technologically better supported [12]. On a content side, it is possible to present knowledge in a network in the form of hypertexts. In addition, the participants of an educational program can benefit from a personal network developed in online supported learning communities [11].

This development challenges educational institutions to find successful ways of integrating the emerging learning scenarios and learning processes. To overcome disadvantages like isolation of students, slower learning progress because of missing team spirit or low involvement of students in the learning material, educational institutions should not just use the Internet as a new distribution channel of old learning methods, but employ the Internet's chances to provide students with the knowledge required for a successful professional life as well as to prepare them for life-long learning and a continuing education.

This contribution wants to:
- show a way of designing an online learning environment
- design a possible classroom component of a specific online learning community

We will first introduce a concept of online learning communities. We will then briefly describe the reference model for learning communities which allows us to model a medium for the learning community. The reference model is applied to concrete MBA program, and the design of the classroom component of this MBA learning community is introduced. Finally, we will give a brief outlook.

2 CONCEPT OF AN ONLINE LEARNING COMMUNITY

An online learning community can offer the basis for life-long learning and intensify students' learning experience immensely. Mutual, thus mostly deeper, examination of learning materials and the exchange between the group members deliver more aspects and different points of view on a topic and help to assess and enlarge the members' knowledge. On an interpersonal level, mutual studying creates a feeling of affiliation which is maximal when considering formal learning goals as well as common social interests.

After defining the term "online learning community", we will give an overview of our proposed design for an online learning community.

2.1 Definition: Online Learning Community

An online learning community unites the concepts of the (online) community and of the new learning paradigm:

A *community* is a group of actors [1] who are connected by a common interest, common goals, or common actions in a commonly used channel system [16]. The channel system is part of the medium through which the exchange between the group members is maintained. According to Schmid, a medium is a system consisting of the components logical space (semantics and syntax of a common language), channels, and organization (the structure with definitions of roles and their rights and obligations, and the process with protocols and processes) [16], [17]. A community can be called an Internet-based community (online community), if it uses the Internet as its "channel system" for exchange between the members [7], [10], [13].

A learning community [5], [11] has learning as its common interest. Actors involved can take on certain roles and the resulting rights and obligations in the community, e.g., the role of a student or teacher, or, less restricted, of alumni or project partners. The membership to the community heavily depends on the learning environment, the kind of community, and its goals. The community develops a common language that is understandable for all members.

The *new learning paradigm* [14] implies that studying is not product but process oriented [3], shifting the focus from the result to the way the learning process takes place. Group-oriented learning, meta-cognitive learning strategies ("learning how to learn" and reflection of one's own learning process), and the possibility for knowledge exchange in the learning network as a basis for a life-

long learning concept are emphasized.

Connecting those concepts (Figure 1), an online learning community can be understood as a group of humans who share, on a pedagogical level, a common language, a common world, and common values and who communicate and cooperate through electronic media during the learning process [19].
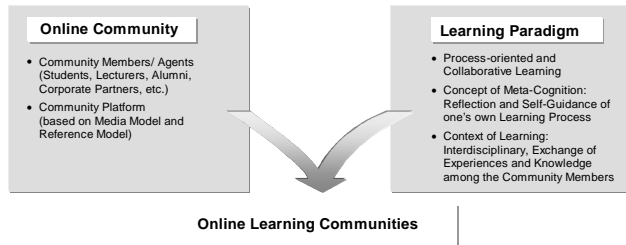

Figure 1: Emergence of Internet-based (Online) Learning Communities

The Internet's characteristics, as opposed to the traditional channels', can increase flexibility in the design of the community: independent of time and place, both synchronous and asynchronous learning over long distances is possible [20]. Individual preferences of community members in learning can more easily be considered, and students, as members of a global learning community, can work on assignments or group projects in a flexible manner.

Internet-based learning is not necessarily "distance learning". An Internet-based learning method can be utilized although all group members are at the same location. Respectively, an online learning community can support a "traditional" learning community partially. In this case, we speak of media-supported learning rather than of media-conducted learning [4].

