

THE IMPACT OF COMMUNITIES OF PRACTICE AT THE UNIVERSITY OF TRENTO: RESEARCH-BASED LESSONS LEARNT

D. Agostini, F. Picasso, S. Maniero, A. Serbati, P. Venuti

University of Trento (ITALY)

Abstract

The University of Trento Teaching and Learning Centre (called FormID) promotes educational leadership and strategic initiatives that consolidate the processes of teaching, learning and assessment continuous enhancement [1] by supporting the professional development of academics, with the ultimate goal of promoting student success [2].

FormID offers both formal and non-formal initiatives [3] tailored to individual needs, such as consultancies with an academic developer or Communities of Practice - CoPs [4], as formative environments useful for disseminating innovative teaching, learning and assessment practices and collective reflection on the continuous improvement [5, 6].

This contribution aims to present the results of a research study carried out to assess the impact of CoPs and eventually improve their role for academics.

For this purpose, one of the Community Assessment Toolkit (CAT) was used, in particular, the questionnaire addressed to members [7]. Furthermore, the data collected were triangulated with observation conducted by an external member in each community and an interview with the CoP facilitators.

Keywords: Faculty development, professional development, community of practice, higher education, community assessment.

1 INTRODUCTION

Community of Practices (CoPs) are described by Wenger & Snyder as “groups of people informally bound together by shared expertise and passion for a joint enterprise” [12, p.139]. Wenger, in previous work [13], affirmed that members of a CoP “do not necessarily work together every day, but they meet because they find value in their interactions. While spending time together, in general, they share information and advice. They help each other solve problems. They discuss their situations, aspirations and needs. They reflect on common problems, explore ideas and act as a sounding board. Over time, they develop a unique perspective on their topic, as well as a body of common knowledge, practices and approaches. They also develop personal relationships and establish ways of interacting. They may even develop a common sense of identity. They become a community of practice [13, 14]”.

As widely recognised in literature and in international current practices, processes of reflective inquiry on teaching and sharing observations derived from peer feedback are facilitated through the use of faculty learning communities [9, 10]. This approach moves the process of improving teaching and learning out of the classroom and beyond the dyadic relationship of the teacher and the student to a broader community of colleagues and peers. Building on the work of Boyer [11], Cox defines a faculty learning community as “a cross-disciplinary faculty and staff group of six to fifteen members who engage in an active, collaborative, yearlong program with a curriculum about enhancing teaching and learning and with frequent seminars and activities that provide learning, development, the scholarship of teaching, and community building” [11 p. 8]. A faculty learning community (a specific type of community of practice devoted to teaching in higher education) may be organised around either a cohort (e.g., new or younger academics) or a topic (e.g., reflective learning).

This paper focuses on communities of practice developed at the University of Trento, in Italy, and investigates their impact on academics. The University of Trento Teaching Learning Centre promotes a series of professional development actions, events and direct support to academics aimed at promoting quality teaching and supporting meaningful, participative and personalised learning [8]. It offers formal events (seminars and workshops) and non-formal initiatives, such as communities of Practice [3]. The focus of this research project is on the role and impact of our five interdepartmental Communities of Practice (CoPs), which have been organised with the aim of disseminating innovative teaching, learning and assessment practices and scaffolding collective reflection on continuous improvement [5, 6]. Only

one of those communities is topic-based, having as a focus the Challenge Based Learning, while the other three are scientific field-based: psychological and cognitive sciences, humanities and social sciences, and hard sciences. That way, lecturers can relate to similar teaching problems and audiences.

2 METHODOLOGY

The research follows a Triangulated Mixed-Methods Multiple Case Study Design.

The triangulation is given by the following data sources, both quantitative and qualitative (Mixed Methods):

- Community assessment toolkit (cat1) [7] (quantitative, likert 5 modalities questionnaire),
- Interviews with cop facilitators (cat2) (qualitative),
- Field observations carried out by a member of the tlc [15, 16]. (mainly qualitative with some quantitative data).

