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MEMBERSHIP CHARACTERISTICS AND ENGAGEMENT IN AN INTERNATIONAL COMMUNITY OF PRACTICE FOR TECHNOPEDAGOGY: A QUANTITATIVE ANALYSIS

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Abstract

This article examines the individual characteristics and motivations of members within a Community of Practice (CoP) that brings together professionals from diverse educational and geographical sectors. The CoP focuses on knowledge exchange and the development of technopedagogical skills. The study was conducted with 134 members from nine countries, featuring a predominance of female participants and substantial representation from Belgium.

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The research is framed within a quantitative methodological approach. It aims to understand the demographic and professional profiles of members as well as their motivations for joining the community.

The findings reveal that CoP members are predominantly experienced professionals with an average age of 42 and high educational attainment, with the majority holding a university degree. Most members are actively engaged in their careers, occupying positions across various educational sectors, from primary education to continuing education. Finally, the motivations for joining the CoP are primarily related to the desire to acquire new technopedagogical skills and to interact with other professionals from diverse backgrounds. The study also highlights four main predictors of willingness to participate actively in CoP: availability of time, intention to collaborate, interest in an original and innovative learning environment, and desire to learn techno-pedagogical content.

Keywords

Community of Practice, Technopedagogy, Membership Characteristics, Engagement

1. Introduction

The concept of Communities of Practice (CoP), introduced by Wenger (1998) and traditionally rooted in face-to-face interactions, is now also applied to describe online groupings. This offers new opportunities for continuing education, characterized by the sharing and analysis of practices among peers (Fédération Wallonie-Bruxelles, 2018). Furthermore, CoPs serve as a source of learning through discussions, information exchanges, and problem-solving (Nezet, 2015), which promotes the advancement of pedagogical methods and practices (*ibid*.).

This article presents the initial findings of a doctoral research project aimed at analyzing the conditions for entry, participation, and learning (Charlier & Daele, 2006) within Communities of Practice, as well as the interactions among these different conditions. It focuses specifically on the theme of entry conditions and seeks to analyze the individual characteristics and motivations for joining among members of an online Community of Practice, which brings together

professionals from various educational and geographical backgrounds. This approach aims to enhance the understanding of both the characteristics and motivations of education professionals who express an interest in joining an online CoP. In the long term, the research will continue by examining how these professionals evolve within the community, how they participate, and how they assess their interactions and learning experiences.

More specifically, this research focuses on the analysis of a sample of 134 members enrolled in a Community of Practice dedicated to education professionals. The objective is to examine who these individuals are by exploring several dimensions: their individual characteristics (such as gender, age, educational level, profession, etc.), their participation in other Communities of Practice, their motives for engaging with the CoP, as well as their willingness to participate actively, share their pedagogical practices, and collaborate with peers. In particular, this study seeks to identify variables that can predict members' willingness to actively participate in a Community of Practice, with the aim of gaining a better understanding of the factors that influence their engagement.

2. Theoretical foundations

2.1 Online communities of practice

The concept of the "Community of Practice" (CoP) emerged in the 1990s, based on the research of Wenger (1998). He drew on the methods of knowledge production and sharing found within scientific communities to transpose these principles into the professional realm. The objective was to facilitate and invigorate the processes of knowledge development and transmission (Bedoya González et al., 2018).

In our previous work (Housni et al., In press), a literature review led us to define CoPs as "a group of individuals, with diverse personal or professional backgrounds, who share a common interest in a specific domain, whether or not it is related to a profession. These individuals meet regularly and consistently, exchanging and sharing their daily experiences as well as useful resources, while exploring new perspectives to deepen their knowledge and skills in the field, with the aim of enhancing their practice".

Although the concept of CoP initially emerged to describe in-person groupings, it is now also used to describe online gatherings. Indeed, over the past two decades, the development of online communities has been facilitated by the accessibility provided by digital tools. In the field of educational sciences, various authors have examined the functioning and inherent processes involved in a member's journey within a community.

Charlier and Daele (2006), in particular, highlighted that members' journeys within virtual communities are influenced by three major stages: conditions of entry, participation, and learning. Among these, entry into the community may play a crucial role, as it could determine how members initiate and structure their engagement. It therefore seems relevant to examine entry conditions in greater detail to explore what might motivate or hinder individuals from joining a CoP.