1.1 Design of an Online Learning Community

Most successful in the development of an online learning community in order to support its members optimally seems to be the combination of the advantages and approved methods of the traditional university and the flexibility of online media. A successful online learning environment, e.g., would be the depiction of a university on the online learning platform, including a classroom community and a campus community.

- The *classroom community*, the community within the course or in the "classroom", is mainly determined by learning objectives and methodological goals of the class; it supports the "formal" learning community. It follows a didactically structured course design (e.g., a study program or training course), allowing the formation of several sub-communities (e.g., student groups, project teams).
- The *campus community* characterizes a campus-wide, more informal community and reflects the "campus life" that takes place beyond the didactically planned study offers; it is designed comprehensively and long-term oriented (in the sense of "life-long learning" concepts), focusing on informal exchange of knowledge and experience. Community members are tied together by social interaction and other common interests.

The depiction of a university on the Internet platform allows for the program to portray online, in a comprehensible and user-friendly way, most of the typical processes that occur during a study program. It should also support the cohesion between students and the community. Taking over such an important role, the platform as the learning community's channel system has to be designed diligently in order to fulfil the community's needs. We

will now introduce a reference model for learning communities that suggests a design for such a platform, as well as the other components (organization and logical space) of a learning community.

2 A REFERENCE MODEL FOR LEARNING COMMUNITIES

Platforms of Internet-based learning communities can be modeled – referring to the media reference model for communities of Schmid [18], [22] – in four designs (derived from four views). We separate the design for the campus community from the design for the classroom community, since those two communities have different focuses and different functions (see Figure 2).
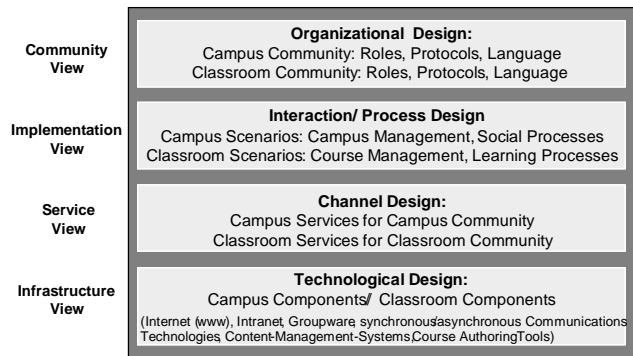

Figure 2: Reference Model for Online Learning Communities[19]

- The *Organizational Design* shows the community view. It defines the structure of the community, the community interests, the actors and roles, their common language and the process with protocols and guidelines for the community. Differing focuses and goals of campus and classroom community require different roles, languages, and protocols. The organizational design is also adapted to the needs of a specific online learning community.
- The *Interaction/ Process Design* is seen from the viewpoint of the implementation view and connects the preceding organizational design with the subsequent service design. Based on the organization of learning communities and supported by the services offered by the platform for learning communities, the processes and scenarios are depicted. The (media supported or presence) phases of particular learning processes are designed. Considering campus and classroom situations, each community will have special interactions and processes.
- The *Channel Design* represents the service view; the channel systems and services offered to the different communities and their members are described, and the web interface is determined.
- The *Technological Design* is presented from the perspective of the infrastructure view (technological aspect). In this part, the decision about where to develop which new technological tools and where to use which standard tool is made. For spotlighting the user needs, not the technology, this level is only performed after the community, its interactions and processes, and the required services are specified.

The reference model can be used to design learning communities which perform all their communication and learning processes on the Internet, as well as to model the design of communities combining attendance classes and online phases, using the Internet for certain functions and selected learning processes only. We now utilize the reference model to support an MBA learning commu-

nity that combines online and presence elements.

