

ÉduCoP case study: the Community of Practice of learners in Educational Sciences at the University of Liège

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Abstract

The concept of Community of Practice (CoP) takes nowadays a great part in the formal or informal learning domain. In addition, computerised tools are often used to sustain the activities of these communities (Wenger, White & Smith, 2009).

The ÉduCoP case study deals with the creation and the animation process of a CoP that was launched in 2010 at the University of Liège. Initiated by a master student in educational sciences, it aims at developing and making durable a community of practice composed of learners in this field and supported by Information and Communication Technologies.

This paper presents several actions undertaken to develop this CoP: the analysis of the potential members' needs, stakes and motivations of students to enrol in this project; the choice of useful and usable technological tools to provide them (here, the eGroupWare platform) and the training sessions linked to its efficient uses; the activities conducted to develop the CoP's members identity and to lead them to debate about common topics, to produce and share resources. The CoP's evolution was observed through qualitative and quantitative data collection processes (e.g. interviews about the members' implication and roles, support from animator, obstacles, feeling to belong to a CoP, analysis of the topics presented in the posted documents and messages, uses of the technological tools, frequency of connection...).

The results are discussed here and perspectives are evoked for this CoP. If the actions undertaken show encouraging results, nevertheless obstacles to the creation and the evolution of such a CoP have been identified (e.g. lack of technological culture among some members, reluctance to share personal productions). Some perspectives are considered to overcome these problems. Since October 2011, this initiative has been recognised at the institutional level: the university is interested in lessons learned in order to implement CoP into other faculties that would be willing to start networking and create communities of learners or of practice.

Keywords

Community of Practice, CoP, Information and Communication Technologies, ICT, Capitalisation, Knowledge Management, KM, Education, Learning, Higher Education.

Context

In Belgium, computerized tools are more and more used in educational contexts (AWT, 2010; Hubert, Massart & Gérard., 2002a et 2002b; Plomp, Anderson, Law & Quale, 2009; Poisseroux, Lassaux & Vandeput , 2008). The use of Information and Communication Technologies (ICT) focused on social interactions and on data exchanges or production (e.g. social networks, blogs...) also becomes usual in the daily life of Higher Education students. On a daily basis the average student asks –often at the last minute- his/her questions to a peer, by mail or via his/her social network to know where an event takes place, how to get a summary, etc. More and more frequently, they create Facebook groups to share this information. But, even if most of university students are familiarized with the Web 2.0 tools, they do not frequently use them to share and structure durably information, to collaborate to make common projects, to produce and capitalise knowledge.

The present case study addresses students entering the Master degree in Educational Sciences (MES) at the University of Liège (ULg). Since 2006, bachelor and master students of the Faculty of Psychology and Sciences of Education (FAPSE) of ULg have access to a virtual space called « Psychopartage » where they can post documents and interact together in a forum. This space has been created by a student' in psychology and is still in use. Even if the ergonomic quality of this service is far to be optimal (Bastien & Scapin, 1993; Shneiderman & Plaisant, 2005), it has the merit to exist and to propose a minimum of tools to answer communication and sharing needs among the students. It is mainly used by students in Psychology.

Few students entering the MES have the university Bachelor grade allowed by FAPSE. They generally come from "Hautes Écoles"(primary teachers, educators...) and have to follow a preparatory year to access to MES. They are aggregated to a large group of students (400) with whom they share courses of first, second or third bachelor degree (in psychology), therefore it is not easy for them to create either their identity as students in Educational Sciences nor to share knowledge with their peers. Master students meet more frequently, but are themselves divided into fields of study, modules (options, work experiences...). In addition, their timetable is very crowded. Having access anytime and everywhere to centralized and sharable information that they can enrich then becomes therefore necessary for them.