2.2 Entry conditions

A literature review conducted by Lee-Kelley and Turner (2017) highlights the complexity of identifying the motivations that drive practitioners to join a Community of Practice. According to Charlier and Daele (2006), a teacher —or an education professional— may feel compelled to engage in a virtual community following observations of their practice in the field. These observations can take various forms, whether didactic, methodological, disciplinary, or administrative. They may stem from a desire to innovate within a specific pedagogical domain, the need to adapt practices to a new reform, or even a pursuit of a new professional identity. In all cases, this awareness prompts a reflective process for the professional, leading them to formalize their thoughts and thus encouraging them to join a virtual community.

Several factors can influence the conditions of entry into these communities: the individual characteristics of the participants, whether personal or professional; intrinsic or extrinsic motivations; and other elements that may affect enrollment, such as professional habits related to updating their practices, access to training opportunities, institutional policies, or even an attraction to pedagogical innovations such as educational technology.

2.2.1 individual characteristics of the participants

Few quantitative studies on Communities of Practice provide information about the characteristics of their members. According to Charlier and Daele (2006), several individual characteristics can be relevant variables to investigate within the context of research, including the personal attributes of teachers and their career stage.

In 2005, Tremblay examined the characteristics of 198 members from 9 institutional Communities of Practice. The analyzed characteristics include, among others: the highest degree obtained, age group, and gender. The analysis reveals a majority of respondents with a high level of education, among which 80% hold a degree from higher education at the bachelor's, master's, or doctoral level. Furthermore, the author highlights a very low percentage (0.6%) of members with no diploma. This distribution can be justified by the nature of the contexts in which CoPs operate: large organizations, often in the public and parapublic sectors. Indeed, these organizations tend to associate the idea of knowledge development with highly qualified positions. Regarding the "age group" variable, a majority of members are aged between 35 and 49 years, while 23% are between 25 and 34 years, 2% are under 24 years, and 15% are between 50 and 59 years. The author (ibid.) notes that these communities are predominantly composed of women (60.7%). Two conclusions emerge from this study. The first indicates that the profiles within the Communities of Practice are relatively homogeneous, except for the age variable. The second conclusion is that age is a crucial variable in the perceptions and attitudes of community members.

Wilson et al. (2020), in their study investigating a Community of Practice composed of higher education teachers, confirm the hypothesis that seniority within the organization plays a role in joining an institutional CoP. According to the authors, novice staff were significantly more likely to participate in the CoP than their experienced counterparts.

2.2.2 Reasons for entering communities of practice

The reasons for entering a community can be varied. In the context of our research, we rely on the motives outlined by Carré (2001, cited by Boumazguida, 2020). The author highlights ten motives classified according to two dimensions: intrinsic motivations and extrinsic motivations (Table 1).

Table 1. *Reasons for entering training according to carré (2001, cited by Boumazguida, 2020)*

Motivation	Reason	Definition: registration is explained by ...
Intrinsic	epistemic	curiosity and personal pleasure in discovering and acquiring knowledge for its own sake.
	Socio-affective	social interaction, where exchange and contact with others are essential.
	Hedonic	the pleasure of the practical conditions and environment, such as ambience or comfort, rather than the learning content itself.
Extrinsic	Professional operative	the acquisition of skills that are essential for adapting to professional developments, perfecting practices and improving performance in the workplace.
	Personal operative	the acquisition of skills useful for carrying out specific activities in non-professional life, such as leisure, family or community responsibilities, with a concrete and targeted aim.
	Derivative	the desire to avoid situations or activities perceived as unpleasant, by seeking out options that offer social interaction or a pleasant setting.
	Identitarian	the acquisition of skills or symbolic recognition to transform or preserve identity, particularly in terms of professional, cultural or social identification, linked to status, title or social self-image.
	Vocational	acquisition of skills or recognition to obtain, maintain or progress in employment, with a focus on career development, career management or job search.

	Prescribed	external pressures, whether implicit, such as social or professional expectations, or explicit, such as legal obligations or hierarchical injunctions.

2.3 Conclusion

This research is distinctive in that it establishes a specific framework for the analysis of virtual communities of practice, with a particular focus on digital teaching and learning practices. Unlike previous work, which has focused mainly on communities of practice in professional environments and often centred on face-to-face interactions, this research explores a field that has yet to be fully explored.

The existing literature shows that the small number of participants in these communities of practice tends to favour qualitative studies, which limits the ability to obtain robust quantitative data. In response to this shortcoming, our study proposes to adopt an exploratory approach, aimed at identifying not only the characteristics of individuals likely to become involved in a community of practice, but also the reasons that prompt them to join.

3. Méthodology

3.1 Research context: the community of practice

The Community of Practice (CoP) is defined as a grouping of various players from the education and training sector. Its members include teachers at all levels, techno-pedagogical advisors, adult educators, digital referents, inspectors, students in education sciences, as well as directors, pedagogical advisors and facilitators.