Every CoP represents a case study that has been analysed. In this particular paper, the data is presented mostly aggregate, except where significant differences arise.

CAT was developed by Verburg & Andriessen at Delft University of Technology and is composed of three instruments. The first one is a members' questionnaire, the second one is an open questionnaire to be used in an interview with CoP coordinators, and the third item consists of a set of open-ended questions designed for implementation with a key informant of high level within the organisation.

We have only utilised the first two instruments for this research, but we plan on incorporating the third one in the near future.

With particular reference to the members' questionnaire, it is organised in 11 areas: objectives, activities, participation, sharing, outcomes, coordination, IT support, institutional support, CoP value, problems and solutions, and change. These will also be the main dimensions of the analysis of the questionnaire that follows.

3 RESULTS AND DISCUSSION

3.1 Results emerging from the CAT questionnaire administered to CoP members

The number of the filled questionnaires is 38, with a response rate of 67,8%. In the following Table 1, the comparison between the average number of participants in the CoPs and the number of respondents per CoP is reported. The psychology CoP appears to have the highest response rate.

Table 1 – CoP and their response rates

<i>Name CoP</i>	<i>Medium number of participants</i>	<i>N. of completed questionnaires</i>	<i>Answer %</i>	<i>Total</i>
CdP Psychological Studies	12	11	92%	100
CdP Humanities	7	5	71%	100
CdP Hard Sciences	25	14	56%	100
CdP Challenge Based Learning	12	8	67%	100
Total	56	38		

It is important to underline that some academics attend more than one CoP; in fact, they filled out more than one questionnaire: 21% of the participants filled out two questionnaires for two different CoPs and 8% filled out three questionnaires (3 CoPs).

Concerning the motivations connected to the academics' CoP participation (Table 2), as the first objective, the power of CoP for sharing information, knowledge and experiences with other colleagues emerged (Median 5 on a Likert 5 scale). The exchange process also involves the acquisition of new standards, methods and practices (Med. 5) useful for enhancing the teaching and assessment processes in connection with improving personal skills (Med. 5). Communication flow can support the

development of new ideas in a broader context (Department and University), and it is interesting to notice that the commitment in the CoPs is unrelated to career-related motivations.

Table 2 – Objectives in participating in the CoP: Median in Likert 5 scale and Interquartile Range (IQR)

<i>Item</i>	<i>Median</i>	<i>IQR</i>
Listening about new knowledge and experiences from other community members	5	1
Developing better teaching standards, methods and practices	5	0
Developing together new ideas for the university/department	5	1
Improving personal appropriation modalities of teaching opportunities and practices	5	1
Acquiring ideas from others how to solve concrete problems in my work	5	1
Improving the level of expertise of the members in teaching practices	4	1
Staying up to date in the topic of the community	4	1
Making the university/department more attractive for students and researchers	4	2
Creating useful contacts/networking	4	2
Career advancement	2	3

In terms of level of interest in continuing the activity of the CoP, the data highlight the presence of strong motivation to continue with the commitment made (Med. 4).

For the area dedicated to analysing the added value of participating in the CoP, members underline that the sharing process enables solutions to concrete teaching problems (Med. 4). In fact, CoP offers the opportunity to be able to make one's own experience the subject of critical reflection [17]. As a second focus point, participants indicate the possibility of developing new ideas (Med. 4), which can become good teaching practices (Med. 3). In summary, the ease with which peers are able to learn from one another, even when facing challenging issues, suggests a positive and trusting environment has been established. Members are able to openly share difficulties in their teaching and are receptive to gaining knowledge from their peers.

