Investigating the Potential Introduction of Faculty Professional Learning Communities in Higher Education

Loucas T. Louca, Theopisti Skoulia, Marios Vryonides
European University Cyprus

Purpose and Research questions

This empirical study explores the potential introduction of faculty PLCs as an innovative way to enhance instructors' teaching competencies. Specifically, it focuses on a "young" private university in Cyprus which introduced PLCs in an informal manner in the past 6 years, and now attempts to formalize this mode of Professional Development for its faculty. Within the context of this effort, this paper seeks to identify faculty PLCs' structures that could encourage long-term sustainability of evidence-based teaching reform in faculty member's teaching practice. Data were collected as part of a funded project which aimed to investigate the characteristics of productive and sustainable faculty PLCs. Towards this end, the study seeks to answer the following two research questions:

1. Which factors relate to the faculty's willingness to engage in PLCs?

2. Which sources of information are considered important in shaping their teaching?

Theoretical framework

Professional Learning Communities (PLCs) are a form of professional development that provides teachers/instructors a framework in which to act as "learners" and schools/institutions as "learning communities" (Clarke & Hollingsworth, 2002). PLCs refer to small teams (communities) of teachers/instructors with shared interests and visions that meet regularly, exchange expertise, and work collaboratively with the goal of improving their teaching practice (Brookhart, 2009; Margalef & Roblin, 2016). In the context of PLCs, professional learning should be an ongoing, sustained, intensive and collaborative approach to improving teachers'/ instructors' effectiveness in raising student achievement (Slabine, 2011) and enhancing student learning experiences. This engagement provides teachers/instructors with opportunities to refine their content knowledge and teaching pedagogies and approaches, understand the need to change, and helps them find ways to implement changes in their teaching that will help their students to learn more effectively (e.g., Fishman, Marx, Best & Tal, 2003; Loucks-Horsley et al., 2003).

The heart of PLCs is a data-driven process that includes systematic analysis and constructive critique of participants' own practice through reflective dialogue, surveys of teachers'/instructors' practice through observation, data analysis, joint planning, and curriculum development (Stoll et al., 2005). The literature has also highlighted five characteristics related to productive teacher/instructor PLCs (Bolam et al., 2005; Stoll et Earl, 2003): (i)sharing common values and vision, (ii)collective responsibility for student learning, (iii) reflection and reflective professional examinations, (iv)individual and group professional learning and (v) supportive and shared leadership (Bolam et al., 2005; Hord, 1997).

Although a recently growing number of studies have investigated the use and function of PLCs at primary and secondary education levels, there is to date relatively little investigation of PLCs in higher education (e.g., Laws, 1996). In a study of university departments, Massy, Wilger, & Colbeck (1994) found collegiality to be "hollowed", with community usually absent from

meetings, curricular planning, and pedagogical work. Despite that, Cox (2004) indicates that faculty PLCs can play an important role in faculty development with evidence suggesting that both student and faculty learning is improved through this process. While the need to identify productive ways within PLCs with which faculty can sustain long-term pedagogical changes in their teaching approaches through a learning community experience is of high interest (Cox, 2004; Richlin & Cox, 2004), there is to date very little evidence whether these changes are sustained or can be sustainable beyond participation in faculty PLCs (Tinnell, Ralston, Tretter & Mills, 2019).

Faculty PLCs as well as professional growth within PLCs are playing an increasingly important role in higher education classrooms, connecting faculty with their students and colleagues (Cox, 2001, and placing an emphasis on evidence-based changes in teaching (Ralston, Tretter, & Kendall-Brown, 2017). However, this growth has been slow, and there are many obstacles to implementation (Palmer, 2002), although there is a growing interest in higher education student learning outcomes and innovative approaches to teaching (Terry, Zafonte, & Elliott, 2018). Creating faculty PLCs could constitute one approach to engaging the faculty community in the cause of student and faculty learning (Cox,2 004).

Faculty PLCs may address the teaching, learning, and developmental needs of a particular faculty group or may address special campus-wide teaching and learning needs, issues, or opportunities (Cox, 2004). Stacey & Mackey (2009) suggest that potential benefits of PLCs include instructors' better understanding of personal teaching philosophy, increase confidence in the capability of applying teaching approaches, and increased collaboration among colleagues even outside of one's own discipline. Roth (2014) identified additional benefits of participation in PLCs: an increase in instructor's motivation, development of inter-instructor relationships, reduced instructor burnout, improved teaching practices, less lecturing time, and more engaging students in active learning opportunities.

Methods, data sources & analyses

Data were collected at the end of the Spring semester of 2022 through an online questionnaire. The Office of the Vice-Rector of Research and External Affairs sent an invitation to all the full-time and part-time faculty (around 400) to participate in the survey.

A total number of n = 127 faculty (Full-time) and Special Teaching Personnel / Scientific collaborators / Special Scientists (Part-time) from all the Schools of the University responded to the invitation (a response rate of nearly 32%). The School distribution as well as the other characteristics of the sample as presented in Table 1 were deemed satisfactory and were expected to provide useful insights into the attitudes and the way faculty felt about their involvement in PLCs.

