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Résumé de l'article

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Motivation Factors of Participation in Virtual Communities of Practice: the Case of the "Educatefor.life" Community

Factores motivacionales para la participación en comunidades virtuales de práctica: el caso de la comunidad "Educatefor.life"

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ABSTRACT

This article explores the drivers of participation in virtual communities of practice based on Deci and Ryan's self-determination theory (SDT). Our research is based on the study of a virtual international community. The data was collected through 14 semi-structured interviews, direct observation and analysis of documentation. The main findings confirm the importance of competence, autonomy, and relatedness as motivation factors, as in line with SDT, whereas the main contribution is the identification of energizing leader, exclusive resources, and transformative purpose as three additional motivation factors. We have also, differentiated the factors of motivation according to the level of participation in community life (core, active and periphery).

Keywords: Virtual community of practice, Motivation, Participation, Self-Determination Theory

Résumé

Cet article étudie les facteurs de motivation à la participation aux communautés de pratique virtuelles en utilisant la théorie de l'autodétermination de Deci et Ryan (SDT). Notre recherche est fondée sur l'étude d'une communauté internationale virtuelle. Les données ont été recueillies au moyen de 14 entretiens semi-directifs, d'observations et d'analyse de documentation. Les résultats confirment l'importance de la compétence, de l'autonomie et de la relation comme facteurs de motivation, conformément à la SDT. L'article identifie également le leadership inspirant, le contenu exclusif et la mission de transformation comme des facteurs de motivation supplémentaires. Les principales sources de motivation des membres varient en fonction de leur niveau de participation (noyaux dur, actif et périphérie) dans la communauté.

Mots-Clés : Communautés de pratique virtuelles, Motivation, Participation, Théorie de l'autodétermination

Resumen

Este artículo explora los impulsores de la participación en las comunidades de práctica virtuales basándose en la teoría de la autodeterminación de Deci y Ryan (SDT). Nuestra investigación se basa en el estudio de una comunidad virtual internacional. Los datos se recogieron mediante 14 entrevistas semiestructuradas, observación y revisión bibliográfica. Los resultados confirman la importancia de la competencia, la autonomía y las relaciones como factores motivadores, alineados con la SDT. El artículo también identifica el liderazgo inspirador, el contenido exclusivo y la misión de transformación como impulsores de motivación adicionales. Las fuentes de motivación de los miembros varían según su nivel de participación (núcleo duro, activo y periferia) en la comunidad.

Palabras Clave: Comunidad virtual de práctica, Motivación, Participación, Teoría de la Autodeterminación

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Over the last three decades, Internet has allowed people to connect, communicate, and share information on topics of interest (Carpentier, 2021). During lockdown, individuals mobilized online communities to support and entertain themselves (Masson & Parmentier, 2021). In particular, we see an increase in healthcare and education domains where virtual communities enhance knowledge, improve practice, and contribute to overcoming isolation (Sibbald *et al.*, 2022).

Virtual communities of practice (VCoP) are a specific kind of community: members interact using an online system, while they may not know each other personally (De Melo Bezerra & Hirata, 2011). In this context, sustaining the commitment of members is essential for the momentum and vitality of the community: a community without commitment will erodes progressively (Guillaume *et al.,* 2022).

The participation is the visible sign of the commitment. According to Preece (2001), the participation is a measure of the success of virtual communities. For Wenger (1998), the participation refers to a process of taking part and to the relations with others that affect this process. For our part, we consider the participation as an aggregate reflecting the performance of all other criteria (trust, attitude, perceived ease of use etc.).

The effectiveness of virtual communities relies on understanding the factors of motivation of members to share their knowledge and a way to support them (Ardichvili *et al.,* 2003; Wasko & Faraj, 2000, 2005). Several authors investigated this topic identifying social and personal triggers (Chiu *et al.* 2006), or common professional interest (Ulla & Perales, 2021, Tham et. al., 2022). However, these are not specific for VCoP or might not have the same importance in VCoP, in the context of loose relationships, than in a traditional CoP. Besides, in existing studies, the participation level within the community is not treated as a discriminating factor for motivation analysis. Overall, VCoP is an emerging area for in-depth exploration, as opined by Beres and Janes (2023) in the conclusion of their systematic review of the literature on VCoP.

