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Design and Management of Online Learning Communities

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Abstract. This article provides an overview of online communities, placing a main emphasis on learning communities. After a brief introduction, the meaning of the term 'online community' will be explored in Chapter 2. This will provide a basis on which to explore the multi-faceted concept of community in relation to existing classifications (chapter 3). In the main section of the article, Chapter 4, the design and management of online communities will be examined. Following on from this organization, process/methods and technology levels of formation will be clarified with selected case examples. Chapter 6 provides a short summary of the article.

1 Introduction

The term 'virtual community', or its synonym 'online community 'is concerned with the idea of forming a community in which members do not necessarily meet and communicate with each other face-to-face, but rather online, in 'virtual space'. With the growth of the Internet in the last few years the term has become increasingly widely employed. The use of the concept of community in connection with Internet technologies has been discussed in practically every field of business, as well as in education. The terminology therefore varies a great deal and is not always used consistently. The multitude of expressions such as business communities, communities of practice and knowledge communities demonstrates the multifaceted nature of the concept of community. What exactly does the concept imply, which different varieties have been classified and how do these types of community become successful?

This article aims to answer these questions. Chapter 2 will explain exactly what is to be understood by the term 'online community' and the history of the concept will be explored, in order to place the different perspectives of the term in a global context. Following this, the goals and typical features of ideal communities will be introduced and communities will be distinguished from other forms of collective learning. Chapter 3 examines the different categories of communities that can be found in practice. The main emphasis of the article is on the design and management of virtual communities. Consequently, in Chapter 4, the organizational, process/method and technological levels of online communities will be differentiated. Chapter 5 illustrates the article with several case examples in the context of learning communities. In Chapter 6 the article is concluded with a short summary.

2 Clarification of the term: what are Online Communities?

2.1 History of the term

With increasing Internet use, the term 'community' is experiencing something of a renaissance. From a sociological point of view, this can be seen as an interesting phenomenon. In Anglo-American society the term 'community' has been well established for many years. In contrast to European society, American society is strongly based on social concepts of self-help and the idea of a local community. Social networks are not primarily supported by state welfare, but rather much more by social support networks. Even in the area of welfare and social work the idea of community building is traditionally highly important. It is therefore hardly surprising that the American concept of community is beginning to make a relatively smooth transition onto the Internet, particularly since the themes of social impoverishment and isolation has shaped much of the discourse on Online Communities from the outset.

In the German-speaking arena it is very noticeable that the English term 'community' is used over German alternatives such as 'Gemeinschaft'. In part this can almost certainly be explained by the continuing Anglicization of the German language, particularly in the IT world. However, the German term also has political connotations. In fascist Germany the term 'Gemeinschaft' was highly compromised, since the 'Volksgemeinschaft' (the concept of national unity) based on 'Blut und Boden' (' blood and soil' – the idea that political stability and power depend on unification of race and territory) implied forms of social pressure, relationships and legitimizations which were not based on the lawful rights of society. This episode in German history has long-since rendered the use of the term 'Gemeinschaft' taboo, and distanced it from social discourse. Similar associations with the term are also made in Russia. The term 'Community' or 'Online Community' is therefore rarely translated into either the Russian or the German language.

At the beginning of the 1990's, important promoters of the Internet such as Esther Dryson (Dryson, 1997) and Howard Rheingold, (Rheingold, 1993) succeeded in fully establishing the term Community (although it could be argued that they over-idealized the concept in parts). Above all they highlighted the social phenomenon of group formation. Probably the best-known definition of an Online Community comes from Howard Rheingold: "Virtual communities are social aggregations that emerge from the 'Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace" (Rheingold, 1993). Schmid pursues a stronger media- and agent-based approach, which does not solely take into account real people. According to Schmid, communities are put together through agents – these can be human or software – which are linked by a common language and set of values and pursue common interests. These agents are tied together through a medium in which their roles interact with each other accordingly. Online Communities are distinguished from other communities in that they exist on the basis of electronic media.

In the development of **E-commerce** the concept of community has experienced an even stronger growth. Hagel and Armstrong (Hagel and Armstrong, 1997) were the first not only to see a social phenomenon in the concept of Virtual Communities, but also to combine this with a new business model, which uses new possibilities for communication on the Internet to generate electronic market places and to enhance customer relations (Timmers, 1998). Business transactions on the Internet seem to depend upon the manner in which a customer stands by a particular label or firm. For this reason, many companies go to great lengths to build and maintain such links through 'Communities'.

In the context of **education and further education** the introduction of Online Communities has also proved to be a promising concept for online courses and distance learning programs. The formation of Online Communities has provided the opportunity to improve both the quality of online courses and the attractiveness of Internet-based learning environments. Furthermore, communities can counteract the isolation of the independent learner (and the associated dropout quota). Members of a learning community can be made up of students, lecturers, tutors, researchers, practitioners and other experts who have a common interest in a specific field of knowledge and area of learning. Teaching concepts, learning partnerships and team-based learning methods in curriculum design can for instance contribute to the promotion of the 'Learning Community' on the 'Net.