1 MODELING THE MBA CLASSROOM COMMUNITY

1.1 The Executive MBA in New Media and Communication

The Masters program "Executive MBA in New Media and Communication", offered at the University of St. Gallen by the Institute for Media and Communications Management (=mcm*institute*), combines competence of business administration, knowledge about technological and economical components of new media, and the interaction of new media with sociological aspects. The use of new media is imparted to students through a combination of theory and practical application, supporting the goal "learning new media through new media". To enhance the employment of new media, predominant face-to-face classes in the beginning are increasingly supplemented by Internet-based elements. The MBA community is tied together by the common interest in the topic "new economy" and the related topics in the field of media and communications management.

The Internet platform is target-group oriented to allow students, alumni, business partners, and sponsors direct access to sections of their special interest. The MBA community and its platform are developed following the four design steps of the reference model. As a pioneer, this community uses the NetAcademy (www.netacademy.org) which was originally developed as a platform for knowledge exchange, publications, and discussions in research communities [15] and is currently used by members of five research communities in the field of media and communications management [8].

The NetAcademy is designed as a "generic" platform. A new research or learning community can choose and combine existing services of the NetAcademy according to its needs and also add other required services. Numerous services already offered by the NetAcademy (e.g., the digital libraries and the glossaries) will be used by the MBA learning community. Additional services, such as curriculum catalogs or teaching templates, will be developed specifically for this community "type". An overlap with the research communities connects MBA community members to and enlarges their network with interesting researchers.

1.2 The MBA Community

Pursuing the idea of life-long learning and a strong affiliation to the MBA community, the MBA team strives to create a close cohesion between students from the very beginning by following the campus-classroom approach mentioned above.

The MBA *campus community* holds the roles "student", "business", "faculty", "alumni", and "guest" and serves as platform for social interaction and networking. Services of the campus community therefore include a meeting point, an information desk, and a "networkers' guide" for finding former study colleagues or experts on different topics.

The MBA *classroom community* is not an exceptional online community but supplements initially predominant face-to-face classes. The Internet platform plays a critical role as coordination platform and as communication and collaboration instrument in different learning methods of the MBA program. In the following section, we use the reference model for learning communities to model a classroom community for the MBA program in the NetAcademy environment.

1.2.1 Community View: Organizational Design

From a community view, the classroom community is structured in terms of roles and rules/ protocols, the common language, and the channel system. The classroom community, due to its formal character, is well-structured and has specific goals. The common interest lies in mastering the learning materials and succeeding in the assignments.

Actors in the classroom community can take the roles "student", "faculty", "staff", and "guest". Their functions vary depending on the learning method employed (e.g., faculty as lecturer, reviewer, or discussion leader (see Figure 3)).
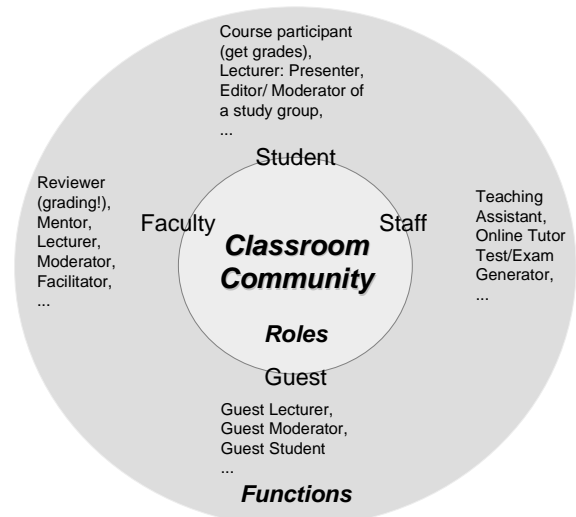

Figure 3: Roles in the Classroom Community

In addition to general rules for interacting on the online platform, there are special rules for successful interaction in the classroom community, such as guidelines for courses (course management: e.g. planning of courses, self assessment of students or course evaluation) and design of classes or learning arrangements [21] ((didactic) guidelines for teaching/ learning methods [6]).