The questionnaire consisted of seven parts, examining the current state of PLCs in order to identify good practices and needs for supporting and sustaining PLCs as tools for professional learning, growth, and development. The questionnaire focused on respondents' self-perceptions about their teaching abilities, investigated the sources of ideas and incentives for teaching innovation, their beliefs about the importance and the nature of teaching, and their views and experiences about professional work and development in the context of working with a group of colleagues.

Results

Analysis of the data indicated factors that relate to the faculty members' willingness to engage in PLCs as well as sources of information that participants in the survey highlighted as important in shaping their teaching. Factors that were related to the willingness to engage in PLCs were the following: (i) sharing teaching experiences with colleagues, (ii) gaining valuable information from hearing about colleagues' experiences, (iii) sharing experiences about student results, (iv) experimentation with new ideas, (v) meetings with colleagues (vi) reflecting with colleagues about common teaching issues, (vii) working in a small group of colleagues on improving teaching, (viii) reflecting on own teaching. Factor analysis indicated that 8 items included in the questionnaire loaded in one factor (see Table 2). Cronbach's Alpha reliability test also gave a good score (α =0.85).

Further, a series of exploratory bivariate analyses were performed using gender, mode of employment (full-time or part-time faculty), rank, and the school that the participants belong to which showed that the demographic variables did not distinguish different modes of willingness (see Table 3). In effect, this means that there was a uniform approach and positive willingness to engage in PLCs. This willingness to engage in PLCs did not relate to the workload of the teaching staff.

Other bivariate analyses showed that willingness to engage in PLCs was positively related to the importance of teaching $r(117) = .295$, $p = .001$. This shows that the participants who consider teaching to be important were willing to engage in PLCs. Attitudes toward excellence in teaching were marginally positively related $r(116) = .198$, $p = .033$ with willingness to engage in PLCs.

An important finding related to the sources of information that participants highlighted as important in shaping their teaching. These sources of information were ranked, and as Chart 1 shows, the most important ones were those related to the feedback Instructors get from students and other sources that originate from within their institution.

Another interesting finding related to aspects of learning that have developed during the covid-19 pandemic which participants indicated as important when working with a small group of colleagues for improving their teaching skills. These aspects were ranked and Chart 2 shows the most important ones.

Finally, the participants suggested several thematic areas for faculty PLCs that would be of interest for the future. Those included four (4) main areas related to (i) pedagogical principles & methods of teaching (including inclusive learning & differentiation), (ii) digital tools & emerging new technologies for teaching & learning (including in-class activities for enhancing student engagement during lectures), (iii) evaluation & assessment strategies & methods, and (iv) interactivity between the students, the instructor & the course materials.

Discussion and scientific significance of the study

Overall, the study revealed participating instructors' very positive inclination to engage in PLCs. Factors connected to that willingness were in line with the literature about important characteristics for productive instructors PLCs, related to e.g., having shared values and vision, adapting a collective responsibility for student learning, and actively and regularly engaging in individual and group professional learning (Bolam et al., 2005; Hord, 1997; Stoll et Earl, 2003; Vescio, Ross & Adams, 2008). Of course, it needs to be acknowledged that the lack of differentiation identified in the ways faculty responded in the questionnaire could be influenced by a self-selection bias of the people who have opted to participate in the study in the end.

One additional important finding relates to the ranking of the items identified by participants in the study as sources of information that shape their perceptions of teaching. These include among others informal input from students (such as informal discussions with students), formal input from students (including official course evaluations, and open-ended comments from students), exams and assignments results, and official engagement with supportive and shared leadership (Hord, 1997). The emphasis on student results and student opinions is also related to the idea of collective reflection and responsibility for student learning (Bolam et al., 2005). Taken all these together, and given the fact that there was no prior participation in formal faculty PLCs, we suggest that these highlight an important characteristic: participating instructors seem to feel that collaborative pedagogical reflection is valuable for their teaching duties, despite that fact that prior research has suggested that the notion of community-wide collaboration is usually absent from higher education meetings, curricular planning, and pedagogical discussions (e.g., Massy, Wilger, & Colbeck, 1994). Of course, during the covid-19 pandemic, instructors at the university relied heavily on peer-driven professional development to overcome numerous difficulties connected to the imposed emergency remote teaching and the need to engage with their students in fully online learning environments (Authors, 2021), which may have contributed to the positive disposition towards collaborative pedagogical reflection.

At the same time, findings point to two useful resources, which characterize university faculty. The value placed by participants in student-related data could be the product of the fact that for an amount of their time, university faculty are also working as researchers, collecting, analyzing, and critically reflecting on the data that they collect. This practice maybe is seen as a productive resource for PLC-related work, providing instructors with a strong commitment to collecting data from their courses and reflecting on them as one of the drives towards pedagogical change. At the same time, the data highlight the potential role of faculty independence and autonomy in their teaching and research agenda and the supportive role that shared leadership (Hord, 1997) may have in enhancing both, which are fundamental characteristics in academia worldwide.