This research aims at identifying motivation factors for participation and knowledge sharing in virtual communities of practice, taking into consideration the intra-community differences in the participation and specifics of virtuality namely the distant relations. For this, we have chosen to focus on Deci and Ryan's self-determination theory (SDT) which represents a broad framework for the study of human motivation and personality. The results of the interviews are further discussed, before drawing conclusions from this study, along with suggestions for future research.

Theoretical perspectives: origin and motivation to participate in virtual communities of practice

Virtual Communities of Practice (VCoP)

A virtual community is defined as a social network allowing members to communicate with computer support (Wellman, 1997), and as a set of social relationships based on shared interests and goals (Andrews *et al.,* 2002; Chiu *et al.,* 2006).

With the proliferation of virtual communities, increasing number of professionals are interested in interacting virtually to share and learn from one another (Roberts *et al.,* 2006; Hara *et al.,* 2010; Ogink & Dong, 2018). Prior literature considers VCoP as a powerful way of leveraging the dispersed knowledge and expertise of its members (Dubé *et al.,* 2005).

Definition of a Virtual Community of Practice

According to Sibbald *et al.* (2022, p.1), *"Virtual Communities of Practice (VCoP) are online communities that use the internet to connect people who share a common concern or passion. VCoPs provide a platform to share and enhance knowledge".*

Virtual community facilitates the gathering of a large and geographically dispersed public (Dupouët *et al.,* 2022). The more the community supports its members, the more its knowledge grows, and the more appealing it becomes to new members. The essence of VCoP is the knowledge management a knowledge, which must be indexed for easy retrieval and stored (Lima *et al.,* 2010). Besides, VCoP acquires virtual communication and creation tools to streamline information circulation (Dupouët *et al.,* 2022). Sustaining a VCoP requires monitoring, maintaining boundaries and responding to change. Overall VCoP creates new opportunities which develop a holistic understanding, enhance flexibility and responsiveness in organizations.

Main Activities

According to Lima *et al.,* (2010), the main activities to create a successful VCoP are:

- Membership Development: promote the growth of the community and replace the leaving members. Beforehand, the organizer fixes targets for community composition as different type of members have different motivations. The non-members constitute potential user pool, and their interests help the community to stay tuned with the topical issues. The control over the size of the community contributes to keeping it alive, flexible but consistent and ensure the quality of the interactions.
- Content Management: information content, alliances, and infrastructure. Content management includes creating user profiles, assigning them to sub-communities, capturing, disseminating knowledge and creating processes that facilitate members' involvement. The content can be admin- or member-generated. The former, provided by the organizer, encourages discussion and attracts prospects. The latter is shared by the users, needs sorting to be sorted and schowcasing where it suits the best. Another aspect of content management is infrastructure: low-quality connection and poor graphical tools bother virtual communication. That being said, a learning curve exists in the adoption of technological means.
- Relationship Management: based on explicit rules that help members solve conflicts, on their own or with the help of moderators. Mcloughlin *et al.,* (2018) opine that the development of in-person interactions in VCoP is critical for the establishment of trust. However, recent studies contradict this statement by showing that connecting virtually is an acceptable alternative. Furthermore, as the community matures, the commitment takes over the relationship as a participation catalyzer.

A Prerequisite: Knowledge Collaboration

VCoP cannot prosper without effective knowledge collaboration (Rheingold, 2000; Faraj *et al.,* 2011). According to Faraj *et al.,* (2011), knowledge collaboration can be defined as sharing, transferring, accumulation, transformation, and co-creation of knowledge. Thus, in a VCoP, members become "prosumer", mix of are knowledge consumer and producers (Tapscott & Williams, 2006). First, when they engage with VCoP, the members look to satisfy their needs and, only afterwards, adopt a form of commitment which grows at the pace of high-quality contributions (Dupouët *et al.,* 2022).