Table 3 – The added value of participating in the CoP: Median in Likert 5 scale and Interquartile Range (IQR)

<i>Item</i>	<i>Median</i>	<i>IQR</i>
The most important thing that happens in our community is that members find solutions to problems in their work	4	1
Thanks to the combination of different skills and points of view in our community, many new ideas have been developed	4	0
Sometimes it is difficult to learn from each other in the community because we have very different backgrounds	2	1
People in the community are reluctant to talk about things that went wrong in their projects/work	1	1

The questionnaire area dedicated to the participants' satisfaction with the facilitator's coordination activities underlines a high level of satisfaction (Med. 5). This highlights another aspect that literature has emphasised: the role of the leader. Numerous studies have indicated that the most critical factor in a CoP is the vitality of its leadership, with the leader's competence emerging as the pivotal element [4].

It is important to note that participants also report a high level of quality of interactions between CoP members (Med. 4,5).

The area dedicated to "Institutional support" highlights a willingness to invest more time in CoP activities (Med. 4); members, in fact, meet each other once a month for an hour and a half during the lunch break. The attendance is open, but it seems difficult to find a match between the numerous institutional and professional commitments. Also interesting is the finding on the encouragement received from one's department to attend meetings (Med. 4).

Methods used by the facilitators with respect to the type of activities proposed were inquired. The analysis shows that the exchange of ideas and experiences between members to find solutions to problems is a crucial element (Mean 4.29). This is followed by conversations about teaching experiences (Mean 4.26) and members' presentations of teaching methods and tools (Mean 3.47). Currently, the CoPs do not work on projects, do not engage in team-building activities and have few interventions by outsiders.

In order to consolidate the CoPs' work, it was asked to identify areas for improvement. Specifically, two aspects were indicated: 'how the university organisation supports the CoP (Med. 4)' and 'tools that support community activities' (Med. 3). These topics will be further explored within the CoPs.

At the end of the CAT questionnaire, questions were proposed to assess the outcomes the members believe they achieved by participating in the CoP (Table 4). As the main topic emerges, the enjoyment of participating in the CoP (Med. 4,5) is directly connected to the perceived quality of the relationships and the sharing process. Furthermore, meetings sustained learning on the themes of innovation and teaching quality, thus demonstrating the achievement of the CoP priority objective (Med. 4). Intrinsic motivation seems to be the first input for participation in contrast with reasons related to reputation, visibility or career.

Table 4 - Outcomes the members believe they achieved by participating in the CoP: Median in Likert 5 scale and Interquartile Range (IQR)

<i>Item</i>	<i>Median</i>	<i>IQR</i>
Enjoyment to be part of the community	4,5	1
Learning connected to the subject of community	4	0,75
Problem-solving skills in their work	3,5	1
Creation of new useful contacts	3	1
Discovery of new projects and possibilities	3,5	1
Update in the specific field of CoP	4	1
Ability to work more efficiently	3	1
Ability to find all kinds of useful information	3	0
Improved reputation and visibility	2	2
Improved career prospects	1	2

Thanks to the data emerging from the questionnaires, we can confirm what has been described in various research on communities of practice activated in faculty development paths [5, 3]. CoP offers academics an informal, peer-to-peer learning process in which they can make their own experience the subject of critical reflection. Academics indicate that CoPs help them to find solutions connected to their work: in fact, university teachers, through the storytelling of their own experience and listening to that of others, can develop a reflective and self-assessment path in their teaching and assessment practice. Reflection to learn through and from experience is what distinguishes the specific contribution of CoP, therefore [18]. Learning is facilitated through social interaction as it is elaborated and implemented as a process.

Academics indicate that they have no problem telling about the critical aspects of their work and this is a sign that a high level of mutual trust, a positive climate, suspension of judgement and empathy has been created. Compared to the classic dynamics of the university environment, often experienced as isolation and lack of collegial relations, the CoP becomes a place that allows academics to experience dialogue, relationships, and mutual support, whereby one obtains the pleasure of being together, indicated as the first result of participating in the CoP. It becomes the place for research in teaching, where ideas can be explored and challenged in a context perceived as safe.