In order to remediate these lacks of communication and of sharing difficulties or solutions was to elaborate an exchange network between students supported by ICT, or better to create a Community of Practice (Wenger, 1998) or a community of learners (Henri and Pudelko, 2002) between these people. But the implementation of such a community is progressive, necessitates different actions undertaking and endorsing roles by the members. This also necessitates to insuring the continuity of activities, the enrolment of new members all along the years, the students' cohorts being there for three years and leaving the university afterwards. The issue of the constitution of such a community is particularly interesting for the students starting their program at the university who are not familiar with this context and who can feel difficulties to create their identity among crowded auditoriums. So a student decided to create a community of practice and to make an exploratory research about this process. This is accounted and analysed in this paper. The name chosen for this CoP is ÉduCoP. After defining the main objectives and the target public, the authors describe the methodological approach and results coming from the analysis of quantitative and qualitative data. At the end, discussion and perspectives are presented.

Objectives and target public

a. Objectives

The main ÉduCoP objective is to animate and make sustainable a community of practice between learners in Educational Sciences, supported by Information and Communication Technologies (ICT).

The lessons learnt from the undertaken actions will lead to recommendations dedicated to faculties or universities that would wish to start networking and to create learners' communities of practice.

b. Target-Public

In 2010-2011, the target public was composed of three groups of students: the one year Preparatory degree (N= 27), 1st and 2nd Master in Educational Sciences (N1 = 31; N2 = 27) of the University of Liège (Belgium). This population had been chosen for the reasons described here above.

Methodological approach

In September 2010, an exploratory study has been undertaken as a master thesis by a student of the 2nd Master in Educational Sciences (MES) convinced of the importance and the need of to gather her colleagues in a community of practice (Bomgart, 2011). To validate her point of view, she first collected through a questionnaire the students' needs and their interests and motivations to enrol in such a project. After checking the motivation of the potential members to enrol and for the tasks they would like to carry on, she identified with her mentor the most suitable technological tool to support this goal. The platform eGroupWare integrating several tools (agenda, participants' profiles, documents storing, announcements, etc.) was chosen. She became the CoP's animator, her roles being mainly to stimulate or regulate the exchanges between members (if necessary). For instance, she organised a session to let the users handle the platform. Afterwards students started to carry some activities that were spontaneous or suggested by the animator.

The initiator of ÉduCoP was not only also its animator. She also endorsed the role of a researcher studying the development of this CoP. She observed and participated to the CoP's life (e.g. forums moderation, stimulation of the interactions, contacts between members). In addition, she followed them up in order to answer their questions (mainly technical) and overcome the students' encountered difficulties.

In order to study the CoP's evolution all along the year, the animator/researcher collected data at different periods. In addition to the submission of a questionnaire to detect students' needs, she analysed the uses of the eGroupWare platform and collected different kinds of quantitative or qualitative data. She analysed connection frequency, peak of activities periods, quantity and topics in the published messages in the forum and in posted documents in the files manager. She also carried out semi-structured interviews addressed to a selected public, for instance taking into account the implication level (active or passive), gender and school year.

Results

This section presents some results from the ÉduCoP case study: needs analysis, technological choice, ÉduCoP characteristics, structure and roles and life cycle.

a. Needs analysis

To set up a community of students and define their identity (« potential » phase in the life cycle of a CoP (Wenger, 1998)), the first step was to collect information about their needs, stakes, wishes, etc. To do that, the authors conceived a questionnaire addressed to all the learners, whatever the school year; the goal was to check whether the "project" was shared by the learners and in which extend.

The analysis of the questionnaires filled by the students (53 out of 85) clarified their needs, stakes and motivations to invest in the project. The following figures show their answers concerning personal and (future) professional needs.

