

Creating and Developing Communities of Practice in Online Environments: The e-Fer Platform

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Abstract

Identifying and developing a community of practice (CoP) is not always an easy task. A CoP, understood "as a group of people who share a common interest, a problem or a passion for a particular subject, and who deepen their knowledge about it, interacting with each other over time" [1, p. 4], is a theoretical abstraction constituted by a set of characteristics that allow us to state whether or not we are in the presence of a CoP. It is not enough to have a group of people working together to say that we are in the presence of a cop.

Based on this assumption, and the concept of cop introduced by Wenger, we present the results of a research developed since 2017 in order to identify the characteristics of an online platform that promotes learning and is a catalyst for a CoP.

For this propose, was designed and built from scratch, the e-Fer platform. It is a virtual simulator of clinical decision making [2], which aims to improve the process of training health professionals in the area of chronic wounds. It promotes learning in an environment based on the web within the scope of chronic wounds [3].

A quantitative survey of platform users registered, and a qualitative content analysis of core-users discussions were applied.

The results obtained allow us to conclude that the users of the platform assumed to belong to a CoP. They perceive learning as the great value of the platform followed by mutual commitment, shared repertoire and, at a lower level, they consider that they form a stable group with strong interpersonal relationships. This difficulty is in accordance with the way the platform has been used. In addition, some technical constraints are mentioned, such as the non-integration of the forum with the platform, which leads to the need for a new registration.

Therefore, it is unanimous the value that a tool of this type assumes for health professionals, however, there is a need to introduce some additional mechanisms, such as automatic feedback, and forum integration into the platform without the need for new authentication.

Keywords: *Communities of Practice, social learning, e-learning.*

1. Introduction

The concept of community of practice (CoP), which emerged in the early 1990s, has evolved over time as part of a social theory of learning as well as an approach to learning and has attracted increased interest in all those years [4].

Most professional learning takes place in the workplace, in informal meetings, rather than the school, in a concept that is known as situated learning, through exchanges of experiences between professionals [5], [6].

A CoP can complement formal education by allowing its members to share tacit knowledge in a non-formal pedagogical situation. "A community of practice (...) is a way of learning based on collaboration among peers. Individuals come together, virtually or physically, with a common purpose, defined by knowledge rather than task" [7, p. 607].

Several studies reported the use of cops in the health care field, stated that they develop in their members the capacity to construct and share knowledge. Besides that, some advantages identified are (i) the generation of new ideas, (ii) solving problems, (iii) sharing knowledge (iv) improving health care (iv) forum for analysis of professional practice and (v) stimulating ideas [8]. The use of CoP is also important for the health and social organization due the potential integration of learning in practice and "to generate learning from the discussion of practice experiences" [9, p. 15].

Nowadays, the development of online platforms creates the perfect environments for connect users interested in same subject, working on it, geographically distributed. However, these new landscapes of practices have new challenges [10]. The complexity of creating and sustaining CoPs in distributed environments is enormous and must be done with a very simple idea in mind "one cannot force a



group of individuals to become a community" [11, p. 70]. It requires a stable leadership, research, planning and support multiple levels.

So, if the existence of a technological platform alone does not promote the creation of a CoP and if, in turn, a community is also not a guarantee of learning, what are the characteristics of an online platform that promotes learning and catalyzes a CoP?

To try answer that question we developed this research studying the e-Fer platform, designed and implemented for training novices and health care professionals in the diagnosis and treatment of chronic wounds.

2. Communities of practice

The concept of CoP is growing up and, historically is possible to identify three phases in the evolution of the theory, where each transition of phase is based on the previous one but involves a figure-ground switch [12]. Despite this the theory remains the same core idea that learning happens in the relationship between the social and the individual [6], [12]–[14].

In the first phase, the existence of the community and its practice where unquestionable "learning is theorized as an inbound trajectory into that community" [12, p. viii]. The apprentice's path to achieve full knowledge of professional practices is through social interactions, in informal environments, with masters and other professionals already advanced [6].