The creation of this community is the result of the Interreg Teach Transition project, which introduced a new university pathway, ‘NUMEFA’, which already exists in Belgium and France.

The CoP's mission is to bring together these educators in a forum for exchange and collaboration. Members are encouraged to share their knowledge, discuss, co-write and co-create around various themes centred on techno-pedagogical practices.

Each year, three CoP cycles are organised, each structured around a theme predefined by the organising team. Each cycle comprises three meetings: an educational sharing session and two co-construction workshops aimed at producing a deliverable on the theme addressed. These

meetings are organised interactively via the Gather.Town platform, which can bring together up to a hundred participants to work together or in smaller groups. These CoP cycles are organised by a team made up of members of the community and participants in the NUMEFA programme.

3.2 Sample

The sample of this study is composed of 134 subjects enrolled in the community of practice. In accordance with the work of Boumazguida (2020), we distinguish two types of profile among CoP members. The so-called 'spontaneous' members join the CoP entirely voluntarily and freely. Enrolled members are integrated into the CoP as part of a degree-granting academic process.

3.3 Research questions

In this article, we seek to answer two complementary research questions aimed at better understanding who the members of the CoP are and their motivations for taking part.

Q1 : What are the entry conditions of future CoP members, in terms of individual profiles, participation habits, reasons for joining and willingness to become actively involved?

This first research question is divided into four sub-questions:

- **Q1.1 : What are the individual characteristics of future CoP members?**

This sub-question aims to identify and analyse the socio-demographic profiles of potential members of the community of practice. More specifically, it looks at variables such as geographical origin, gender, age, level of training, professional occupation, seniority, level of teaching and the types of content they teach. The aim is to draw up an accurate portrait of the diversity of the members, which could influence their motivation to enrol.

- **Q1.2 : What are the Members' Habits Regarding with Communities of Practice?**

This sub-question explores members' previous practices in terms of integration into communities of practice. It seeks to investigate how registered members discovered the CoP, as well as their experience of participation in other similar communities, in order to better understand the dynamics of member participation in several networks of practice.

- **Q1.3 : Why do members join the community?**

This sub-question looks at the reasons motivating members to join the community of practice. Based on Carré's typology (2001, cited by Boumazguida, 2020), it explores different types of motivation, whether intrinsic or extrinsic. The aim is to understand the reasons that drive members to join the CoP.

- **Q1.4 : What willingness do CoP members have to participate actively and discuss their teaching practices?**

This sub-question examines members' availability, their intention to get involved, and their habits and opportunities for exchanging teaching practices with their peers. It analyses their intentions at the time of joining the CoP, based on statements about the time they are prepared to invest and their openness to collaboration.

Q2 : Do entry conditions predict willingness to participate in the community of practice?

This question seeks to establish the extent to which the various factors arising from individual characteristics, participation in other communities, reasons for joining, and willingness to exchange are able to predict the willingness to participate actively in the community of practice. The aim is to determine the most influential variables and to identify the member profiles most likely to become involved in the community.

3.4. Instrumentation

Enrollment in the Community of Practice (CoP) occurs through the completion of an online questionnaire. This questionnaire outlines the main themes addressed within the CoP, namely the enhancement of its members' technopedagogical practices, the objectives, and the overall functioning of the CoP. It also includes information regarding compliance with the General Data Protection Regulation (GDPR).

The online questionnaire is structured into three distinct sections. The first section is dedicated to the socio-demographic data of the enrolled members, including variables such as country, gender, age, level of education, and socio-professional sector (job occupation, seniority, type of audience, and content taught). The second section of the form focuses on the motivations

for joining the CoP. These motivations are categorized according to Carré's typology (2001, cited by Boumazguida, 2020). Furthermore, this section includes items related to members' availability, their intention to engage, as well as their habits and opportunities for exchanging pedagogical practices with their peers. Indeed, as noted by Charlier and Daele (2006), these factors could also explain the entry conditions of a member into an online community. Finally, a third section also collects information about members' habits regarding their participation in Communities of Practice.

This questionnaire is available online and is open year-round, allowing interested individuals to join the CoP at any time. For the purposes of this study, the analyzed data comes from responses collected between September 1, 2023, and June 30, 2024.

4. Analysis and Discussion of the Results

This section is structured around the responses to the two previously defined research questions. The analysis is based on the variables defined in the methodology and revolves around the quantitative results obtained from the questionnaire.

