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What All Stakeholders Should Do: Creating E-Learning Communities[1]

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ABSTRACT

This paper examines how companies that offer e-learning products collaborate with their clients, external experts and end users. Given increased demands for more sophisticated learning products, it is becoming increasingly crucial for e-learning firms to source and exploit content, education, knowledge and expertise that are beyond the traditional boundaries of the firm. These changes raise a set of problems related to how firms can effectively interact and collaborate with other stakeholders in order to create, distribute and improve e-learning products. Based on some previous researches and the existing literature on "communities of practice", it is proposed that "learning communities" should be established by leading firms to meet demands for new e-learning products.

Keywords: learning, e learning, learning community

This paper emphasizes on enterprises that produce digital educational and training materials, hereafter known as "e-learning" firms. E-learning is a fast growing multimedia sub-sector that has emerged to meet increased demand for digital and distance based learning and training materials in educational and workplace environments.

The focus of this paper is to research the ways in which e-learning firms collaborate and communicate with their clients, external experts and end users. These firms produce e-learning packages both for the market and for specific company clients. Given the increased demands for more sophisticated learning products, it is becoming increasingly crucial for firms to source and exploit content, education, knowledge and expertise that are beyond the traditional boundaries of the firm. This occurs in three ways. First, there is the sourcing of content from the client. Second, and increasingly, there is the need to draw advice from external learning experts. These may be experts in teaching and learning or in the subject being taught. It is now necessary for firms to open up their organization to exterior knowledge and know how, to create new collaborations. Third, given the necessity of providing effective learning that is sensitive to learner/ end user needs, it is now more common to involve the end user within the development process - ensuring that e-learning products are able to engage with and enhance the learning of the end user. It involves more consultation, partnership and interaction with the end user than ever before (Russell, Calvey and Banks, 2003).

While the term "learning community" can be defined in many ways (Imel, 2001), it is used here to describe the interactions between the collection of "communities of practice" integral to the firm, and the range of external experts, clients and end users involved in the creation of an e-learning product. Given the need for flexibility and creativity in this sub-sector (Swanson and Wise, 1997), the more firms can integrate external expertise, client creativity and learners' knowledge and viewpoints, the more effective these "learning communities" and their e-learning products will be. However as we will see, while some successes have been realized, the strategies and pathways adopted in forming these new communities are often partial and uncertain. It's possible to conclude that e-learning firms need to more fully engage in expanding their "learning communities" to ensure the continued production of innovative e-learning products.

1. A SOCIAL DEFINITION OF LEARNING

In a social learning system, competence is historically and socially defined. How to be a physicist or how to understand the position of the earth in the universe is something that scientific communities have established over time. Knowing, therefore, is a matter of displaying competences defined in social communities. The picture is more complex and dynamic than that, however. Our experience of life and social standards of competence of our communities are not necessarily, or even usually, congruent. We each experience knowing in our own ways. It is in this interplay that learning takes place.

Consider two extreme cases. Sometimes, we are newcomers. We join a new community. We feel like an idiot among the experts. We want to learn and apprentice ourselves. We want to become one of them. We feel an urgent need to align our experience with the competence defined. Their competence pulls our experience.

Sometimes, it is the other way round. We have been in a community for a long time. We know the rules. We are

thoroughly competent, in our own eyes and in the eyes of our peers. But something happens. We are sent to overseas. We go to a conference. We visit another department. We meet a "stranger" with a completely different perspective. Or we just take a long walk or engage in a deep conversation with a friend. Whatever the case may be, we have an experience that opens our eyes to a new way of looking at the world. This experience does not fully fit in the current practice of our home communities. We now see limitations we were not aware of before. We come back to our peers, try to communicate our experience, attempt to explain what we have to change how our community defines competence. We are using our experience to pull our community's competence along.

Whether we are newcomers or experts, knowing always involves these two components: the competence that our communities have established over time, and our ongoing experience of the world as a member. Competence and experience can be in various relations to each other: from very congruent to very divergent. As two examples show, either can shape the other, although usually the process is not completely one-way. But, whenever the two are in close tension and either starts pulling the other, learning take place. Learning so defined is interplay between social competence and personal experience. It is a dynamic, two-way relationship between people and the social learning systems in which they participate. It combines personal transformation with the evolution of social structures.

2. THE ADVANTAGES OF E-LEARNING

A considerable amount of research has been conducted on e-learning. In contrast with traditional classroom learning, e-learning brings distinct benefits to learners (Beam and Cameron, 1998; Hiltz and Wellman, 1997; McCloskey, Antonucci and Schug, 1998):

Time and location flexibility. E-learning eliminates the barriers of time and distance by offering just-in-time, on-the-job learning. It has potential to reach a global audience.