In the context of companies, the term 'community' has been emerging with increasing frequency in both theory and practice, and also in connection with the theme of **knowledge management** and **organizational learning**. In this sense the focus is on forms of learning which are not planned as curricular, dissociated educational measures (i.e. decontextualized) but rather on learning that is integrated into everyday working life (and is therefore situated and contextualized). Due to the growing importance of knowledge and collective learning as crucial success factors in the business world, new learning concepts are being sought which attempt to bridge the institutionalized dichotomy between work and learning. The aim is to reunite the two areas, which in reality genuinely belong together. Learning communities seem to be a step in the right direction towards exploring the definitions of learning and working and erasing the dividing line between the two. In the operational work sphere, communities of this kind are often described as 'Communities of Practice', a term which has emerged from ethnographic field research in the organizational world. In contrast, the concept of learning communities comes from the sphere of curricular, structured learning.

A definition of learning communities that encompasses both approaches is provided by Reinmann-Rothmeier (2000). According to this definition, a learning community is a community in which people are joined together by a mutual interest to intensively examine a particular theme, and in so doing are able to learn together, exchange existing knowledge and work on aspects of problem solving together.

The current article focuses particularly on these kinds of community ('learning communities'), which are not only characterized by curricular, decontextualized learning, but also by situated, contextualized learning.

2.2 Aims and typical features of ideal Online Communities

In any situation where a social tie motivates and lays the foundation of a business, it is interesting to initiate communities and work out their net product potential both for the community leaders and for the community members. The actual formation of a community therefore takes on a central status where Online Communities are concerned. Successful, collective learning in an initially impersonal medium can only be a promising concept in the long term if a community is formed around the learning, which enables members to get to know one another as individuals and consequently as learning partners. For this reason, essential objectives for online learning communities are (Paloff and Pratt, 1999):

- to achieve a deeper understanding of learning content and knowledge themes, to work together to solve problems, to exchange experience and develop new knowledge,

- to support the socialization process among the members of the group through group learning and community activities,

- to promote the development of formal and informal learning groups in order to exchange implicit as well as empirical knowledge, to provide opportunities for informal discourse and freedom for ideas, integrated into the natural working environment in which the knowledge has been developed and proven,

- to aim to achieve higher student motivation and a greater sense of responsibility for successful learning, and to minimize the dropout rate (in curricular learning communities).

As the term 'community' is a complex theoretical construct, it is helpful to work out typical elements of an 'ideal' community, which also belong to the concept of the Online Community. This will enable a subsequent examination of the specifics of Online Learning Communities.

Feature	Description
Initiation	Communities form around common interests and are therefore partly goal-oriented. This focus on a common interest and the form of community chosen build a systematic barrier distinguishing online communities from other communities or social forms.
Life cycle	Communities must give rise to and pass through different phases of community formation. Scott Peck (in Zur Bonsen, 1999) differentiates four phases of community formation: 1)Pseudocommunity, 2)Chaos, 3)Becoming vacant, and 4)Community. Other approaches incline more towards social psychological group theories, and can be reduced to the popular scientific phrases concerning team building, i.e 1) forming, 2) norming, 3) storming, 4) adjourning.
Relationship	Communities are held together first and foremost by informal relationships, which are based on the commitment of individual members, who can generate strong social pressures towards one another. In this framework the opportunities to identify, participate, build trust and acquire relevant skill are of central importance. Newer forms of community are based in part on legal contracts.
Reciprocity and legitimization	Communities are distinguished by an element of reciprocity, which is based on a mutual acceptance of rules and duties. The observance of these rules and duties legitimizes participation in a community. Rules and duties can be renego-tiated by concensus (by those who are in charge of definition, - ideally everybody). The agreement is the basis of lasting ‚commitments‘.
Self-guidance	Communities are distinguished not least by a strong element of self-guidance and new orientations can be established relatively quickly.
Orientatation to the member‘s own environment.	Communities draw in the environment of members in a stronger manner than other social forms permit. Therefore both emotional-affective and subjective interests and strengths can legitimately be brought in and selected as central themes.
Common platform:electronic media	Members of a community are integrated by a medium (Internet and Internet technologies through the use of a ‚virtual‘ or Online platform which enables a wider range of members to be reached.

Table 1: Typical features of ideal Online Communities (Stoller-Schai, 1999)

These elements of communities are of particular interest for the support of learning processes because they are based on individual interest, voluntary participation and intrinsic motivation – fundamental conditions, which decisively support the learning process. If life-long learning, self-guided learning/reflection on one's own learning process, co-operative learning and the acquisition of orientation knowledge are increasingly becoming core competencies, then learning forms should be sought, which promote the formation of these competencies more efficiently than traditional teaching/learning methods. In this regard, online learning communities seem to be a promising concept, as they place an emphasis on personal identification with references to one's own environment and promote more efficient learning through co-operative learning.