Taken all these together, our findings point towards new directions in faculty professional development, away from traditional approaches of lectures or seminars, focusing more on peer interaction and support, and student data focusing on learning outcomes aligned with the increasing research interest in the field (Terry, Zafonte, & Elliott, 2018). In a sense, engaging faculty in PLC practices may be a way of further empowering faculty in their working environment. At the same time, they point to a direction for further, more detailed investigations through more qualitative approaches to shed in-depth light on the issues that are related to the findings we have presented providing more evidence about the impact of faculty PLCs on higher education (Cox, 2004; Richlin & Cox, 2004; Tinnell, Ralston, Tretter & Mills, 2019).

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Acknowledgment

Table 1: *Respondent Characteristics*

Variables	Categories	N	%
School	Humanities, Social & Education Sciences	53	41.7
	Business	13	10.2
	Sciences	40	31.5
	Law	8	6.3
	Medicine	13	10.2
Gender	Female	69	54.8
	Male	57	45.2
Age	<30	3	2.4
	30-39	38	29.9
	40-49	51	40.2
	50-59	26	20.5
	≥60	9	7.1
Rank	Full-time	75	60
	Part-time[1]	50	40
Teaching Experience in Higher Education (years)	0-4	27	22.1
	5-9	25	20.5
	10-14	27	22.1
	15-19	17	13.9
	≥20	26	21.3
I usually teach… (more than one choice may be given)	Undergraduate	103	
	MA	54	
	PhD	19	

Note: Inconsistent sample sizes across characteristics resulted from missing responses.

[1]Special Teaching Personnel / Scientific collaborator / Special Scientist

Table 2: *Factor analysis*

Items	Component 1
1. sharing teaching experiences with colleagues,	.552
2. gaining valuable information from hearing about colleagues' experiences,	.789
3. sharing experiences about student results	.697
4. experimentation with new ideas,	.761
5. meetings with colleagues	.801
6. reflecting with colleagues about common teaching issues	.804
7. working in small group of colleagues on improving teaching	.581
8. reflecting on own teaching	.667

Table 3: Exploratory bivariate analyses

Variables	Categories	Mean	t	Sig
Gender	Male	31.72	-1.959	.053
	Female	33.28		
Rank	Full-time	33.48	1.755	.082
	Part-time	32.01		
			F	
School	Humanities, Social and Education Sciences	32.53		
	Business	33.09	.725	.576
	Sciences	32.30		
	Law	35.00		
	Medicine	31.77		

Chart 1: *Sources of ideas for Teaching Innovation*

	Mean
Informal input from your students	9,07
Formal input from your students	8,73
The results of exams or assignments assigned to students	8,48
Discussion with coordinator/chair/dean about formal input from students	8,36
Discussions with colleagues about formal input from your students	8,24
Participation in workshops and/or seminars organized on campus	8,13
Observing the teaching practices of colleagues	7,93
Reading scientific publications on effective teaching methods	7,73
Collaborating with colleagues in peer groups about teaching	7,67
Experimentation (trial and error)	7,57
Finding ideas from the Internet	7,26
Attending local & international scientific conferences	7,18
Participation in workshops and/or seminars outside University	7,05
Soliciting information from professional organizations	6,55

Chart 2: *Features deemed important when working in small groups*

	Percentages
Digital tools that will foster collaboration during meetings	29,9%
Online communication for meetings	29,9%
Digital tools that can help solve problems that we encounter in our teachings	27,5%
Online communication between 2 meetings	12,7%
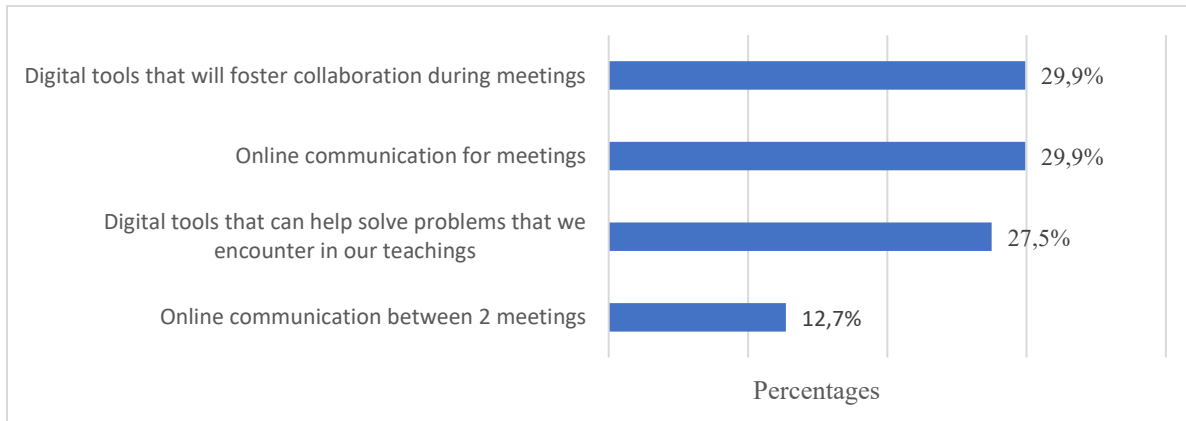
Note: respondents were able to choose more than one option.