Cost and time savings. In e-learning, learners do not have to travel to a specific location. It is reported that the companies using online learning can expect an average of 50% in time savings and 40% to 60% in cost savings compared with conventional way (Khirallah, 2000).

Self-paced learning. E-learning fosters self-directed and self-paced learning by enabling learner-centric activities.

Collaborative learning environment. E-learning links each learner with physically dispersed experts and other learners, together to form an online collaborative learning community (Alavi and Leidner, 2001). By

electronic means, an e-Learning environment encourages learners to ask questions that they may not be able to ask in a conventional classroom, and to share different ideas with others more easily through online discussion forums.

Unlimited use of learning material. E-learning allows unlimited access and retrieval of electronic learning material. People can review information stored in centralized knowledge repositories over and over again. The learning material can be efficiently maintained and updated.

E-learning has become an inescapable element of business in the new economy. In 1999, companies in the United States spent $62.5 billion on educating their employees, with more than $3 billion spent on technology-delivered training (Khirallah, 2000). Effective and efficient learning methods are greatly required by companies to ensure employees and channel partners to be timely equipped with the latest information and advanced skills. Consequently, e-learning is being adopted by many companies to expand their learning market to previously out-of-reach employees (Wulf, 1996).

Today, thanks to the widespread access to the Internet, e-learning emerges as one of the fastest-moving trends in higher education. Thousands of online courses, including degree and certificate programs, arc now being offered by educational institutions worldwide.

3. COMMUNITIES OF PRACTICE

Communities of practice are the basic building blocks of a social learning system because they are the social "container" of the competence that makes up such a system. By participating in these communities, we define with each other what constitutes competence in a given context. Communities of practice define competence by combining three elements (Wenger, 1998). First, members are bound together by their collectively developed understanding of what their community is about and they hold each other accountable to the sense of joint enterprise. To be competent is to understand the enterprise well enough to be able to contribute to it. Second, members build their community through mutual engagement. They interact with one another, establishing norms and relationships of mutuality that reflect these interactions. To be competent is to be able to engage with the community and be trusted as a partner in these interactions. Third, communities of practice have produced a shared memory of communal resources—language, routines, sensibilities, artifacts, tools, stories, styles, etc. To be competent is to have access to this resource and to be able to use it appropriately. Communities of practice grow out of a convergent interplay of competence and experience that involves mutual engagement. They offer an opportunity to negotiate competence through an

experience of direct participation. As a consequence, they remain important social units of learning even in the context of much larger systems that are constellations of interrelated communities of practice.

The firm is often seen as a key organization that can house the expertise, skills and knowledge necessary for efficient and effective e-learning production. Fransman's (1994) conception of the firm as a "processor of knowledge"(Amin, 2000) is perhaps an apposite description. E-learning firms process knowledge for their own uses but they also trade in knowledge. They draw upon the knowledge of in-house experts and, increasingly, outside subject matter experts and build this knowledge into products. They comprise sections, each with responsibility for, or claiming to own, part of the design and production process.

With these issues in mind, in recent years it has become common to refer to firms as a composite or collection of different "communities of practice". The idea of a community of practice was developed by Lave and Wenger (1990) as a theory for practice-based learning in which one could undertake "legitimate participation", to serve a kind of apprenticeship with a group of insiders in an organization; organizations being comprised of a range of different disciplinary groups or collectives, each charged with specific areas of responsibility. The theory was referred to by Brown and Duguid (1991) to support their contention that the separation of knowledge from practice is unsound. They argued that the ways in which people actually work differ from official descriptions and that "learning in working" is a better way to improve performance, and most characteristic of how firms share and develop knowledge. Wenger and Snyder (2000) later described a community of practice as a "group of people informally bound together by shared expertise and passion for a joint enterprise", with members inevitably sharing knowledge in order to solve problems in their organization. Yet, while these communities might be informal and resistant to supervision, they cannot exist without management support and structure they are bounded, to varying degrees, within the bureaucratic organization of the firm.

Given the ways in which "communities of practice" are often associated with firms working in the creative industries (Raffo et al, 2000), it is reasonable to test out how far firms were acting as "communities of practice" in the production of e-learning products. At first, some key questions need to be addressed: Can "communities of practice" operate across different organizations? Can they operate without geographical proximity? In e-learning, how does involvement with external agencies impact on the firms' "communities of practice"?