Finally, the illustration below clearly illustrates those concepts that exert considerable influence on learning communities: on the one hand which members and roles are integrated, which rules and guidelines are agreed in the community, as well as how a community is formed. On the other hand a changed learning paradigm is evolved, which embodies the basis of understanding in a learning community, (e.g. building bridges between work and learning, collective learning, mutual knowledge and exchanging experiences):
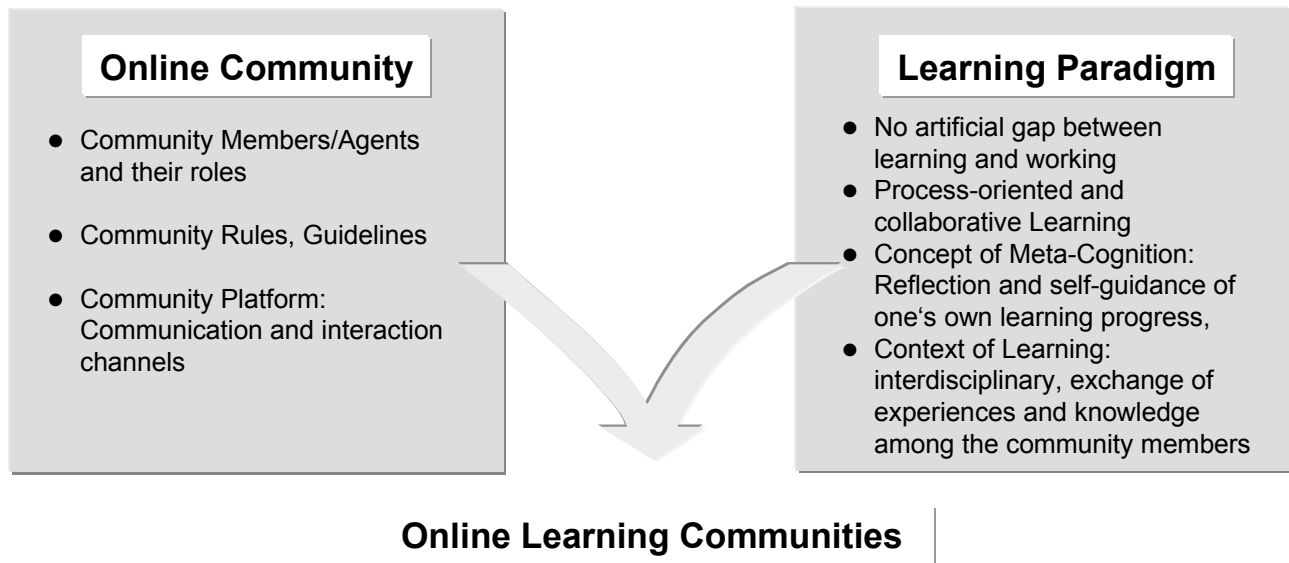
Online Community

- Community Members/Agents and their roles

- Community Rules, Guidelines

- Community Platform: Communication and interaction channels

Learning Paradigm

- No artificial gap between learning and working
- Process-oriented and collaborative Learning
- Concept of Meta-Cognition: Reflection and self-guidance of one's own learning progress,
- Context of Learning: interdisciplinary, exchange of experiences and knowledge among the community members

Online Learning Communities

Figure 1: Underlying concepts of online learning communities (Seufert, 2000)

2.3 Distinguishing Terms: Communities and Collective Learning

Collective learning and team-based learning are already well established and have been practiced in teaching for many years. What are the differences between these types of learning and learning communities, which clearly also serve some form of collective learning? One difference is that while learning teams establish their objectives through the project or the task set, and the team members are brought together by the organizational structure or by the teacher, members of a learning community are defined by shared interests, purposes and values and are bound together by stronger emotional ties. Nevertheless, learning teams, learning partnerships and mentor programs can also have their place as learning methods in the framework of a learning community. Learning communities therefore represent an overriding concept of collective, community-oriented learning, which can serve existing, well-established methods of 'collaborative learning'. In this way the community formation can be supported by the construction of sub-relationship networks (e.g. through learning partnerships that exist in a community).

Forms of collaborative learning	Purpose	Affiliation	Relationship	Coherence	Lifespan
Learning Communities	shared goal or purpose, activity that provides the primary reason for belonging to the community	Voluntary, self-selected, intrinsic motivation	Emotional relationship, one basic value of a community is trust among its members.	Common interest in a topic, informal discourses and shared experiences and discussions	As long as interest exist
Learning Teams	Specific assignment, project, performance goals	Organized: a team can be organized by an outside individual	individuals can be assigned to a team and have a commitment to the success of the endeavor with no requirement of commitment to others on the team	Goals, Milestones team members may have loyalty to the project and not each other, the focal point is the work product	Until the project ends, the team can evolve to a community
Learning Partnerships	Two people/ partners with shared goal or purpose	Voluntary, partners are equals who select one another with the expectation that they will learn from one another	Emotional relationship, friendship based on trust, respect and loyalty. intentional partnership: preestablished Unintentional: events happen that bond the individuals together,	Mutual help, synergy, relationship is deeply valued as part of the endeavor. Partners hold a very deep commitment to one another as well as to the success of the endeavor.	long-term partnership as long as interest exist
Mentorships	A common goal, explicit and implicit knowledge transfer and transfer of learning experience from mentor to protégé	Organized or self-selected (mostly because of the mentor's knowledge expertise)	Mentor-protégé relationship the two are not equal (e.g. graduate student, faculty adviser), the protégé will learn from the mentor	A common goal (e.g. thesis), one-sided help, advice	Until the mentorship ends, evolution from mentor to learning partner/ peer can happen

Table 2: Distinguishing concepts Learning Communities (Seufert et. al., 2001)

3 Classifications of Communities

3.1 Overview

A multitude of categorizations for online communities can be found in the relevant literature. The following classifications should help to clarify the many facets of online communities. In the context of technology used for the community platforms, the following categories can be discerned:

- Web-based communities based on *Internet* or *Intranet* technologies, (see also section 4.3)

- *Peer communities, which are based on peer-to-peer technologies*, involve network structures where all connected workstations/PC's are identical. Each connected computer can put its hardware or software at the disposal of other computers or use that of others. Since Napster has shaken the foundations of the music world and made the exchange of songs – in a peer-to-peer community – a great deal easier, the computer industry is faced with an entirely new perspective with new types of risks and prospects.