The exchange of ideas, viewpoints, and suggestions in a CoP setting promotes "team learning", a key component of the learning organisation model outlined by Senge [19]. This cooperative approach not only enables individual development but also catalyses transformation across the entire organisation.

To conclude, it is important to detect that however the participants express a high level of interest connected to the CoP experience, the number of attendees is limited.

3.2 Results emerging from CAT interviews with cop facilitators

3.2.1 Community of Practice objectives and Facilitator objectives

In connection with the inquiry area of the interview focused on the Community of Practice objectives, the interviewed facilitators underline important information connected to the development of the Community itself and CoP direct objectives.

The Communities of Practice seem to be a safe and inspirational place where academics can meet each other in order to share reflections on teaching, learning and assessment processes: thanks to the sharing processes, it is underlined that the CoP members can, in fact, produce strategies and ideas to improve directly their professional practice, scaffolded by their peers.

Furthermore, during these monthly meetings, it is possible for them to address common doubts and problems connected to their teaching practice, taking ownership of their teaching methods but also opening their design process to new and interesting methodologies that can answer their practical needs emerging in class.

Communities of Practice can therefore act as places of connection, essential for sharing real experiences and thus exchanging applied practices, stimulating the growth of new and dynamic collaborations between the university teachers.

In terms of personal objectives connected to the role of facilitators, the participants express the willingness to create an informal context of harmony and sharing: facilitators, therefore, are active supporters of the internal balance of the community, playing a leading and mediating role in relations and structuring communication. This is connected to the need to create an environment useful to decompress the stress related to academic life, so a relaxed and informal place that is free to be attended, detaching it from a mandatory perspective.

Facilitators also aim to provide space and time for discussion on teaching, learning and assessment, supporting participants in a working process focused on teaching innovation (new approaches, the broader panorama of teaching methods and tools, how to relate to students). They would like to represent professionals who can introduce prompts for initiating activities during the CoP meetings and out of this protected environment, also providing the participants with their own professional experience.

As a final point, thanks to their support, they want to make members autonomous in running the community.

3.2.2 Composition, participation and sharing

The composition of the CoP is very different in terms of numbers and interdisciplinarity: the number of participants may vary from a minimum of 7 to a maximum of 40 (this Community now is divided into two sub-communities to maximise the organisation and the engagement) and the disciplinary background is very varied.

In general, the level of interaction among members is high as everyone contributes to the discussions, and the level of interest is high as teachers seem to directly apply the identified strategies/tools during the CoP meeting in their classroom. In one case, the interaction is so powerful that participants even proposed activities.

In relation to the sharing process, the level is very high: in fact, those who participate are self-selected, they come voluntarily, so they are already highly motivated, they have their own sensibility about teaching, and they have already tried to implement some strategies, approaches and innovation in their courses. They share doubts and criticism connected to their own practice, and they are highly available to create connections with the other members through testimonies of direct experiences.

3.2.3 Activities and results

The activities proposed by the facilitators varied during the development of the academic year: in some cases, in order to create a collaborative environment, it was introduced an ice-breaking activity (focusing on programme, expectations, methods, objectives, rules), with which they chose together how to proceed. In the next meetings, the Reflective Team [20] approach: this methodology is designed to be used by groups of practitioners to share and discuss in a structured way (ground rules established such as surrounding confidentiality, respect for the opinions of others, and allowing each person to talk) unresolved professional dilemma with the group [21]. Brainstorming moments were included, also in connection with sharing best practices in comparison, experiences collection and creation of original works and documentation connected to CoP's activities.

In terms of activity results, facilitators feel and see good atmospheres of exchange, with a sincere commitment to finding solutions between members. During the CoPs meeting, there were identified interesting operational hints to be given to colleagues who presented a specific case; furthermore, everyone reflexively considered their own practices thinking of strategies to improve them. Finally, as a concrete result, in some cases, CoP members directly create products available to the academic community (for example, guidelines on specific teaching methods).