Given the increasing importance of outside experts, it became a big concern with how far agencies and forces external to the organization - whether in conflict,

cooperation or collaboration with the firm - are able to penetrate or impact upon Wenger's "locally negotiated regime of competence" and "shared histories of learning" that make up the community of practice (Amin, 2000). The e-learning firm negotiates with clients who commission products, with the external freelance experts who are selling their knowledge, the end users and with the firm's own staff who design and produce the e-learning products. The types of exchanges and relative bargaining positions of the parties to these negotiations vary according to the stage in the production. Knowledge is constantly passing through these stakeholders and the firms ought be able to benefit from these internal and external challenges in terms of enhancing their own performance.

Further, referring to Amin's (2000) discussion of the definitions of communities of practice offered by Wenger (1998), while the key dimensions of "mutual engagement", "joint enterprise" and "shared repertoire", can be individually applied to many of the firms delivering e-learning, as well as the clients and end users–it should be discovered whether such mutuality was as pronounced within the collaborative and convergent networks and communities as necessary for the production of e-learning products. From the existing literature, communities of practice as defined is not multi or inter-organizational. The groups studied by writers on communities of practice are usually involved in discrete organizations or task based activities, for instance Wenger's group dealing with insurance claims, where decisions are negotiated within a given organizational framework but on the basis of tacit knowledge or unwritten convention. The emphasis is on close study of single organizations, rather than on the diffuse and diverse networks that make up the whole production process. In an area where management skills and knowledge for effective production can be acquired through extended and exterior communities of clients, experts and learners, where mechanisms for the creation, exchange and possession of knowledge are much harder to define and where relying on others (non-firm members) is a necessary imperative, the received notion of a community of practice begins to unravel thus it is needed to develop a more appropriate understanding of how communities of practice operate within the context of production in the e-learning.

As production of e-learning products necessarily involves members of communities working in different organizations, the firm ceases to have primacy in terms of bounding the parameters of creativity and communication, or defining e-learning products. Just as Tyre and Von Hippel (1997) refer to communal or collaborative processes and "the importance of such collaborative processes [being] that no one person embodies the requisite knowledge to comprehend complex organizational problems or the requisite variety to clarify equivocal issues", the definition of learning is no longer bound by the needs or objectives of the

individual firm. The primacy of the firm may be compromised for the greater good of the production process and the advancement of the learning community of which the firm is a member. All of these cannot be contained within the conventional understanding of the firm as a bounded set of "communities of practice" - a more open-ended conceptualization is needed in order to capture the range of communities required to produce quality e-learning materials. Extending communities of practice, into "learning communities" is one route that firms can follow to enhance the quality of e-learning products, as well as to help create a more open and reflexive attitude to learning within the firm itself.

4. DEVELOPING E-LEARNING PRODUCTS

Before examining the components of the learning community, it is useful to reflect on the particular kinds of e-learning products that companies were producing. Most commonly, firms were producing interactive CD-ROM's or Web-based products — sometimes converging the two—and while the content of products differed, three broad product types can be identified. Each involves a different level of community involvement from the four key parties involved: the firm, external experts, the client and the end user.

Organization-specific "rule based". In certain cases, learning material is ready made and is converted into technology-based. Some of this is rule based, for example the conversion of client companies' internal regulations or induction procedures. The appreciation of how learners learn should not be underestimated, but the client companies' needs and those of their learners are relatively easy to define. Much of the work concerns creating rule sets and programming. There is some literature on instructional design (Christian-Carter, 2001). In these products the learning and learning design are largely the province of the firm and the client external experts and learners are less likely to be involved in this learning community.

Organization-specific "non-rule-based". In the production of e-learning materials, there is a growing emphasis upon client and end user needs. Open ended and non-rule based learning is becoming more popular. Firms are therefore beginning to involve the client or end user in the creative process and this requires the involvement of new disciplines such as the learning designer in order to create or facilitate specific products and/or forms of delivery. The concentration of firms on the clients' or end users' learning requirements leads us to argue for a complex assessment of the types of creativity necessary for effective production, one that incorporates understanding of the interpretation of client needs, the design of the learning approach and the graphic design and technical elements. In these products the firm, the client and the end user are often closely involved in the design, development and evaluation -

potentially a creative learning community.

Non-organization-specific. Some e-learning products may be generic, but often broadly targeting a particular occupational, educational or industry sector. In other cases, the product is produced speculatively for general sale. Whichever the case, the company producing the products has to acquire knowledge and decide on the outcomes and objectives of the e-learning. In general sale products, the firm and its designers will usually not have any sustained engagement or full knowledge of the individual client or end users themselves. Thus, the notion that end users are engaged in the wider "learning community" is limited. In this kind of generic production, the notion of a learning community may be firm-led, drawing upon established commercial models of design expertise, learning delivery or market research.