The NetAcademy creates a common language (logical space) through glossaries and interlinked contents (links to glossary entries, links to authors and their roles in the community, etc.). The definition of a specific terminology for the classroom community creates a common understanding and the uniform use of terms and, thus, allows a better exchange and better communication among the members. The common understanding should not only refer to contents but furthermore to the structure of and the processes in the community, such as learning goals, key takeaways or learning methods.

1.1.1 Implementation View: Interaction/ Process Design

The implementation view concentrates on the processes and interactions in different learning scenarios. Every scenario encounters several phases, not all of which necessarily have to be media supported. Structured interaction protocols can be generated for some processes that are highly automated; other phases may be structured only basically.

The interaction design includes the class management, which has a more administrative character, as well as the design of the learning processes, which deal with imparting contents. In order to determine the design of learning scenarios we will briefly introduce our teaching framework depicted in Table 1.

The MBA program uses learning methods according to the study categories (contact study, self study, context study) introduced by the University of St. Gallen in the tide of restructuring its

study programs [23]. *Contact study* [2], as a first category, contains of face-to-face events, , ranging from "traditional lectures" to interactive lectures, in which the direct contact between the participants plays an important role. The second category, *self study*, includes student-centered methods. These can vary from highly controlled self study integrated in lectures to completely independent self study tutorials. As a last category, reflection or *context study* focuses on a broader context of learning content and mostly combines team-centered methods and complex, practical assignments of interdisciplinary fields [6], [9].

A teaching/ learning method may be explained by two dimensions. The *social form* distinguishes between class events, group work and individual work according to the dominant part of the lesson. The *activity form* indicates the kind of the learning task and knowledge achievement of the students. Whereas during a lesson based on "frontal teaching" prepared knowledge and thinking structures are imparted, during lessons based on case methods, project-based methods or scientific work the emphasis lies on the learners' own creation of knowledge.

Not every combination of social form and activity form is possible or recommendable. A faculty dominant approach to scientific work would not be successful, neither would be frontal teaching for group work or self study. The challenge lies in combining different methods for the greatest possible learning success.

Study Categories	Appropriate for: - Contact Studies 1. Self-Studies - Context Studies	Appropriate for: - Contact Studies - Self-Studies - Context-Studies	Appropriate for: 2. Contact-Studies - Self-Studies - Context Studies
Social Form **Teaching/ Learning Methods** *Activity Form*	**1. Class Events** Dominant: Faculty	**2. Group Work** Dominant: Group Moderator	**3. Individual Work** Dominant: Student Online Tutor
Frontal Teaching (New Theories and Concepts)	Examples: - (Online) Lecture - Q&A-Sessions - (Online) Guest Lecture, Mentoring - (Online) Symposium - Dinner Speech - Excursion	**1**	
1. Preparation / Revision "Wrap Up"	Examples: - Lecture: Instructor-led Preparation and Wrap up	Examples: - Homework in Groups - Group Presentations: What's new, Tech Talk, Lessons Learned	Examples: - Homework - Presentation: What's new, Tech Talk, Lessons Learned
2. Training / Practice	Examples: - Tutorials/ Exercises, - Computer Lab Sessions **2**	Examples: - (Online) Tutorial: Instructor-led - Computer Lab Session: Instructor-led	Examples: - (Online) Tutorial: Group-led - Computer Lab Session: Group-led	Examples: - (Online) Tutorial: self-paced - Computer Lab Session: Student-led
4. Case Methods:	Examples: - Case Studies, - Web Quests, - Case Writings	Examples: - Lecture: Presentation of Cases - Guest Lecture: Presentation/ Demonstration of Business Cases	Examples: - "Classic" Case Study - Self-Study Case	Examples: - Case Study - Self-Study Case
5. Projects:	Examples: - Media Venture - Real Life Projects - Students' Projects		Examples: - Integration Seminar - Project Seminar - Task Forces/ Expert Groups	Examples: - Student Project - Seminar - Field Study
6. Scientific Work:	Examples: - Working Reports/Analysis - Thesis		Examples: - Group Reports - Group Thesis	Examples: - Reports - Thesis

Table 1: Teaching Framework for the MBA Program

1.1.1 Service View: Channel Design

The services in the service view are used to execute the processes of the implementation view. We identify four basic services for the classroom community which are learning community specific, thus new on the NetAcademy. Faculty and staff have very similar roles using the services in the classroom community and are conglomerated here. Guests have the same rights as students but are restricted in their access to single courses.