4.1 What are the entry conditions of future CoP members, in terms of individual profiles, participation habits, reasons for joining and willingness to become actively involved?

4.1.1 What are the individual characteristics of future CoP members?

a. Geographical origin

The sample considered consists of 134 subjects from 9 countries around the world. The distribution of subjects by country shows a strong predominance of Belgium, with 106 members, accounting for 79.1% of the total (n=106). The second largest group is from France (n=9, or 6.7%). Finally, 14.2% of the members (n=19) are from other countries, namely Cameroon, Ivory Coast, Haiti, Luxembourg, Morocco, Quebec, and Tunisia (Table 2).

Table 2. *Distribution of COP members by geographical origin*

Geographical origin	Frequency	Percentage (%)	Cumulative Percentage (%)
Belgium	106	79,1	79,1
France	9	6,7	85,8
Other	19	14,2	100
Total	**134**	**100**	

The analysis of geographical origins shows a significant predominance of Belgian members, who account for nearly 80% of the community. This strong representation may be linked to the origin of the Interreg Teach Transition project and the NUMEFA certificate, primarily developed and promoted in Belgium, where the Community of Practice enjoys greater visibility. French members, on the other hand, represent 6.7% of the sample. This figure, while less significant than that of Belgium, remains consistent with the influence of the NUMEFA project, which is also valued in France. Finally, the "Other" category, which includes subjects from various regions such as Cameroon, Haiti, Quebec, and other countries, constitutes 14.2% of the sample. This distribution demonstrates an international openness of the CoP, although these members remain a minority.

b. Gender

Table 3 indicates that the registration form was completed by 86 women (61.2%) and 48 men (35.8%).

Table 3. *Distribution of COP members by gender*

Gender	Frequency	Percentage (%)	Cumulative Percentage (%)
Women	86	64,2	64,2
Men	48	35,8	100
Total	**134**	**100**	

The data analysis shows a higher representation of women within the community, with 61.2% of members identifying as female, compared to 35.8% identifying as male. This distribution can be related to the composition of educational professions, where women often constitute the majority. In 2023, the teaching staff across all levels in Francophone Belgium consisted of 73%

women (Fédération Wallonie-Bruxelles, n.d.a). This trend also supports the findings of Tremblay (2005), who highlighted that Communities of Practice are predominantly composed of women.

c. Age

The age of the community members ranges from 24 to 65 years, with an average age of 42.5 years (standard deviation = 9.46). One member did not provide their age, which brings the total number of respondents to 133 (Table 4).

Table 4. *Descriptive statistics on the age of members*

	μ	σ	Min	Max
Age (N=133)	42,5	9,46	24	65

The average age of CoP members is 42.5 years, which reflects a profile of relatively experienced users who are likely well-established in their professional careers. This average is slightly lower than that observed in data from Francophone Belgium, where the average age of teaching staff was 47.5 years in 2023, with an age range from 20 to 69 years (Fédération Wallonie-Bruxelles, n.d.b). These data highlight the heterogeneity of the sample regarding age, which supports Tremblay's (2005) observations on the diversity of age profiles within professional Communities of Practice.

d. Education

Table 5 shows the distribution of members according to the highest degree obtained.

Table 5. *Distribution of COP members by highest degree obtained*

Highest degree obtained	Frequency	Percentage (%)	Cumulative Percentage (%)
Primary Education Diploma	1	0,7	0,7
High school diploma	6	4,5	5,2
Short non-university higher education diploma	40	29,9	35,1
Short university-level higher education diploma	5	3,7	38,8
Long non-university higher education diploma	7	5,2	44

Long university-level higher education diploma	70	52,2	96,3
PhD	5	3,7	100
Total	**134**	**100**	

Data analysis reveals that 52.2% of members hold a long university-level higher education diploma. This level of qualification primarily corresponds to upper secondary school teachers (students aged 15 to 18), higher education teachers (students aged 18 and above), as well as adult educators. Additionally, 29.9% of members possess a short non-university higher education diploma, which mainly corresponds to primary school teachers (students up to 12 years old) and lower secondary school teachers (students aged 12 to 15). This proportion indicates that the CoP includes a significant number of professionals working at these educational levels, bringing valuable insights from the early stages of education. The remainder of the sample is represented to a lesser extent by individuals with a primary education diploma (0.7%), a high school diploma (4.5%), a short university-level higher education diploma (3.7%), a long non-university higher education diploma (5.2%), or a PhD (3.7%). This composition aligns with Tremblay's (2005) analysis, which highlighted a majority of respondents with a high level of education.

e. Professional identity

For this subsection, we examined several aspects: the professional occupation, their tenure in the profession, the level of education in which they are involved, and the subjects they teach.