However, it is in the case of "total-open" learning products, supported by a range of tools and e-coaches, that another type of "learning community" may come more into play. Individual or small groups of learners, from all walks of life at different times, might be invited to register or share knowledge of the product. The link between members is professional or emotional rather than organizational.

5. LEARNING COMMUNITIES

As argued, in e-learning production, the extension of a "community of practice" into a "learning community" involves integration and exchange between the firm and its internal communities with the external world - most notably exterior experts, the client and communities of end users. While client and end user might be one and the same, it is more common for companies, schools or universities to act as the client and their staff or students to be identified as the end users. By describing how each of these constituencies have a role in the production of e-learning products this paper explores how effective e-learning can be better obtained through a more open and open ended approach, one embedded within informal "learning communities".

5.1 The firm in the learning community

While the firm, as a set of communities of practice, is engaged in formal, structured, but also informal and tacit modes of learning (Amin, 2000). The successful e-learning company is one that is pushing the learning dimension much more to the fore - both in terms of product and production process. In terms of product, the way in which this is most evident is in the increased creation of specific roles for an in-house expert in the design and delivery of learning. Often referred to as the "learning designer", this figure acts as the designer, director and evaluator of learning needs and outcomes in the production process.

The role of a "learning designer" will vary from company to company but most crucial is an outward looking, experimental approach to learning. For the learning designer, the parameters of learning are worked out in and through the production process in a manner contingent on a range of issues including client needs, resource constraints and educational principles. It is against the background of this process of negotiation with external agencies that innovative firms have increased the development of learning dialogues and attempted to redefine and reposition the role of a "learning designer".

Many of firms were engaging with a varied client base, producing e-learning across industrial or educational sectors. Such expansion has increased the primacy of the role of the learning designer. Good learning designers should be "experts in not knowing" and can ideally work with any type of content. Clearly a figure that can manage and manipulate any kind of content to effect and implement an effective e-learning process must be attractive in a growing e-learning marketplace.

As well as employing learning designers, in terms of production, firms are becoming more outward looking and experimental in their search to create a learning community. This involves integrating external experts into the production of e-learning products. Many firms have established their own forums and network of individual practitioners and organizations interested in e-learning.

5.2 External experts in the learning community

Given that many small firms are unable to employ a fall time learning designer, and with the need for ultimate flexibility in a fast changing and uncertain market place, the role of external experts, such as freelance learning designers, evaluators and educators becomes more crucial.

The role of external experts has grown in recent years as multimedia firms with strong technical and design competence but little in the way of educational expertise are looking to integrate the "learning" dimension into the product and production process. These experts are often members of informal networks, often, though not necessarily geographically "clustered" around the commissioning firm, but bound together by a history of collaboration, shared experience and know how. Given the high levels of self-employment and freelance work in this sector, the role of the "external" expert is more salient and vital than in other, more traditional industry sectors - making them key members of any learning communities.

5.3 The clients in the learning community

The client must now play a central role in the formation and maintenance of a learning community. Attitudes to clients varied among the firms, with some of them talking about managing their clients' expectations and the "whole process being managing the client to accept the creative". However, others took a different view, seeing the client's creative contribution as a central part of developing e-learning products. Although there was general agreement that clients' needs were often difficult to define, a problem often complicated by the clients' lack of appreciation of the scope of e-learning - the point about collaboration is that clients become involved with the developers at an early stage in the production process and can provide creative input into the design and development of e-learning materials - while, at the same time enhancing their own understanding of e-learning within the context of their own organization. For the firms the negotiations with clients and the meeting of their needs assumed a central role.

While the extent to which clients are engaged will vary, it was clearly evident that more successful and progressive firms understood the client as central in the definition and delivery of e-learning - not merely a customer to be satisfied. This ensures that the issue of learning - for both parties - remains open and subject to creative development.

5.4 The learners in the learning community

While firms, external experts and clients can often generate productive learning communities; the involvement of end users/ learners is an area that needs more work. The needs of both individual and groups of learners are often subordinated to concerns over development and design, time-scale, budget, distribution, price and so on. But there are a number of other, more hidden reasons why end user learning needs and experiences are often secondary concerns. It may be that in the provision of tried and tested "rule based" software, learners' needs are assumed to be simple and straightforward and unworthy of detailed consideration. Further, it is often the case that clients assume that their staff or student learning needs are homogenous. Also, firms themselves may feel uncertain in challenging client's identification of what the learner's needs are - particularly in the case where the client is an educational institution. Even when partnerships involve the end user, there is no guarantee that the learners' input will be as valued as that of the firm or the experts. However, for a growing number of firms, the integration of the end user is now deemed crucial. These firms come to realize the primary focus of attention needs to be on the needs of the learners.