Different Levels of Participation: Core Group, Active Members and Peripheral Members

According to Wenger *et al.,* (2002, p. 55*), "people participate in communities of practice for different reasons – some because the community directly provides value, some for the personal connection, and others for the opportunity to improve their skills"*. Wenger *et al.,* (2002) differentiated three levels of community participation: (1) "the core group", (2) active members and (3) peripheral members.

The "core group" includes people who actively participate in community discussions and debates. This group of people, often having a limited size, constitutes the heart of the community.

Active members are people who attend meetings and participate in the community forums but without the regularity or intensity of the core group. This group is also small.

Most community members are peripheral members, who are only watching the interactions of the core and active members. They feel that their contribution is irrelevant or lack time. However, they learn from the interactions within the community and might interact informally.

Community members move through these levels. Core members join the sideline as the topic of the community shifts. Active members may be deeply engaged, then disengage. Peripheral members drift into the center as their interests are stirred.

Motivation factors of participation in VCoP

A number of studies on virtual communities (e.g. Chiu *et al.,* 2006; Cho *et al.,* 2010; Eaton & Pasquini, 2020; Ulla & Perales, 2021. Jiang *et al.,* 2021; Bickle et *al,* 2021; Dupouët *et al.,* 2022, Tham et. al., 2022) explore the influence of level or type of motivation on the propensity for exchange. The research in information sharing and group decisions report mixed and often, juxtaposed competitive and cooperative motivations (e.g. Wittenbaum, *et al.,* 2004; Brodbeck *et al.,* 2007), relying on extrinsic incentives (Kalman *et al.,* 2002). Other authors, such as Agterberg *et al.,* (2010) and Thompson (2005), note the interest in creating the necessary epistemic conditions and manipulating environmental factors (e.g. community structure, content, ways of connections) to encourage sharing. Indeed, Gilson *et al.,* (2015) identify that despite a wealth of research, there is still much to know about virtual groups.

The unique characteristics of VCoP attracted academic and practical interest to investigate the dynamics of knowledge collaboration and to answer why millions of volunteers contribute to the creation of collaborative content by offering time and talent in return for no obvious monetary reward (Faraj *et al.,* 2011).

To investigate this further, we drew upon self-determination theory (SDT) (Deci & Ryan, 1985; Deci *et al.,* 1999; Deci & Ryan, 2000, Gagné, 2003; Gagné & Deci, 2005). This is multi-dimensional theory originating from psychological needs research and has been used in a broad range of applied domains, such as education, health, sport management, marketing and consumer research.

Relevance of SDT as a framework for the VCoP

In the last decades, the SDT appears to be a famous theory of human motivation. However, some researchers underline that the SDT has not been actively used as a framework in knowledge sharing studies (Yoon & Rolland, 2012). According to Yoon & Rolland (2012) and as mentioned by Deci & Ryan (1985), in the SDT model the intrinsic motivation is a key factor in the human behavior. Yoon & Rolland (2012) suggested a model to understand knowledge-sharing behaviors in virtual communities based on the SDT framework.

Tsai & Pai (2014) consider that SDT is a relevant theory to explain some variables of newcomers' participation behaviors in virtual communities. More recently, Kuem *et al.* (2020) develop a framework mobilizing on SDT theory to understand the different mechanisms regulating continuance and contribution in online communities. Chiu (2022) uses the SDT as a framework to show student engagement in on-line learning during COVID. They demonstrate that SDT is useful to understand *"the effects of needs-based support on student motivation, engagement, and learning"* (Chiu, 2022, p.15).

Therefore, we consider that SDT is an appropriate and adapted framework in our study.