Regarding professional occupation, 95.5% of the members of the Community of Practice are currently employed, while 4.5% are not in active employment (Table 6).

Table 6. *Distribution of COP members by professional occupation*

Professional occupation	Frequency	Percentage (%)	Cumulative Percentage (%)
Yes	128	95,5	95,5
No	6	4,5	100
Total	**134**	**100**	

Professional tenure was reported by all respondents, with the exception of one member (Table 7). It ranges from 0 to 43 years, with an average of 16.94 years (standard deviation = 9.40 years). This finding contrasts with the results of Wilson et al. (2020), who note that tenure in the organization plays a significant role in joining a CoP.

Table 7. *Descriptive statistics on members' professional tenure*

	μ	σ	Min.	Max
Professional tenure (N=133)	16,94	9,4	0	43

These data indicate that the vast majority of CoP members are active professionals, with an average tenure of 16.94 years. This suggests, on one hand, that the community consists of both novice teachers and experienced practitioners with up to 43 years of career experience, and on the other hand, underscores the relevance of the community for professionals in position who seek to enrich or enhance their technopedagogical practices in their daily activities. The fact that 4.5% of members are currently unemployed could indicate situations of ongoing initial training, professional transitions, or periods of job searching, during which joining the CoP would allow them to establish or maintain connections with the educational field and acquire new skills.

The distribution of CoP members according to the level of education in which they are involved shows a diversity of profiles from various educational and training sectors (Table 8).

Table 8. *Distribution of COP members by profession*

Profession	Frequency	Percentage (%)	Cumulative Percentage (%)
Preschool Education	5	3,7	3,7
Primary Education	21	15,7	19,4
Lower Secondary Education	17	12,7	32,1
Higher Secondary Education	12	9	41
Social promotion Education	9	6,7	47,8
Non-university higher education	7	5,2	53
University higher education	10	7,5	60,4
Adult Continuing Education	27	20,1	80,6
Extracurricular Activities	4	3	83,6
Other	22	16,4	100
Total	**134**	**100**	

20.1% of members work in adult continuing education, making it the most represented category. Members from primary education make up 15.7% of the community, followed by those from lower secondary education (12.7%) and upper secondary education (9.0%). Social promotion education accounts for 6.7% of the members, and 7.5% are active in university-level higher education, while 5.2% come from non-university higher education. Members from preschool education represent 3.7% of respondents, and 3.0% facilitate activities for youth in an extracurricular context. Finally, 16.4% of members fall into the “other” category, which includes specific roles not previously mentioned, such as technopedagogical project managers, directors, training managers, educational advisors, and more.

The distribution of content taught by CoP members falls into three main categories (Table 9). 47% of members teach disciplinary content, which includes specific academic or school subjects (e.g., mathematics, languages, sciences, educational sciences). 38.8% of members are

involved in teaching technopedagogy, which encompasses the integration of digital tools for educational purposes and the development of digital skills. 10.4% of members focus on digital skills development. A small portion, 3.7% (equivalent to 5 members), did not specify their teaching content. This could be due to the fact that some CoP members are not directly involved in teaching or training roles, such as directors.

Table 9. *Distribution of COP members by teaching contents*

Gender	Frequency	Percentage (%)	Cumulative Percentage (%)
Disciplinary	63	48,8	48,8
Technopedagogy	52	40,3	89,1
Digital skills	14	10,9	100
Total	**129**	**100**	

4.1.2 What are the Members' Habits Regarding with Communities of Practice?

a. Discovery of the Community of Practice

Members of the Community of Practice (CoP) have discovered the community through various sources (Table 10). Specifically, 34.3% of members were introduced through sponsorship by another member. Additionally, 31.3% of members found the CoP through their enrollment in the NUMEFA university program. A further 26.1% discovered the CoP via social media platforms. A smaller proportion, 3.7%, learned about the CoP through a blog post on the Teach Transition website (the Interreg project that initiated this community), while 4.5% indicated other means of discovery, such as participating in a webinar, receiving an email from their professional institution, or serving as an expert for the CoP.