- Communities which use *mobile technologies*, which can also provide new forms of media-supported learning (mobile learning).

- Communities which occur in *virtual worlds* (such as Multi User Dungeons), which have so far spread mainly in the field of 'edutainment'.

One of the oldest classifications originates from Hagel and Armstrong (Hagel and Armstrong, 1993), who make the following categorizations, based on the needs that a community satisfies for individual members:

- *Communities of interest,* in which the need for exchange of information is satisfied, such as THE WELL or Geocities, with their newsgroups and discussion forums,

- *Communities of Relationship,* which focus on social needs and are characterized by the strong social and emotional relationships of their members. An example is Diabetes.com, a community in which people provide support for one another, and exchange information regarding the progression of the illness and therapy advancements.

- *Communities of fantasy,* in which the need for fantasy, games and entertainment is fulfilled. Members meet in fantasy worlds which often appear to be three-dimensional and in which members appear as virtual figures, (e.g. Multi User Dungeons),

- *Communities of Transaction,* which reflect the interest of members in financial performance production and exist in Business-to-Business and Business-to-Consumer platforms such as Vertical.net and Amazon.com.

The classification system above will be used in the present contribution and expanded upon for the aspect of learning. Depending on the objective of the area on which a community is focussed, subdivisions can be made in the spheres of work, research, learning/study and private interests. However, as indicated by the illustration below, there are many overlaps between the spheres. For example, a Community of Practice, which has work as its central focus, can also contain substantial aspects of communal research due to a need to generate new knowledge, or as a result of the private interest of members taking part in a community.
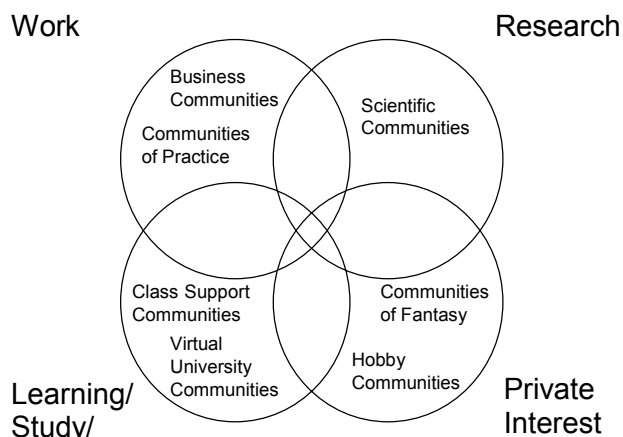

Figure 2: Categorization system for online communities

4 Design and management of online communities

4.1 Organizational level

The organization of a community establishes which kind of community will be formed, which common interest the members will pursue, which roles should be institutionalized and the conduct guidelines according to which the community will function. The following ''guidelines' for a successful community are formulated at the organizational level, with learning communities once more the main focus:

- *Clear structural guidelines* are extremely important and should be negotiated and accepted by each individual member at the outset. Poloff and Pratt (Poloff and Pratt, 1999) point out that a learning community is underpinned by a collection of contributions, which make reference to others. For this reason it is vital to make students aware of the importance and required quality of these contributions from the beginning. Assessment systems are also frequently established, with discussion contributions making up part of the assessment, - analogous to an employee 'appraisal.' In the business environment there are conflicting opinions on this issue and although assessment is based partly on mechanisms similar to those above, such as incentives for discussion contributions, ratings or 'top lists', financial incentives are also implemented.

- Each community member *makes a commitment to his or her participation in the community.* When forming the basis of the community, each member must have taken part in or expressed an opinion on the drawing up of communal laws and duties. In a business context, this can result in a community mission, a 'code of ethics' or a community charter, which represents the basis for communication in a community. (e.g. how to deal with criticism, netiquette, etc.).

- Contributions provide the 'nutrients' of an online community and indicate the degree of participation and presence of those taking part. A key task for the moderator is to reduce the amount of communication between the participants and the moderator and instead to stimulate the communication between participants. The regulations that Paloff and Pratt have developed in the course of increasing experience are in part very rigid. In addition to the community formation and the clear rules, they attach great importance to the *role of the moderator*, who has to accompany the learning community in an inconspicuous manner and only intervene when it strictly necessary.

- Technology-based communication frequently contains many hidden difficulties, and problems are only to be expected, particularly at the beginning of an online community. Moreover, inexperienced Internet users can sometimes have insufficient media competence, which can lead to frustration and consequent learning obstacles. In discussion forums it is therefore important to *reflect upon individual learning experiences together and optimize the learning experiences step by step.*

- A key aim in the framework of the organizational planning of a community is to give the members room for social questions and interests and to allow them to build informal learning communities. Members should become actively involved in the further development of the community, enabling them to implement their own ideas (for instance, students can pursue individual initiatives and set up sub-communities and exchange markets, etc.).

In addition to the conduct guidelines, the predominant roles are an important feature of the organizational level of a community. They control the rights and duties that a member takes on with a role. Role concepts can also be differentiated according to different classifications. For example, classical roles in a curricular learning community are:

- *Student*, student group,

- *Alumni* (former student),

- *Faculty*, lecturers, experts in a field of knowledge,

- *Web coaches* and *online tutors*, who offer support for the learning process and general advice on learning.