Deci and Ryan's self-determination theory

The self-determination theory (SDT) grew out of the work of psychologists Edward Deci and Richard Ryan. SDT is concerned with the self-determination behind the choices that individuals make without any external influence or interference, and the basic psychological needs that are the basis for their self-motivation (Deci & Ryan 1985). There are two key assumptions of the theory:

1. The need for growth drives behaviour - the first assumption of SDT is that people are actively directed towards growth. Gaining mastery over challenges and taking in new experiences are essential for developing a cohesive sense of self.
2. Autonomous motivation is important - while people are often motivated to act by external rewards, such as money, prizes, and acclaim (extrinsic motivation), SDT focuses primarily on internal sources of motivation, such as a need to gain knowledge or independence (intrinsic motivation).

Ryan & Deci (2000, p.70) define intrinsic motivation as *"the inherent tendency to seek out novelty and challenges, to extend and exercise one's capacities, to explore, and to learn".*

According to Deci & Ryan's SDT, people are motivated to grow and change by three innate and universal psychological needs: competence, autonomy, and relatedness.

Competence

People need to learn different skills. When people feel that they have the skills needed for success, they are more likely to take actions to achieve their goals. The intrinsic motivation for an action can be enhanced by *"feelings of competence"* conducted by *"social-contextual events (e.g., feedback, communications, rewards)".*

Autonomy

People need to feel in control of their behaviors and goals. This sense, of being able to take direct action that will result in real change, plays a major part in helping people feel self-determined.

Several studies also have proved that basic psychological needs satisfaction is positively related to successful outcomes (Gagné & Deci, 2005). In virtual communities, an individual's action in knowledge sharing can be regarded as a self-motivated behavior exempt from any external influence and interference. Thus, it is assumed that the basic needs satisfaction will engender the positive consequences, such as individuals' knowledge-sharing behaviors in virtual communities.

Relatedness or Connection

People need to experience a sense of belonging (Ryan & Deci, 2008). This can be interpreted as a need to find aspects in common with team members. The feeling of 'relatedness' should not, however, be seen as a factor that can justify the absence of diversity within teams. People need to have a sense of belonging and connectedness with others; each of us needs other people to some degree.

Research methodology

Context of study

Our research is based on the study of a virtual community, called *"Educatefor.life"*. The main goal of this community is redefining and creating new types of education. *"Educatefor.life"* was created in December 2018 by Lars Lin Villebæk, a Danish dad highly motivated to offer the best future to his children, notably with a more inclusive education for one of his special needs son. He was deeply concerned by the poor ability of the current education system to support the development of the 21st-century and lifelong learning skills.

"Educatefor.life" is a global online community, open to anyone willing to collaborate with like-minded people, such as parents, educators, teachers, and entrepreneurs. Any member can create a sub-community and propose a project to work for during a 10 week-sprint (see Appendix 5), by following the ExO methodology[1] supporting exponential growth and thus open innovation. The only condition is to be able to mobilize a team of volunteers among the *"Educatefor.life"* community.

Sample and data collection

We chose to use a qualitative methodology, which is appropriate for in-depth analysis of a phenomenon, particularly of organizations, groups and individuals (Yin, 2015). Qualitative research is particularly oriented towards exploration, discovery and inductive logic (Patton, 2002).

The data was collected through 14 semi-structured interviews, direct observation and analysis of internal documentation. It should be noted that one of the authors of the present study used to be part of this community. This fact gives us an insider view and improves the quality of the direct observation.

The procedure for selecting participants was that of purposeful sampling (Patton, 2002): the lists of community participants and documentation of frequency of their participation provided by the founder were used to identify the core group, active and periphery members. In addition, 14 interviews have been conducted in May 2019. All interviews were accomplished by *Skype/Zoom.us* and were tape-recorded and transcribed (see Appendix 1 and Appendix 2).