Lately, the community of practice is no longer considered as certain and is seen as an emerging structure that results from shared learning over time. In this second phase was a "figure-ground switch in the sense that rather than the community defining learning is learning that defines the community" [12, p. viii]. It is possible to talk about the intentionality of creating and supporting a CoP as a way to support learning.

In the third phase we see a new figure-ground switch in the sense that the primary focus of a CoP is on a broader landscape of practice and not in the community. It means that learning in this scenario involves two distinct but related processes: it occurs in the community of practice for which the member is competent; but also occurs in a broader landscape of practices where many communities are included that the "learner" is not a member but has some knowledge that allows their participation. The learner has some level of knowledgeability [12].

It is not enough to have a group of people working together to say that we are in the presence of a community of practice. It is necessary the joint existence of the domain, the community and the practice [15].

The framework established by Wenger is based on five essential dimensions that are the necessary and sufficient condition for the existence of a community of practice: (i) Mutual engagement: it represents the interaction between people that leads to the creation of shared meaning; (ii) Joint enterprise: it is a process in which people are committed and work together for a given domain; (iii) Shared repertoire: refers to the existence of common slang, stories, artefacts, that members use to negotiate meaning within the group; (iv) Learning: participation in a community of practice results in learning for its members; (v) Community: members of a community of practice form a stable group with strong interpersonal relationships developed through sustained joint venture [4], [14].

3. Empirical study

With this study we wanted to identify the main characteristics of an online platform that could promote learning and catalyzes a CoP. For that, we used the e-Fer platform that is a virtual simulator of clinical decision making [2], which aims to improve the process of training health professionals and students in the area of chronic wounds. It promotes learning in an environment based on the web within the scope of chronic wounds in a thinking together way [3].

In order to achieve our goals, an online survey, was adapted [4], with author authorization and validated by experts was designed and applied to the 896 users active in the e-Fer with the analysis of the forum discussions carried on the platform.

From the results we can see that the respondent's age varying between 19 and 51 years, 76% of them are under 25 years and 92.1% are under 30 years. They are predominantly female (81.2%) whose professions vary between students (51.1%) and health professionals (47.2%). Regarding the time of use of the platform, 43.7% used it for more than 2 years, 24.5% for less than 6 months and 23.1% between 1 and 2 years and the remainder between 6 months and 1 year.

The internal consistency, or fidelity, of the scale is very good as demonstrated by the 0.952 value obtained for the Cronbach Alpha internal consistency coefficient.

According to the Keizer rule, factorial analysis, by condensation method in main components, extracted 4 factors that, after varimax rotation, explain 64.89% of the total variance (VT):



- Factor 1, with items related to Learning;
- Factor 2, with items related to the Mutual Commitment;
- Factor 3 with items related to the Sharing of sense of professional community;
- Factor 4, with items related to Mutual Knowledge.

Of the total participants, 92.1% consider that they are part of a group of people who share a common interest and who deepen their knowledge about it, interacting with each other over time, and they considered to belong to a COP.

Almost a quarter of the participants (24.5%) never accessed the forum they never interacted with the other members. Of those who accessed, 31.2% stated using it to consult previous messages for solving a case, 18.2% asked a question and 14.8% discussed a case with other users. These results are in agreement with the analysis made to the 727 messages of the forum that showed the request of help and discussion on the cases as the categories more frequently. Also, no request for help in the forum remained unanswered.

4. Conclusion

We found that the users of the e-FER platform assume as members of a community of practice. They perceive learning as the great asset of the e-FER platform followed by mutual commitment, and, at a lower level, they consider that they form a stable group with strong interpersonal relationships. This difficulty is in accordance with the way the e-FER platform has been used– there is higher interaction during the school year as there is a Professor in the IPL School of Health that uses the tool as a complement to his face-to-face classes. In addition, some technical constraints are mentioned, such as non-integration of the forum with the platform, which causes the need for a new registration, which inhibits a better communication from the members.

Therefore, the value that e-Fer assumes for health professionals is unanimous, but there is a need to introduce some additional mechanisms, such as automatic feedback, and the inclusion the forum on the platform, facilitating the interaction among members.

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