A further role division is made according to the perceived *functions* in a community, which are oriented towards the areas of a town, or a local community, (Schmidt, 2001). For this reason it is not always people who fulfil a role but also software agents (e.g. search engines):

- *Pathfinders* find a specific selection of contents, from a map of knowledge or the Yellow Pages. This role is mostly undertaken by a search engine.

- *Knowledge Shops* provide contents (e.g. course offers, learning contents and materials, knowledge databases, index of experts) for those who can make use of them.

- The *Moderator* controls the communication and discussion in a forum (also votes, trials, special events etc.)

- Office-based *statisticians* report on the status of a community, gather statistics and collect news from other members. They also give reports on such issues as preferences of the shops.

- *Reporters* report on the community news, take care of new content and dynamics in the community.

- The *Mayor* makes sure members observe the community rules and duties.

According to Kim (Kim, 2000), the tasks of the moderator, such as motivating members of the community to contribute to discussions and only intervening when necessary, depend to a considerable extent on the background experience of the members. With regard to the status and life cycle of the membership of the community, the following rules can be observed:

- A *visitor* does not yet belong officially to the community but is rather initially a visitor and observer of the 'scene'. However, in most communities, access for visitors is restricted.

- A *novice* or *newcomer* is a new member of the community and is more restrained when making comments in the community.

- *Regulars* are members who have already belonged to the community for a considerable amount of time. They can be distinguished by the regularity of their participation.

- *Elders* or *experts* make a great many contributions to discussions. They are highly experienced in the use of New Media. Frequently they are also *leaders* (official or unofficial 'spokesmen').

In addition, members of a community can assume an unofficial role, which greatly influences the dynamic of the community formation. Moderators and web-coaches or online tutors should be equally aware of this fact and as '*facilitators*' should devise corresponding strategies to assist the members in their roles. Kim differentiates the following 'Social Player Types' in a community (Kim, 2000):

- *Achievers, performers* are characterized by goal-oriented behavior. They can, for instance, lead negotiations with the management, carry out the organization of events or control the co-ordination with other communities,

- *Explorers, gurus,* take up new trends and themes, bring in new ideas. Their behavior is strongly characterized by curiosity and the integration and regeneration of knowledge,

- *Socializers, greeters, caretakers,* look after the building and maintenance of the social network. Their own behavior is characterized by trust, empathy and readiness to help other members.

- *Killers, brats* are the 'troublemakers' of a community. They can however bring new impetus into a discussion. Actual learning gain can often lie in contributions that irritate, raise paradoxes or point out contradictions.

4.2 Process/Methods Level

Following the description of the organizational level in the previous section, this section draws attention to the level of process and methods. The formation of a virtual community can comprise a system of stages, in which the following phases can be differentiated:

Phase 1: Pre-implementation

In the first phase of the formation of a learning community it is particularly important to determine the actual necessity for an online community. For curricular learning communities this phase also involves working on curriculum design, whereby collective learning forms (see section 2.3) should be taken into particular consideration. Numerous experiences have shown that an exchange over the 'Net is rarely achieved when the discourse is not tied in with a fundamental component of the curriculum and course design. It is also essential that the learning results be assessed in accordance with the chosen form of learning (e.g. assessment of participation in discussion contributions, group grades). In a situated learning community (e.g. a community of practice) it must be considered which promoters, members and roles are necessary and whether an intrinsic motivation towards active participation is sufficient or whether additional incentive mechanisms are necessary. An online community needs to create orientation for its members, either through an intuitively easy to use surface of a community platform or through a content orientation of course plans, (e.g. as a timetable in a curricular learning community).

Phase 2:Implementation - Attracting interested parties

This phase occurs during the official start of a community and involves introducing the community and drawing attention to it. Attractive contents and conditions of use should draw in interested parties. The invitation of guest observers could arouse additional interest and enable potential members to look around the new community and consider joining.

The formation of a learning community on the Internet is more difficult, particularly if the participants are not long-standing Internet users. For this reason a competent promoter and experienced moderator are needed to organize, lead and accompany the process. Particular attention is needed at the beginning of the community when members are getting to know each other, introducing themselves with contributions and – an essential aspect which can determine the continued success of a learning community – are beginning to refer to the contributions of others. The main concern here is to achieve a kind of intersubjective identification, a 'birth' of individual 'net personalities' as the basis of the community formation. This has been highlighted in Mead's identity concept (Mead, 1991). The members of a learning community must, from the very beginning, be given the opportunity to occupy their own personal space on the internet learning platform and to create a point of reference between their own environment and the learning area on the internet.

Phase 3: Establishment and promotion of the virtual community – promoting participation

In order for a community to establish itself further, in this stage of its life cycle it needs to support lively communicative exchanges of ideas and – even in the beginning period – to keep this communication alive. To stimulate the exchange of knowledge and experience it is important to create an atmosphere of openness, and not to rule out certain themes or views that at first glance do not seem to be associated with the common topic. The issue of respect must be considered very carefully from the outset. It is therefore important to draw attention to mutual feedback so that members are integrated into the communities and mutual activities gradually. In addition to supporting interaction, measures should be taken to encourage the broadening of content or the organization of interesting events. In this phase the community members must be able to recognize an enduring element of usefulness in their membership.