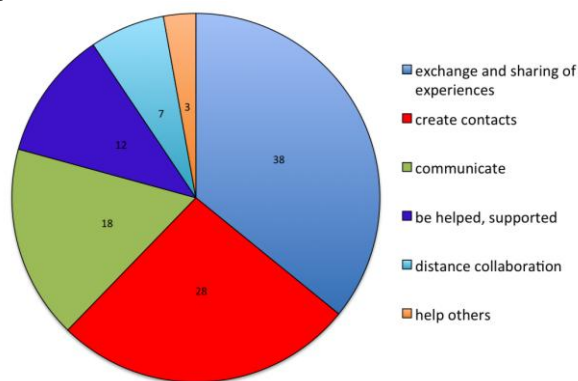


Figure 1 : Personal needs of ÉduCoP members (Bomgart, 2011)

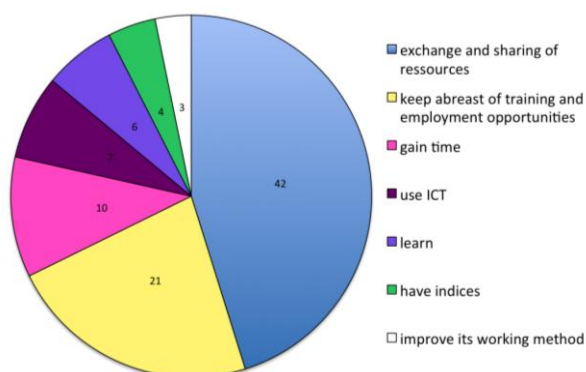


Figure 2 : Professional needs of ÉduCoP members (Bomgart, 2011)

The exchange and sharing of experiences and resources, either at the personal level or at the professional one, are main needs for the students. Create contacts, communicate, be supported, collaborate at a distance and

finally help others are part of their personal needs. Keep abreast of training and employment opportunities, gain time, use ICT, learn, get indices and improve their working methods are declared needs at the professional level.

Since having access anytime and everywhere to centralized and sharable information is one of their priorities, and that distance collaboration and use of ICT are evoked, this can be considered in favour of the support of technologies. Then this community should not only interact face-to-face but will also use some technological tools to match their needs.

b. Technological choice: the eGroupWare platform

A CoP can be born and live independently of the use of ICT. Nevertheless, technological tools to communicate, share and capitalize knowledge help sustain the CoP activities with some efficiency (Daele et al., 2009; Denis, 2010; Denis, Grana & Snoeck, 2010; Wenger, 2001; Wenger et al., 2009).

To match the ÉduCoP members' needs, the distance collaboration tool eGroupWare was chosen. At the opposite of the website "Psychopartage", it offers a large range of functionalities and a good ergonomic quality of its users interface (Nielsen, 1993; Nogier, 2005; Snoeck, 2010). More, this software is customizable and open source. Then the tools available in this platform can be adapted, added, hidden, considering their actual usefulness and the frequency of use by the concerned people.

The eGroupWare space of ÉduCoP integrates six tools matching with particular functionalities:

- The agenda gathers events common to all the CoP's members.
- The addresses book gathers information (name, address, institution, picture...) about all the members.
- The forum (here it is an independent tool added to eGroupWare) is the dedicated space for discussions between learners.
- The file manager centralises CoP's documents.
- The wiki allows to in a collaborative way editing pages.
- The announcements offer information about events, actualities about CoP's members or about their preoccupations.

The platform was implemented by the IT manager of the CRIFA-ULg (Centre de Recherche sur l'Instrumentation, la Formation et l'Apprentissage of the University of Liège).

c. ÉduCoP: a CoP or a CoL?

A large range of resources (books, papers, case studies...) about communities of practice are available. Taking into account those dealing with the setting up and animation of virtual communities, the authors pointed out some elements to qualify ÉduCoP: the definition of the CoP concept, its structure, its life cycle (Wenger 1998) and the useful technologies to support these communities (Wenger, 2001 ; Wenger et al, 2009).

There exist different typologies about CoPs and lots of definitions of this concept (cf. Henri & Pudelko, 2002; Henri, 2006; Parot, Talhi, Monin, & Sebal, 2004; Wenger et al., 2002). Even if ÉduCoP is constituted of learners, it is not what Henri & Pudelko call a "Community of Learners" (CoL). In a CoL main goals are centered on mastering competences linked to contents (disciplines) and on how to reach these through authentic activities. They are often less perennial than CoP and are generally managed by teachers who propose the topics to deal with.