- A m*anaging tool* serves as a course planner for all members, for (administrative) preparation of courses by faculty/ staff, and

for evaluation of courses by students/ guests.
- A *reporting tool* allows students/ guests to assess individual course progress and their own grades; faculty/ staff can overview class progress and the grades of all students.
- Using a *content repository tool*, faculty/ staff can provide materials for class events, group work, self studies and self tests; students/ guests can get class materials and assess their knowledge in self tests.
- A *cooperation tool* supports faculty/ staff in preparing team work or group projects, provides team spaces for group projects of students/ guests, and serves as a discussion forum for all members.

Depending on the learning method, one or more basic services can be integrated into new, more complex services. The following example illustrates how the online community is supported in the activity "thesis" by a "thesis marketplace service":

The starting hurdle of writing a thesis can be choosing a suitable topic or finding a supervisor for a self-selected topic. A "thesis marketplace service" (see Figure 4) offers a platform for trading topics and finding supervisors or students interested in working on specific topics. Later on, the service can provide support in phases of tutoring. In the cooperation tool, students can place a topic proposal and search for a supervisor, a tutor, and writing partners. Faculty members can provide topics and search for students interested in those topics, and they can respond to students who require tutoring services. Materials can be exchanged in the content repository tool. Administrative issues are covered in the managing and reporting tool.
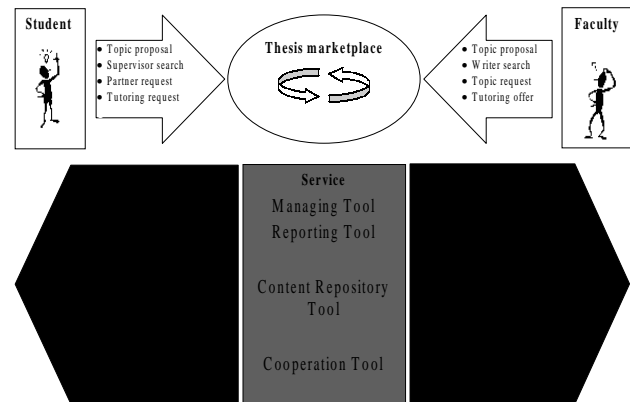

Figure 4: "Thesis Marketplace Service"

1.1.1 Technological Design

The technological design of the classroom community includes the supply of discussion databases for team work, synchronous chat tools, asynchronous discussion tools, and content databases for class materials, cases, and assignments. It also includes the graphic design of the platform, managed in a separate design repository to allow quick adaptations independent of the technological design.

Not only the three layers above determine the decision about the way of implementing the infrastructure, but also other circumstances (already existing technological framework, financial and personal resources, time frames, etc.). Considering those prerequisites, a trade-off between choosing a low-cost standard service solution and a high-cost customized service solution or even development of new services has to be reached.

The MBA classroom community is implemented as a combination of standard software and individual software solutions.

2 CONCLUSION

We have described how a learning environment can be depicted, we have used the reference model for learning communities to design an example classroom component for a specific learning community, and we have illustrated a sample community service.

We are convinced that the design of this online learning community, according to the media reference model, considered all important factors of the learning community. The critical factor for acceptance and use by the community members, however, will be the fulfillment of their needs. We therefore see the diligent observation and critical investigation of student, faculty, staff, guest and business partner needs as our everlasting challenge to lead the MBA online learning community to success.

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