Phase 4: Continuous further development – establishing loyalty

After establishing the online community the next phase relates to its further development and the aim of fostering a relationship and loyalty among the members of the community. This can occur in the form of individualized offers which are based on observation of a member's main points of interest (e.g. user profiles in personalized community portals). While the community provider appears more actively here, the role of the moderator recedes increasingly into the background. As mentioned previously, 'facilitators' and moderators have the task of accompanying the learning community in an inconspicuous manner and should only intervene when necessary. Through this process, it is hoped that the community will achieve autonomy. The moderator recedes into the background as the members become more competent and the self-guidance activities of the learning community come gradually to the fore. The competence in self-learning and the capability of reflection are goals to strive for, and these should not only be stimulated by moderators but should also be developed further in a co-operative manner by the participants.

Phase 5: Longevity – working out net product basis for suppliers of virtual communities and community members

The final phase in the life cycle of a virtual community is working out the longevity of the community. Measures can be established which are aimed to be of use for suppliers as well as members. These measures must occur in co-ordination with the community members – for instance, advertising in the virtual community can be counter-productive. In some cases there can be time restrictions on the duration of a community (e.g. at the end of a course), and so longevity is not always an aim. If this is the case, the potential for the advancement or transition into a new community, (e.g. into an alumni community) or combining different communities should be assessed.

4.3 Technological level: Community services and platforms

This section highlights the technological level involved in forming online communities and the associated choice of corresponding community platforms. For *curricular, decontextualized online learning commu*nities, the popular learning platforms on the market such as WebCT, TopClass or the learning management system CLIX are most suitable. These systems already have integrated service components for supporting communities. Functionalities such as the Yellow Pages for finding experts, discussion forums and classrooms (Seufert et. al. 2001) are frequently incorporated in these services.

There are already numerous community platforms established on the market for the building of *situated learning communities*, Communities of Practice. They provide specific mechanisms for presenting discussions as well as dealing with discussion contributions (e.g. rating-functionalities of discussion contributions), in order to support the building of a community.

Examples of services that should support the formation of internet-based communities and therefore frequently represent the functionalities of community platforms are:

- Mailing lists

- E-Polls for the collection of opinion polls (e.g. from e-groups)

- Web blackboards

- Visualization of sub-groups

- Community chronicle

- Expert index: who's who, yellow pages

- Document management switching on of content, exchange of documents, etc.

- Photo album, member guestbook

- Audio and video conferences, chat and discussion forums, buddy lists

- Team workspaces, group calendar, work-flow based task administration

- Feedback mechanism: rating functionalities, scoring models for the grading of content, discussion contributions, combined with incentive mechanisms (e.g.. Top lists, point allocation).

Table 3 compares a summary of selected examples of community platforms.

Community Platform	Description/particular quality	Examples for areas of application
Cassiopeia www.cassiopeia.com	Community platform with personalization, functionalities for the organization of teams, integrated incentive system for active participation in the community	Knowledge Communities, Communities of Practice (on the Intranet) B2B Communities (Internet)
Vignette www.vignette.com	Community platform for the lasting formation of customer relations, personalized information for customers, analysis of customer profile (e.g. visitor activities, activities regarding campaigns, through content, advice, feedback, etc.)	Specialization in customer-related communities, (internet)
Webfair www.webfair.com	Community platform with personalization, integrated feedback mechanism, feedback recorded in a database, integrated scoring model as the basis of an incentive system.	Knowledge Communities in the broadest sense, business communities (see section 3)
Arsdigida www.arsdigia.com	Community platform with personalization, functionalities for the organization of teams. Open source methodology: developers can develop the tool further according to their own needs.	Knowledge Communities in the broadest sense, Business Communities (Internet/Intranet)
e-groups www.egroups.com, comparable tool with similar functionalities: Yahoo.com	Communities can be set up on the prevailing server, simple functionalities such as synchronous or asynchronous communication possibilities, group calendar functionalities for peer-facilitated communities.	Interest/freetime/hobby communities (internet), more for private use
Groove www.groovenetworks.com	Community platform with personalization, functionalities for the organization of teams, document and workflow management functionalities for peer-facilitated communities.	Peer-to-Peer Knowledge Communities (Internet, Peer-to-Peer Technology)