For our research, we used a thematic coding. As part of a thematic analysis (Bardin, 2001), we adopted as a unit of analysis an entire sentence or a group of sentences related to the same theme. For coding, we followed the recommendations of Yin (2010) who distinguishes two levels of coding. The first level of coding aims to understand how the categories intersect and bind to then go to the second level, which seeks to link all the properties of other categories (see Appendix 3 and Appendix 4).

The "Educatefor.life" Virtual Community of Practice and its Dynamics of Development

"Co-creating humanised, personalised, empowering paradigms for every human, any age" is the vision of Educatefor.life[2], a VCoP dedicated to developing creators rather than consumers in a tech world where the future of the human depends on his capacity to demonstrate creative thinking. For this, the founder suggests modifications in the education systems. These modifications are the main subject for actions and discussions between community members.

Educatefor.life is also a virtual space, a «digital homeplace», where the users interact publicly and in private. The leader offers a self-service coaching which helps every participant to define his targets in the community. *"Owing to this coaching, I discovered my interest for the topic of female financial independence. A few hours later, I posted the topic, and 3 other ladies joined me, we set up a team and named it "Womup"* (C.W., Denmark).

A year after its creation (January 2020), the *"Educatefor.life"* community counts 22 "core group" members, 50 active members and 191 periphery members.

Animation Tools of "Educatefor.life" Community

To encourage members to participate more actively in the life of the virtual community, several facilitation tools have been implemented.

The Online Workshops and their Facilitation

The online workshops called *"Sprint"* were led in from February to May 2019. Sprints allow breaking projects into smaller chunks by assigning tasks to team members. A sprint lasts for only 10 weeks during which the team is expected to accomplish some work. This methodology draws from "Agile" and follows a strategy of moving forward by small steps.

Sprint was a key driver for creating the dynamics and momentum of the community. People were attracted by overall purpose of the community and by the topics of the Sprint. The members who joined work groups started to work in sub-communities which established their own culture, routines, and defined their desired outcome of the Sprint. Some sub-communities gained such a strong traction, that they continued after the Sprint and also occasionally reported back to the community about their progress and results.

The Sprint Facilitator drove a lot of the coordination along with written assignments for all sub-communities.

1. https://blog.growthinstitute.com/exo/11-attributes

2. https://educatefor.life/

The Online Community Platform Based on "Mighty Networks"

The first step for an online community is to find a hosting web platform, a sort of "digital homeplace" where the participants discuss freely. *"We needed a tool which could connect people and was designed for an online community"* (L.L.V, VCoP founder, Denmark). The chosen solution, based on "Mighty Networks"[3] allows a prospect to join the community as a member by self-registering his profile, to subscribe to specific topics of interest and to integrate sub-communities which he deems relevant for himself.

The online community platform is also where the Sprint Facilitator communicates to the groups and where individuals find each other based on interests. The animation happens by posting articles or surveys and through live chat. The video conference tool is the *Zoom.us,* that include '#EducateforLifeTalk' sessions, where community members share experience. In those sessions, there are community members who present through screen sharing and run discussions with the other participating community members. The members are notified for each new content or interaction by email. Adding new members is encouraged, through granting badges according to the number of new members co-opted.

Emailing and Online Global Conference Call with the Members

Email newsletters are monthly sent to a larger list of subscribers (currently approximately 600 subscribers). However, this communication tool is not used much, as the focus is on keeping the activities on the *"Mighty Networks"* platform. Some regular catch-up conference calls are organized. It is a great way for the members to get in touch, and share their learnings and challenges. There was also three major conference calls (workshops) at the beginning, middle and end of the sprint, with guest speakers bringing high quality content and experience on the table and the sprint facilitator, explaining the methodology to the global community. Both written and live video conversations maintain a positive, empathetic and creative tone that inspires and attracts new members.