Not only are firms looking to expand their collaboration, an increasing tendency now aims to generate a dynamic among learners and encourage them to share learning experiences and stories, and generally to engage more widely with the providers and producers of e-learning. Creating a set of mechanisms whereby all parties can

provide feedback and engage in the production process is the ultimate goal. How this can be achieved, however, remains a crucial question.

5.5 Mechanisms for managing the learning community

How are these four disparate constituents of learning communities able to bind and act to effect the development of e-learning and e-learning products? It is indicated that certain emotional and conceptual leaps must be made to open out all stakeholders to reach an openness which requires the development of relationships with reciprocity and trust (Cross and Baird, 2000). For example, the firm needs the expert's knowledge and the expert needs to trust the firm with it. Trust and friendly collaboration are pivotal in cementing this kind of community (Ingrams and Roberts, 2000).

Geographical proximity remains important in the learning community. External experts and learners in face to face exchanges remains the best way for identifying and agreeing objectives, processes and outcomes and for helping to facilitate trust. In production, it was noted that face-to-face meetings avoided endless e-mails, course content was largely written within face-to-face meetings, and problems caused by the lack of understanding of each other's functions and of the development process itself could be overcome with face-to-face exchanges.

Where it was not possible to meet directly the clients or external experts a secondary option was to use Internet Technology to enable relationships to be maintained across distance - this was a strategy many firms employed. However, often, firms found it difficult to meet or engage with the learners or end users, face to face or at distance. But if learners are to become more central to the learning community then mechanisms for integration must be found.

Some firms now make it a priority to update knowledge, to provide toolkits for learners, interactive resource centres with archived documents, links to material and more opportunities for learners "to do things themselves". Additionally, "e-coaches" now assume a central role in cementing the dispersed body of learners into the learning community. Learners may be more engaged in feedback activities, ongoing consultation and development discussions allowing learners to create content and put it on line themselves and to generally enhance the contribution of learners in the e-learning production process.

5.6 Barriers to the formation of learning communities

After revealing some of the possibilities and strategies of new learning communities, it would be misleading to suggest that this is a general or even a widespread process - many firms remain locked into the traditional separation of the firm from the external world, prioritise firm expertise over external knowledge and give short shrift to opening up the debate within the firm or questioning the qualities of their products. Some firms claiming that its size and attitude allowed it the luxury of debate on learning theory, was later criticized by its own staff for its concentration on deadlines and profits which discouraged staff from being innovative. It seems clear that while some learners are encouraged to use tools experimentally to construct their learning, create their own content and upload whatever they like into their shared space, the capacity of many companies to experiment, make mistakes and survive is limited.

The economic pressures placed upon a company may make it difficult to enjoy the luxury of debate on learning - this is accepted. All activities take place within budgetary, human resource and time limitations. Even if the firm wishes to develop a network of external experts, clients and learners, a decision has to be made whether to formalize and structure this network - and incur maintenance costs through communication, meetings, events and so on, or to leave it open ended and informal, but potentially losing impetus. Finally, even when learning communities are in evidence, the power relationships within that network may be asymmetrical - not everyone is able to shape the direction or definition of learning exactly as they would wish.

6. CONCLUSIONS

The creation of e-learning products involves new convergences of technology, media, skills and, increasingly, individuals and organizations themselves. The management of firms and production processes must now focus on the human aspects of these convergences - the learning community. In this article, this has led to the increased utilization of client knowledge and the involvement of the external experts, clients and end users, providing an added, challenging dimension.

As more firms enter this sub-sector and as "learning design" has the potential to become a profession in its own right, the need to acquire knowledge from outside sources will increase. This question of knowledge acquisition over distance therefore applies to firms as well as learners. There seemed to be an irony in that firms find face to face meetings essential in the development of distance and e-learning products - a necessity perhaps only partially offset by new relational communities that are emerging across geographical space. The end result is a loosely bounded learning community comprising of members from a variety of organizations and groups interacting face to face and at a distance.

As more and more firms look to enter the e-learning market, not all will come ready equipped with learning designers or a discrete learning philosophy - this may undermine the quality and effectiveness of e-learning products. But by engaging in exchange with clients, experts and learners - firms can go some way to resolve the current dilemmas of this emergent industry; namely how to provide materials that are sufficiently researched, tested and appropriate for a diverse, and fast expanding, range of end users.

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