Table 3: Selected examples of community platforms

The following illustration shows an example of the community platform Webfair. The particular quality of this tool is that the community member has several options, in which he can react to content (see section 3): a contribution can be judged (‚rating'), a recommendation can be forwarded, a contribution can be put into a forum, members can communicate by email or by telephone, and finally, members can be invited to take part in Business Chat.
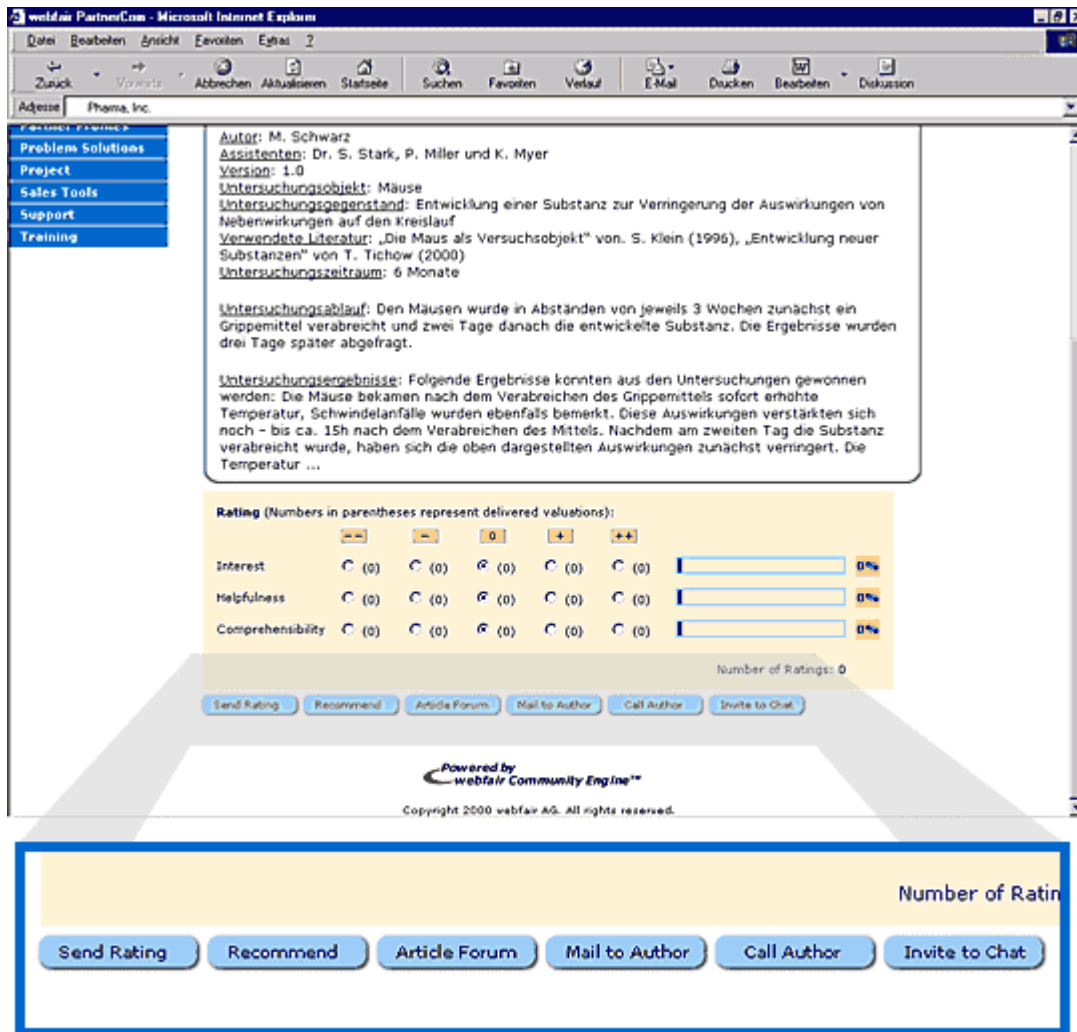
Figure 3: Community platform Webfair

With these functionalities and feedback mechanisms on the content presented (e.g. discussion contributions, documents), the interaction of the community members should, on the one hand, be made easier and promoted, and, on the other hand, create incentive systems for active participation in a community.

The community platform ICN (Information Communication Network), from Siemens was developed on the basis of the product Arsdigida, which originates from a spin-off of MIT (Massachusetts Institute of Technology). With ICN, community members can formulate ,urgent requests' in order to gain support from other members when solving a problem (see section 4). In addition, useful knowledge about projects, people involved and best practice can be found.
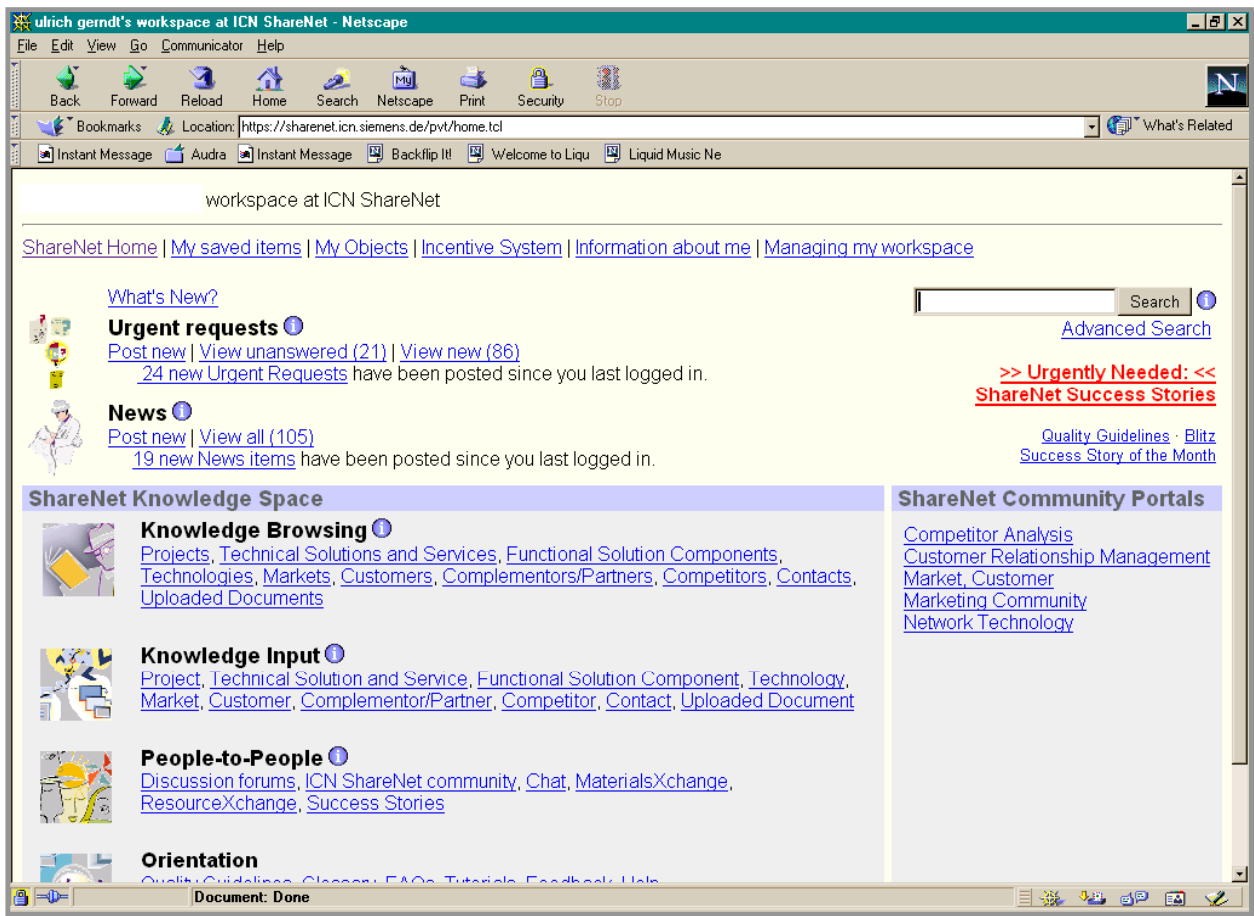
Figure 4: Community platform at ICN: Sharenet