3.2.4 Coordination, IT and Institutional Support

In relation to the topic of coordination, facilitators predominantly organise meetings, encourage members to participate in the community, and share their expertise and materials (such as online resources shared by the official University learning management systems) with community members, also proposing external events and prompting the connection with the institution.

To conclude, facilitators seemed to be supported by the institution that provided spaces and general resources. The institutional and IT CoP support is specifically connected with the actions and strategies promoted by the FormID (Teaching Learning Centre) and the direct support of the Vice-Chancellor for Teaching.

3.2.5 CoP value, problems, solutions and development

The CoP value seems to be felt by all the participants: in fact, the Community offers prompts about teaching strategies to be implemented, but also relationships like the possibility for young teachers to confront with seniors: this opportunity can overcome insecurities in planning and managing teaching activities. The different perspectives can open the members' reflection about new ways of teaching, through listening to the experience of others, and this contributes to not feeling alone

The main problem is connected to the creation of a shared calendar based on members' availability; in addition, another important issue is connected to the difficult facilitation of heterogeneous groups and in general difficulties in managing people during the designed activities.

To enhance the effectiveness of community development efforts, facilitators recommend regularly diversifying the activities offered to maintain the interest and engagement of participants. They also suggest incorporating the Reflective Team approach to collaboratively generate tailored solutions. Additionally, they are exploring ways to further motivate and engage individuals for more active involvement in the community.

3.3 Results emerging from field observations

To conclude, in order to ensure data triangulation, it was decided to combine the CoP members' questionnaire and facilitator interviews with a participatory observation process with related field annotations [20, 21] (Cardano 1997; Corbetta 2015). These data allowed us to confirm the previous data analysed and its convergence. In fact, with the adoption of the following categories 1. Activities implemented; 2. Timing organisation; 3. Participation; 4. Involvement; 5. Didactic-managerial themes emerged; 6. Sharing; 7. Strengths; 8. Difficulties/Criticisms; 9. Facilitator's task; and 10. Proposals, which partially overlap with the previous categories used for the analysis of the facilitator interviews, it is possible to deeply analyse the CoP processes. The monthly meetings seem to enhance communication and sharing moments crucial for academics in order to reflect on their own teaching and assessment practices and then to scaffold redesign actions. Furthermore, thanks to the observatory's point of view, it is possible to underline the importance of the role connected to the facilitator who welcomes participants, coordinates the meeting and the activities designed, summarises what emerged during and at the end of the meeting; makes his own contribution to the analysis of the problem addressed, shares information on events and proposes materials to share.

4 CONCLUSIONS

Research has confirmed that the Community of Practice is a catalyst for peer coaching processes [8, 9] by providing a safe and inspiring environment for open communication and sharing. CoP also offers an opportunity for decompression and in-depth thematic discussions on teaching, learning, and assessment practices, which emerge as hot topics. This is facilitated by the informal context of the community [13].

In order to continuously raise the interest of the members, it emerged as crucial the need to alternate different types of activities (practice sharing, reflective team, inviting experts and/or teachers who have implemented best practices, peer observation).

Thanks to the triangulation of the data, and the verification of its convergence, it is possible to affirm that CoPs can represent a stable tool for permanent reflection: the organisation of these collaborative spaces has demonstrated the ability to enhance communication among professional peers and foster moments of direct reflection on teaching and assessment practices. As a result, this reflective process can inspire targeted redesign actions that prioritise the delivery of a renewed quality of education.

Facilitators and Cops' participants virtuously collaborate in processes of sharing problems, good practices, doubts, dilemmas or simply experiences, with the common aim of activating reflection and change, concretely helping each other in their professional practice.

The study is set to continue over a period of time to enable the collection of data through a process of action research and continuous improvement. The availability of more data will allow for the possibility of feedback and iterations, thereby bringing about a better understanding of the nuances of the dynamics within CoPs and garnering more evidence on the most productive activities and approaches. Furthermore, the study will incorporate new CoPs, and the third tool of CAT that targets the institutional level will be implemented.

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