Table 10. *Distribution of COP members by way of discovering the community*

Way of discovering the community	Frequency	Percentage (%)	Cumulative Percentage (%)
Sponsorship by another member	46	34,3	34,3
Blog post on the Teach Transition website	5	3,7	38,1
Social media platforms	35	26,1	64,2
NUMEFA university program	42	31,3	95,5
Other	6	4,5	100
Total	**134**	**100**	

These results indicate that the dynamics of sponsorship play a central role in the development of the community, with 34.3% of members being integrated through the recommendation of another member. The NUMEFA program, which accounts for 31.3% of discoveries, also serves as a significant channel for participation in the CoP. This figure confirms that the institutional embedding of the CoP within university programs attracts a considerable proportion of members enrolled as part of their academic training. Finally, social media, accounting for 26.1%, represents another major avenue of discovery, underscoring its importance in enhancing the community's visibility.

b. Participation in other communities of practice

Table 11 indicates that the majority of CoP members, specifically 76.9%, do not participate in other communities of practice, whereas 23.1% of them are engaged in at least one additional CoP.

Table 11. *Distribution of COP members by involvement in other communities*

Involvement in other communities	Frequency	Percentage (%)	Cumulative Percentage (%)
Yes	31	23,10	23,1
No	103	76,9	100
Total	**134**	**100**	

These data indicate that nearly a quarter of CoP members (23.1%) also participate in other communities of practice. This may suggest that these education professionals are already familiar with such frameworks and utilize these networks to enhance their practice. It is possible that these members seek complementary perspectives and resources by engaging in multiple communities. Conversely, the majority of members (76.9%) appear to focus exclusively on this CoP, which may indicate that they find sufficient responses to their professional development needs within this particular community.

4.1.3 Why do members join the community?

The results indicate that members report a variety of motivations, both intrinsic and extrinsic, for their engagement in the community (Table 12).

Table 12. *Descriptive statistics on the reasons for CoP involvement*

Motivation	Reason	μ	σ	Min.	Max
Intrinsic	epistemic	4,57	0,84	1	5
	Socio-affective	4,27	0,97	1	5
	Hedonic	4,26	0,97	1	5
Extrinsic	Professional operative	4,35	0,99	1	5
	Personal operative	3,66	1,25	1	5
	Derivative	3,22	1,37	1	5

	Identitarian	3,15	1,35	1	5
	Vocational	3,04	1,53	1	5
	Prescribed	1,69	1,28	1	5

Reasons related to intrinsic motivation appear to be the most influential in the participants' intention to engage. In particular, the epistemic reason (learning new content related to technopedagogy) achieves a high average of 4.57 ($\sigma = 0.84$), indicating that the desire to acquire new knowledge is one of the primary reasons for engagement. Similarly, the socio-affective reason (interacting with individuals from diverse contexts) also receives a high average ($\mu = 4.27$; $\sigma = 0.97$), suggesting that members place a strong value on exchanges with peers from various backgrounds. Finally, the hedonic reason (learning in an innovative and original environment) shows an average of 4.26 ($\sigma = 0.97$), indicating that the enjoyment of operating within a novel and stimulating setting is also a significant driving force.

Regarding the reasons associated with extrinsic motivation, the results are more varied. The professional operational reason (developing skills to be more effective in one's current job) is particularly significant for the members, with an average of 4.35 ($\sigma = 0.99$), indicating a marked concern for improving professional competencies. In contrast, other extrinsic motivations, such as identity recognition (being acknowledged by peers) and the vocational reason (developing skills to change jobs), are of lower priority, with respective averages of 3.15 ($\sigma = 1.35$) and 3.04 ($\sigma = 1.53$). The prescriptive reason (upon instruction or recommendation from a superior) receives a low average of 1.69 ($\sigma = 1.28$), suggesting that for the majority of members, engagement in the CoP is not perceived as an institutional obligation. However, this score may also be explained by the fact that 28 out of 134 members are enrolled in the NUMEFA certificate program, where participation in the CoP is a formal requirement. For these enrolled members, engagement in the CoP is partially constrained, which does not seem to reflect the experience of the majority of participants. Lastly, the personal operational dimension (developing transferable skills for personal life) presents an intermediate average of 3.66 ($\sigma = 1.25$), indicating that some members believe their engagement in the CoP could also yield benefits in their lives beyond the professional context.

Finally, these results suggest that the engagement of members in the CoP is primarily driven by intrinsic factors. There is a notable interest in learning, exchange, and personal development within a stimulating environment. While extrinsic motivations related to professional objectives are also present, other dimensions of external motivation appear to play a minor role in the engagement of enrolled members.

4.1.4 What willingness do CoP members have to participate actively and discuss their teaching practices?

The following Table 13 presents the responses of members regarding their availability, willingness to collaborate, and their habits of exchanging ideas about pedagogical practices within the community of practice.