Impact from COVID

COVID was a booster for *Educatefor.life*. As many online initiatives, it has benefited from a forced digitalization imposed by circumstances. The community leader also took opportunity to offer new possibilities which became part of participant motivation. *"We can both learn and work, but more importantly we can cooperate with people all around the world"* (D.B., active member, Colombia). *"Nowadays, the involvement in virtual communities is very relevant: there are more offers, knowledge and available contacts online"*. (C.A., active member, Denmark). COVID context also created or emphasized the situations of isolation, questioned the need to move, and pushed to rethink the meaning of the existence. Many felt they needed to do something to make the world better. This trend was in line with the massive transformation purpose (MTP) idea which was anchored from the very beginning in the vision of Educatefor.life community.

From a different standpoint, growing number of communities started to compete for the time and the attention of the potential audience. Thus, the organizers were urged to provide exclusive content, resources, and activities. *"Time is in general a major constraint but when one is interested, he makes it"* (L.L.V, VCoP founder, Denmark). Based on this conviction, the leader enhanced the content available freely in the community whereas his idea of using "Sprints" made difference as a unique activity.

3. https://www.mightynetworks.com/

Findings

Identification of factors related to Deci and Ryan's self-determination theory

People are motivated from within, by interests, curiosity, care or abiding values. These intrinsic motivations are not necessarily externally rewarded or supported, but nonetheless they can sustain passions, creativity, and efforts over the time.

Competence: the opportunity to grow and learn

One key reason to join the community was the desire to learn. We identified three main expected learning modes: interaction with other members, experimenting ExO methodology, and growing an online international community.

Some people see the community as an opportunity to learn new techniques by interacting with other members. *"I decided to join due to a personal interest in innovation in Education and the technology space. I expected to gain new knowledge from interactions with the community and I did."* (L.U., active member, Bolivia). Their motivation was also proportional to the challenges offered by the community. *"Participating in this community is a way to challenge ourselves to go to the next level and learn how people connect through a platform"* (G.F. active member, Bolivia). *"I wanted to study Education now and in the future. Not only technologies but also how we can transform life locally. With every person's knowledge, we learn and discuss to find new ways forward.* (G.F. active member, Bolivia). *"Dive into a community of people who work in education, hoping to find interesting contact/resources"* (L.L.V, VCoP founder, Denmark). Some members joined the community to achieve new objectives, notably by experimenting how a virtual community works: *"I joined this community because it was a good supplement to what I'm doing in my daily work"* (C.A., active member, Denmark).

Some members were particularly interested in *ExO methodology*. Indeed, the community proposed an opportunity to experiment it through "Sprint" projects. The original approach has been adapted by Lars in collaboration with the *Fastrack Institute*[4], to work in an open innovation context. The 10-week time-boxed sprint offered a true learning opportunity in an intensive rhythm that was motivating for the members: *"The rhythm of the Sprint with daily notifications was fantastic. During the Sprint I learned more than I have learned in the previous two years"* (L.U., active member, Bolivia). The sprint gave a paced framework, making members accountable to participate: *"The Sprint is the "training partner" that holds me accountable every week"* (E.M., active member, Mexico), as each team had to complete a new assignment each week and upload the deliverable on the platform.

Some people wanted to learn how to grow an online international community**:** *"By participating in this community, I want to learn how to grow a community, specially a global one"* (C.A., active member, Denmark). This concerned specifically innovation. *"I was interested in what the process, the engagement would look like. What kind of ideas came out, what would be actionable with the things we developed"* (J.Q., core group, Canada).

Autonomy

Autonomy is a fundamental urge of human beings. Community members are more eager to participate, when they feel that they will have the rein in their hands. *"I wanted to create a project by my own, personal project as my son needs a different environment to learn than the school can offer"* (L.L.V., VCoP founder, Denmark).

4. The Fastrack Institute: is a non-profit organization achieving social impact through injection of knowledge and technology to enable cities to adapt to and capitalize on rapid technological change alongside rapid urban population growth. https://fastrackinstitute.org/

Everyone could prioritize his time according to interests which is a factor of motivation. When people are motivated, they find the required time to achieve the goal: *"We realized that we had to use so much time but we found the time because it was exciting and useful."* (C.A., active member, Denmark). People are more responsive, when they know that they have a choice *"I was a very active member through sharing articles and participating in sub-communities, and finally created my own community"* (J.P., core group, Belgium).