ÉduCoP is more a community of professionals, the profession of its members being "learner". It can be considered as an emerging community of practice since it is "a group of individuals who share an interest, a set of problems or a passion about a topic and who deepen its knowledge and expertise in a domain interacting in a continuous way" (Wenger, 2005). This definition fits well with what the members of ÉduCoP are or could become. They are individuals sharing interests in the field educational and learning. They are all involved in an academic training and they encounter some common problems to learn about learning and about their future profession (adult trainers). They have different personal experience (some are already experienced teachers, other are directly continuing their initial training at the university...). They express what they have in common and progressively build a common ground. Even if they are not first linked in an informal way, they are federated by their common interests and similar projects, they have a common culture, they (intend to) network, cooperate and share their knowledge.

Whereas the ÉduCoP community was created more formally by a student (member), the focus on technologies being suggested by its creator, on the basis of the activities already developed, we can consider that it is an emerging CoP that can spontaneously continue to exist under certain conditions (e.g. renewal of common topics, commitment of members, new incomers...) as in other CoPs.

d. Structure and roles in ÉduCoP

How is the ÉduCoP community structured? What are the roles played by the members?

The animator's has a very important role in the ÉduCoP context. She is the initiator and the coordinator of the CoP and a student as the other members. She is part of the heart team. She proposes convergence actions to enhance the identity of the group and its feeling to be a CoP. She follows up the activities and boosts the members.

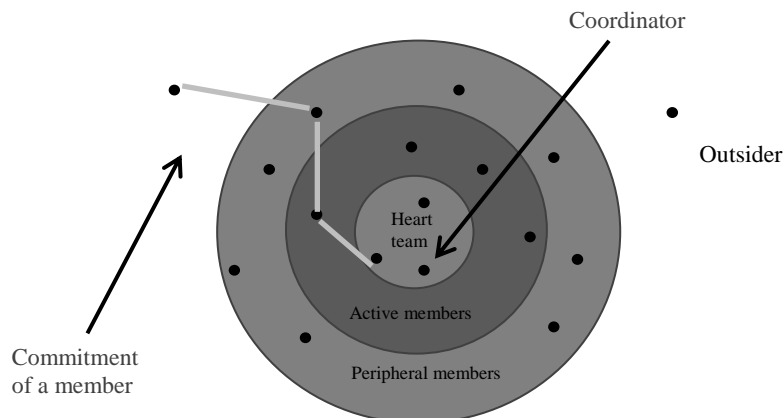


Figure 3: Members' implication degree of CoP's members (from Wenger, 2005, p. 76)

The commitment of the members is progressive. Some become "active" (interact, produce and share) and do not limit themselves to a peripheral role (consult what has been produced by the others). The authors observed the members' implication evolution after a time (connexions, share of documents, interactions in the forum, etc. - see hereafter). Thirty members were interviewed so that we have obtained information related to the difficulties the members encounter to collaborate and to capitalize knowledge. In addition we obtained information on the nature of participation (implication) of each of the interviewees.

Generally the most active people are girls, especially those in the last year (2nd master). This observation is amazing since the students who can benefit the most important added-value are the members who start their program. All the members interviewed said there was an added-value to be part of ÉduCoP. Two thirds of the "passive" members declared they will be more active next year and not limit their participation to consultation of resources, but also to production and sharing. Social desirability or real conviction? We will observe that next year.

Perennisation of CoP's implies the enrolment of new members and their commitment. Different members should also play or share the role of animator, but it seems to be too early at the moment. It is an on-going process.

e. The life cycle of the CoP

CoP's life cycle (Wenger, 1998) allows to situate the CoP's evolution and to take care of its duration and of its redeployment. Where is ÉduCoP situated in this cycle? What are the actions engaged to sustain the CoP? The needs analysis pointed that the "potential phase" was real. So with the animator's help and stimulation, some learners of the three degrees in Educational Sciences (preparatory year, 1st Master and 2nd Master students) started to fill their profiles, to interact and to post resources.