Table 13. *Descriptive statistics on active participation and exchanges of practice*

	μ	σ	Min	Max
I have time to participate in the activities of the community of practice	3,06	0,96	1	5
I plan to take the necessary time to participate in the activities of the community of practice.	3,59	0,96	1	5
I plan to collaborate with my peers within the community of practice.	3,84	1,02	1	5
I regularly exchange ideas with my peers about each other's teaching practices.	3,63	1,27	1	5
I have the opportunity in my work environment to discuss my teaching practices.	3,72	1,17	1	5
I regularly discuss my teaching practices.	3,66	1,18	1	5
I can articulate my viewpoint regarding my teaching practices.	3,95	0,99	1	5

The data show that members of the Community of Practice (CoP) report a moderate availability to participate in community activities ($\mu = 3.06$; $\sigma = 0.96$). However, when it comes to their intention to allocate the necessary time for participating in CoP activities, members appear to

be more proactive ($\mu = 3.59$; $\sigma = 0.96$). These results suggest that not all members feel they have enough time available, although their intention to dedicate time to CoP activities is higher. CoP members also demonstrate a strong willingness to collaborate with their peers ($\mu = 3.84$; $\sigma = 1.02$), indicating a readiness to engage in collaborative exchanges.

Regarding the habit of exchanging pedagogical practices, the statement "I regularly exchange ideas with my peers about each other's teaching practices" yields an average score of 3.63 ($\sigma = 1.27$), indicating that, overall, members engage in regular exchange practices, although the higher standard deviation suggests notable differences among them. These results are further supported by the item "I have the opportunity in my work environment to discuss my teaching practices" which received an average score of 3.72 ($\sigma = 1.17$). This suggests that most members feel they have sufficient opportunities within their professional environment to discuss their pedagogical practices.

Members also report having a habit of discussing their pedagogical practices, with an average score of 3.66 ($\sigma = 1.18$) for this statement. This indicates a certain familiarity with exchanges regarding pedagogical practices; however, the standard deviation of 1.18 highlights a dispersion in responses. Finally, the statement related to the ability to argue one's viewpoint scores an average of 3.95 ($\sigma = 0.99$), the highest among all items, demonstrating members' confidence in their ability to defend and explain their pedagogical practices.

4.2 Do entry conditions predict willingness to participate in the community of practice?

To gain a deeper insight into the factors that may predict the intention to participate in a community of practice, we conducted a multiple regression analysis incorporating the various variables investigated in the entry questionnaire for the CoP, which correspond to research questions 1 to 4. These variables served as predictors to determine which ones could explain the intention to participate in a community of practice.

Regarding the type of procedure, we opted to apply the stepwise removal method, known as "Backward" in version 29 of the SPSS software, to highlight the model that provides the highest degree of prediction by successively eliminating the least relevant variables. To appropriately

utilize this method, it is essential to maintain a limited number of relevant and significant predictors while also considering the degree of prediction offered by the adjusted R^2 value. Lastly, we considered the tolerance index, which allows us to identify any potential issues of multicollinearity in the proposed model. According to Stafford & Bodson (2006), it is generally accepted that a tolerance value below .20 may lead to problems in estimating the coefficients associated with variables affected by multicollinearity.

Table 14 presents the model derived from the multiple regression analysis. The predicted variable is the intention to participate in the activities of the community of practice.

Table 14. *Multiple regression analysis: Explanatory model for intention to participate in the CoP*

R	*.768*	*Tolerance*
R_2	*.59 (59%)*	
P-value	*.001*	
Predictor n° 1	*Having time to participate in activities*	*.74*
Bêta	*.43 (p < .001)*	
Predictor n° 2	*Having the intention to collaborate with peers*	*.791*
Bêta	*.479 (p < .001)*	
Predictor n° 3	*Having the opportunity to learn in an original and innovative environment*	*.489*
Bêta	*-.145 (p = .077)*	
Predictor n° 4	*Learning new content related to technopedagogy*	*.522*
Bêta	*.160 (p = .043)*	

Regarding the explanatory variables, the model indicates that four predictors are significant, together explaining 59% of the variance in the intention to participate ($R^2 = .59$; $p < .001$). The multiple correlation coefficient (R) of .768 demonstrates a strong relationship between the set of predictors and the dependent variable, suggesting a robust fit of the model.

The tolerance analyses reveal satisfactory values for each predictor, indicating low multicollinearity. Having time to participate in activities presents a Beta of .43 ($p < .001$), making this predictor the most influential on the intention to participate. The tolerance of .74 is relatively

high, demonstrating that this variable does not share excessive variance with the other predictors. Members who have more free time are more likely to actively invest themselves, making them more inclined to engage in the activities of the community.