5 Selected case examples

The selected case examples in Table 4 demonstrate how different online communities can be in practice. The description categories used are linked to the levels of organization, process/methods and technology which were introduced in the previous section.

Example	Organization	Process/Methods	Technology
Distance Education Course, „Virtual University Community" (students in Russia are spread across 7 time zones and do not see one another face to face), Community of Teachers	Mutual commitment for the duration of the course: further education for teachers who acquire methods for distance education courses, above all psychological basis for the design and presentation of online courses.	Collaborative learning forms: formation of peer groups, working on assignments and learning in project teams, Value Added Services for the members, which are also still available after the course, (course materials, information, etc.)	Internet Platform with synchronous and asynchronous communication possibilities, Value Added Services for the members, which are also still available after the course.
Distance Education Course/ Distributed Student Teams at Stanford University: students from separate universities work together in learning teams.	Mutual commitment for the duration of the course, co-teaching: also mutual commitment from the universities involved.	Collaborative Learning: students work in teams comprising members from separate universities, implementation of interventions for team support and community building.	Internet Platform with synchronous and asynchronous possibilities for communication, intervention tool on the basis of NetMeeting (team building tool „Broken Squares").
MBA Community at the University of St Gallen: curricular anchored learning community, support of a campus community, link with scientific communities on the NetAcademy for the exchange of research and theory.	Mutual commitment for the duration of the MBA, subsequent transfer to an Alumni community, several sub-communities: student, student teams, alumni, faculty mutual interest on the topic media and communication management.	Collaborative learning forms: working and learning in project teams, special community projects, research- oriented processes (e.g. writing reports, dissertations), exchange of knowledge, ‚Value Added Services' for members, even after finishing the course.	NetAcademy Community Platform for Scientific and Learning Communities, Value Added Services for Community members(e.g. Expert Directory, Library Module, Glossary, Events Calendar, dissertation exchange market, etc.), www.media-mba.unisg.ch
Study Networks at Hewlett Packard for new employees: situated, contextualized Community of Practice	Group of new employees from HP, who form a network spread across the firm. Participation is voluntary, commitment for 6 months.	Sharing experiences and mutual support in the training period, quicker building of a network, bringing in new ideas. Group establishes its own goals.	Forms of exchange chosen by the group, record of results on the Web.
Interest Community, Community of Practice at ICN Siemens: Situated, contextualized Community, employees at ICN Siemens	Participation is voluntary, structurally fixed by the firm's rules, mutual commitment to participate in the CoP.	Exchange of experience and knowledge, lessons learned and Best Practices, knowledge regarding projects, help solving problems, (e.g. through 'urgent requests')	ICN ShareNet: Community Platform at Siemens (see section 4)

Table 4: Selected examples of Learning Communities

6 Summary

This contribution provided an overview of online communities, with an emphasis on learning communities. It has been demonstrated that these occur not only in the framework of education and further education measures, but can also be situated in everyday working life. After a brief introduction, the meaning of the term 'online community' was explored in Chapter 2. Subsequently, the many different facets of the term were highlighted. Chapter 4 considered the design and management of online communities and constituted the main part of the article. The levels of formation introduced here, - organization, process/methods and technologies - were explored further in Chapter 5.

Even if one is of the opinion that the concept of community has its life span and that it will eventually be replaced with other concepts, it is nevertheless clear that the online communities represent a fundamental and hitherto neglected social phenomenon in relation to media-imparted learning. These phenomena (e.g. exchange of knowledge, mutual motivation support etc.) mark challenges for further development in the field of knowledge management and the formation and management of collective and organizational learning processes.

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