The coalescing phase started mainly with the animator's will to create and maintain the existing group's identity. She stimulated the students to meet. Whatever the context, scholar or not, the goal was to keep a collective identity and to install a confidence climate. Animation of face-to-face meetings between students and virtual convergence

actions, independently of the students' level, were focused on the group identity development and on feeling to become a CoP. First, the CoP's animator organized training sessions to familiarise the students to the use of the platform tools so that they can discover the different functionalities and then interact and share documents with the minimum of technological constraints. Nevertheless, all of the CoP's members could not attend them because of organizational constraints. A reference guide (Snoeck, 2010) was also provided online to help them remember or discover the procedures of use. They then have a common tool available to manage their activities.

To sustain the creation of its identity and let the members become attached to the CoP more durably (Wenger, 1998), several convergence actions (Rorive, 2003) took place. First, a survey was organized by the animator to determine the name to give to the community. ÉduCoP was chosen by 36% of voters (N = 25). Secondly, the students were elicited to search and create logos about collaboration. A logo (see figure) particularly retained the members' attention and became the official logo of ÉduCoP.



Figure 4: The ÉduCoP's community logo (tree of collaboration)

Other convergence activities were organized during the school year: proposition of topics in the forum, production of syntheses in the wiki, profiles creation in the addresses book, etc.

Inside the community of practice of these learners, some periods are very active and others seem less favourable for work. During these « less active periods » (when students have work experience for instance), it was necessary not to go to the phase of « dispersion » of the community. The animator's role had a crucial importance at these moments. Continuously, she stimulated interactions between members (in the forum for instance) and sent boosting messages by mail. But the animator's tasks are not limited to that. To insure the good CoP functioning she had to be available to answer learners' questions and meet them if needed. She was a kind of resource person, a tutor with some expertise in the technological and educational fields.

The active phase: what do members do? The whole connections to the eGroupWare platform and data (messages, announcements, files, wiki pages...) are saved in a server of the University. On the one hand, the analysis of the connection frequency shows that the ÉduCoP members connect to it one time per week in average. In addition, the most important peaks of connection are observed just before school holidays or exams.

On the other hand, the analysis of the frequency of use of the available tools (during the academic year 2010-2011) shows that only three of them are regularly used: the files manager and the forum are consulted each time members connect to the platform, and the address book is itself frequented by a third of them so called "active members".

The organization of the files manager has been collaboratively conceived by the members with the help of the animator. It reflects the structure of their university program (year, fields study, mandatory courses, options, courses). Other folders, more administrative, are also present there. For instance one can find courses schedules or employment offers. Whereas this tool permitted to collect a lot of resources, some folders stayed empty. Some members did not encounter difficulties to use the files manager. Others were confronted to different obstacles, e.g. some had difficulties to post a document or to do it at the right place; others did not know where to find a specific resource. The interviews conducted at the end of the academic year show that these difficulties seem to be explained on the one hand by the students' absence at the training, and on the other hand by a lack of "technological culture" or habits to manage files. Another explanation is the students' reluctance to post their personal resources. Some do not want to share the fruit of many hours of work or are afraid of giving and not receiving something in return. So they play more the role of looking at others' productions than of producing themselves something to share.

Concerning the discussion forum, during five months, we observed the posting of twelve different threats where the CoP's members published seventy messages. Some of them concern courses and questions about them (f.i. "How to structure the report concerning the translation sociology paradigm?"). Others have more social characteristics (e.g. mood of the day). Even if the discussion forum is used to interact about several topics, some students' regret the asynchronous aspect of the tool as opposed to a chat.

The CoP's members appreciated the addresses book because it allows them to find easily information about their peers (mainly they mailing addresses and their phone numbers). Forty-nine profiles out of 85 are complete.