"Having the intention to collaborate with peers" is also an important factor, with a Beta of .479 ($p < .001$) and a tolerance of .791. This high tolerance reinforces the idea that this factor significantly contributes to predicting the intention to participate, without being redundant with other variables. Potential members who have a strong intention to collaborate may perceive the community as an opportunity for mutual exchange and learning, which would enhance their motivation to participate.

The predictor "having the opportunity to learn in an original and innovative environment" (hedonic motive) shows a slightly negative relationship (Beta = -.145, $p = .077$), approaching significance. Its tolerance of .489 remains acceptable but may suggest a slight correlation with other variables. This relationship initially appears difficult to explain, as it seems counterintuitive. We might have anticipated a positive influence of this predictor on the intention to engage, given the appeal of an environment perceived as innovative. To better understand this unexpected link, it would be relevant to explore the indirect relationships between this predictive variable and the intention to participate, particularly through mediation analysis (Klein et al., 2008). A mediation analysis would examine whether this negative relationship could be influenced by one or more intermediary variables, potentially shedding light on this negative association. Furthermore, semi-structured interviews with participants from the sample could provide complementary qualitative insights to refine our understanding of this dynamic. By integrating these approaches, it would be possible to better capture the nuances of this relationship and thereby enhance our statistical analysis by contextualizing the link between the predictor and the dependent variable.

Finally, learning new content related to technopedagogy (epistemic motive) shows a positive contribution with a Beta of .160 ($p = .043$) and a tolerance of .522. This tolerance value also indicates low collinearity, and the significance of this predictor suggests that it uniquely contributes to the intention to participate in the community. This result implies that individuals

motivated by the desire to acquire new technopedagogical knowledge are likely to perceive an interest in active involvement in the community.

According to Tremblay (2005), age is an essential variable in the perceptions and attitudes of community members, influencing their motivation to engage. However, in our study, this variable did not show a significant relationship with the intention to participate in the CoP.

5. Conclusions, limitations and perspectives

This study aims to analyze the entry conditions of members into an online Community of Practice (CoP) focused on technopedagogical practices. By exploring the individual characteristics, motivations, and willingness of members to actively engage, this research seeks to provide an in-depth understanding of the profiles of participants and the factors that influence their commitment.

The analysis of the literature has highlighted a limited number of quantitative studies on the profiles of members within Communities of Practice, particularly online. In this regard, this study stands out due to its quantitative approach, which enables the creation of a profile of members in a CoP dedicated to technological education. Our work thus makes an original contribution by expanding the understanding of membership profiles in these communities, going beyond the often-preferred qualitative approaches.

Our main objective is to understand who the members are that join this Community of Practice (CoP). To address this goal, two research questions have been formulated. These questions focus on the individual characteristics of the members, their participation habits in other communities, their motivations for joining, their willingness to participate actively, and the predictors of their engagement. A structured questionnaire was developed to gather the necessary data for analyzing these aspects.

The main observations indicate that the members of this CoP are predominantly experienced, hold a university degree, and are engaged in education. The majority express intrinsic motivations for joining, particularly the desire to acquire new knowledge and engage with peers. Social networks, sponsorship, and the NUMEFA university program emerge as major channels for discovering the CoP. Furthermore, members demonstrate a willingness to actively participate,

although variations can be observed regarding their availability and opportunities to discuss pedagogical practices in their professional routines.

Moreover, the linear regression analysis identified four main predictors of the willingness to actively participate in the CoP: time availability, intention to collaborate, interest in an original and innovative learning environment, and the desire to learn about technopedagogical content. Contrary to previous research, the results indicate that it is not the individual characteristics, but rather motivational and contextual factors that significantly predict the willingness to participate.

Certainly, this research is not without limitations. First, the sample is predominantly composed of Belgian members, which may limit the generalization of the conclusions to other cultural contexts. Second, the data rely on self-reported statements, which may be influenced by social desirability bias, particularly for prospective members who are also enrolled in the NUMEFA university program. Finally, the study was conducted over a single period, limiting our ability to assess the evolution of members' motivations and commitments in the long term.

As part of our ongoing research, we will explore how these members participate and what knowledge or skills they gain from their engagement in the community, particularly through longitudinal studies. This stepwise approach aims to provide a comprehensive view of the members' journey, from their entry into the CoP to their learning and evolution within it. Expanding the sample to include more diverse or international contexts could also enrich our understanding of engagement dynamics in online CoPs. These perspectives could contribute to refining the strategies for the creation and facilitation of CoPs, particularly in the field of technopedagogy.

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