Actions and enrolment of new members are continuing during the (new) academic year 2011-2012. The creator of the CoP is no more a student but she continues to animate and coordinate ÉduCoP. She is trying to stimulate the active participation of all the potential members.

Discussion and perspectives

Considering the first results, we can say that the step of "potential" phase is over and that the "coalescing" one is ongoing for some members. The community is growing and some members declared that they will participate more next year (2011-2012); they have a feeling of belonging to a community. The topics they dealt with are becoming more numerous. Even if this community did not emerge in an informal manner, we can consider it is a CoP of people whose profession is "learner" and "future trainer".

Using the eGroupWare platform to support their activities, they have access not only to learning goals, but also to social ones since they know better each other and since they share knowledge as in a community of professionals of a domain who share their practice.

Our research centre (CRIFA-ULg) would like to continue to sustain this former student's initiative, for instance providing technological resources (server, software and their maintenance). We also want to deepen the questions about the detected difficulties: "Is there really a lack of technological culture or of mastering ICT that impede the efficient use of the platform?", "Which are the reasons of this reluctance of some members to share personal resources? Is it possible to overcome that? If so, how?", and "Are asynchronous discussions in the forum slowing down interactions between members? Would a chat be a more adapted tool to ÉduCoP members' needs?".

Whatever the encouraging results obtained through the actions undertaken during an academic year (Bomgart, 2011), we have to consider now how to overcome the obstacles to the setting up or the evolution of such a CoP. Consequently the next actions in ÉduCoP will focus on that. For instance, the animator will make sure that each person interested in enrolling the CoP will participate to the training session to be at ease with eGroupWare. In addition, one of us (who was a student until last year) or a member who master the tools will organise a technological hotline in order to answer the CoP's members' questions. A Frequently Asked Questions list dealing with the recurrent questions could also be available online. This can be designed by the animator or some active members.

During the activities of the CoP, the animator will insist on the win-win aspect of the interactions and sharing of practice. But we are conscious that it takes time to overcome the socio-affective obstacles linked to the sharing of personal production (e.g. fear of being judged, of not having a return, of being despoiled of his/her ideas...). That is why working on the building of a confidence climate and on the identity and feeling to be part of a CoP is very important.

Finally, to continue to enrich this CoP it would be interesting to enlarge it. Some former students (who obtained their diplomas last academic year) are already part of the CoP and some declared they can continue to interact and share resources with younger students since they consider this approach is enriching. Then transferring competences and expertise of elders could be an added-value for the current students.

This year ÉduCoP is restarting its activities with ancient and new members. It seems that the enlargement of the CoP is promising: all the students of the new preparatory year are now registered to eGroupWare and we heard that students are talking about their CoP. Of course, some of them will probably not participate actively and some former members will not want to collaborate. A new cycle of data collection is going to be realised (e.g. identification of needs) as well as convergence actions in order to enrol the new members.

After two years, we hope to be aware of good practices, possible obstacles and the way to overcome them. So we will be able to propose recommendations to people who would try the same experience. There is now an official demand at the level of our university to do this and to try to integrate this approach with the help of existing institutional technologies. If so, that will necessitate adapting them, communities having needs that are not necessary matched by these tools.

References

- Agence Wallonne des Télécommunications (AWT). Baromètre TIC 2010. L'usage des Technologies de l'Information et de la Communication en Wallonie. Namur: Author. Retrieved October 7, 2011, from http://www.awt.be/content/tel/dem/barometre_TIC_2010.pdf
- Bastien, J.M.C., & Scapin, D.L. (1993), Critères ergonomiques pour l'évaluation d'interfaces utilisateurs. Rapport technique INRIA n°156, Juin 1993, INRIA : Le Chesnay.
- Bomgart, M.L. (2011). Élaboration d'une communauté virtuelle entre étudiants en Sciences de l'Éducation. Mémoire et travail de recherche. Liège: Université de Liège.
- Daele, A., Charlier, B., Ciussi, M., Daele, A. Denis, B., Giboin, B., Henri, F., Jacquemart, S., Malengrez, D., Rossier, A. Vandeput, E., Van de Wiele, N., Vidou, G. (2009). Analysis of Instrumental Genesis lived by the CoPs (D.PAR.08). PALETTE project report, IST Project no. FP6-028038.
- Denis, B. (2010, May). *Cops' creation and evolution sustained by ICT tools and services*. Networked Learning Conference. A research-based conference on networked learning in higher education and lifelong learning. Aalborg, Denmark.
- Denis, B., Grana, C. & Snoeck, C. (2010). Rapport d'activités du projet Health CoP. Liège. Université de Liège.
- Henri, F. (mars, 2006). La communauté de pratique, une structure sociale pour le développement des connaissances. Conférence au Kick off meeting PALETTE. Lausanne.
- Henri, F., & Pudelko, B. (2002). La recherche sur la communication asynchrone : de l'outil aux communautés. In Daele, A., et Charlier, B. (eds). (2002). Les communautés délocalisées d'enseignants. Étude du Programme de Numérisation pour l'Enseignement et la Recherche (PNER). Paris.
- Hubert, S., Massart, V., & Gérard, J. (2002a). Analyse du programme Cyberécoles: Enquête dans les établissements d'enseignement primaire, secondaire et de promotion sociale. Liège: Centre de Recherche sur l'Instrumentation, la Formation et l'Apprentissage.
- Hubert, S., Massart, V., & Gérard, J. (2002b). Évaluation du "Plan Multimédia": Enquête dans les établissements d'enseignement primaire et secondaire de la Région Bruxelles-Capitale. Liège: Centre de Recherche sur l'Instrumentation, la Formation et l'Apprentissage.
- Nielsen, J. (1993). Usability Engineering. New Jersey: A P Professional.
- Nogier, J.-F. (2005). Ergonomie du logiciel et du design web. 3e Ed. Dunod. Paris.
- Parot, S., Talhi, F., Monin, J.-M., & Sebal, T. (2004). Les communautés de pratique. Analyse d'une nouvelle forme d'organisation et panorama des bonnes pratiques. Lyon: Knowings & Pôle productique Rhône-Alpes.
- Plomp, T., Anderson, R. E., Law, N. & Quale, A. (Eds.) (2009). Cross-National Information and Communication Technology. Policies and Practices in Education. (pp. 83-102). Charlotte, New Carolina: Information Age Publishing. Cross-National Information and Communication Technology. Policies and Practices in Education. Charlotte, New Carolina: Information Age Publishing
- Poisseroux, J., Lassaux, E., & Vandeput, E. (2008, avril). TacTIC pour une intégration réussie des technologies en Haute École. Colloque DIDAPRO 3, Université Paris Descartes Paris, 21-23 avril.
- Rorive, B. (sous la direction d'O. Rocher). (2003). E-projets. La conduite du changement par la traduction. Étude-action réalisée dans le cadre de l'appel d'offre ITT 150601. Éditions Anact. Décembre 2003.
- Shneiderman B., & Plaisant C. (2005). Designing the User Interface: Strategies for Effective Human Computer Interaction. 4th ed. College Park, MD: Addison-Wesley.
- Snoeck (2010). Guide d'utilisation de la plateforme eGroupWare. Liège: Centre de Recherche sur l'Instrumentation, la Formation et l'Apprentissage de l'Université de Liège.
- Wenger, E., McDermott, R., & Snyder. W. (2002). Cultivating Communities of Practice: A Guide to Managing Knowledge. HarvardBusinessSchool Press.
- Wenger, E. (1998). Communities of Practice. Learning, Meaning, and Identity. United States of America: Cambridge University Press.
- Wenger, E. (2005). La théorie des Communautés de pratiques. Apprentissage, sens et identité. Québec : Les Presses de l'Université Laval.
- Wenger, E., White, N. & Smith, J. D. (2009). Digital Habitats. Stewarding technology for communities. Portland: CPquare.