The members could get involved at four levels: globally with all the community members during the community calls, at sub-community level by sharing specific topics, at sprint team level on a weekly basis and at personal level with a specific member. *"We made a mistake by creating a closed sub-community. We could have interacted more with the global community and learned more"* (G.F. active member, Bolivia).

The community offered a large choice of roles to be played by each member: from an advisor to support sprint team or, sprint member and even just an observer. Some members got involved in the design of the methodology and invited new members *"I brought some participant to observe or to create their own sprint team. I worked with Lars to develop the process to make sure it would be accessible to the members"* (J.Q., Canada, core group). *"Being active in each sprint group I was part of, I finally created my own group."* (J.P, core group, Belgium,). Being part of a community brings also surprises. *"I wanted to be part of the community as an advisor and to learn the ExO approach. Before starting, I followed the "define your MtP" online course and launched a sprint topic aligned with my freshly defined MtP. What a surprise when I realized three other members were also motivated to work with me on this beautiful idea. Finally, I was actively engaged for 3 months, like a full-time passion job"* (C.W., core group, Denmark).

Relatedness to a Purposeful Community

As people are social beings, they have the necessity to belong to a group and to be accepted by it. *"I'm excited to be part of a community, connecting with like-minded people, seeing how can we impact the world"* (S.K, active member, Australia). Many members of the *"Educatefor.life"* work towards a higher good to achieve a positive impact. We observe this trend also in such communities as tech for good, where younger generations use their expertise to be involved in purposeful activities.

A first motivational factor was the opportunity to connect with "like-minded people" and access the diversity of the international community: *"The diversity (geography, demographics, professional background etc.) of the community was positive and enriching."* (E.M, active member, India). Indeed, *Educatefor.life* is a true international community, bringing people from USA, Canada, Denmark, India, Australia and others. *"The exciting part was to be with like-minded people. Almost like during the LEGO Idea conference I attended recently, it was interesting to network with people, preaching to preachers, people that are on the same page regarding their personal MtP"* (J.P., core group, Belgium).

A second important benefit was the expansion of the personal network. Our findings show that the community enabled dispersed or isolated individuals to relate and belong: *"Very inspiring to meet so many amazing persons that we would never have met without this participation. Most exciting was the network/community, some of the people presenting in webinars were very interesting and knowledgeable"* (C.A., active member, Denmark).

Members who find VCoP activities intrinsically interesting and beneficial are more altruistic in their sharing behavior: *"Working with a global worldwide community is energizing knowing there would be people that genuinely try to make a difference in the world. I realized that there is a huge community of people trying to change the world and understood that we can help each other"* (E.M., active member, India).

Through our research, we have identified also other factors that motivate people to participate in the virtual communities.

Factors of motivation in addition to the self-determination theory

From the interviews conducted, three additional motivation factors emerged, besides the ones identified by the SDT: MtP (Massive Transformative Purpose), exclusive resources and activities and energizing leader.

The top factor is the attraction by a MtP and willingness to have impact. For *Educatefor.life*, the MtP is "designing the future of education". The members also enjoyed exclusive resources and activities which were only available within the community for free. Finally, they felt motivated by the purposeful leader.

MtP to achieve an impact

The first shared motivational factor among the participants was the desire to achieve an impact around the MtP of the community "designing the future of education". *"I was excited to be part of a community that wants to change the world"* S. K, active member, Australia). *"After some disillusion with the current education system, I wanted to be on the cutting edge of the paradigm shift"* (J.P, core group, Belgium). *"The system must be broken and must be changed"* (M.V, USA, periphery). *"We wanted to see how this Sprint process accelerates our impact on adult lifelong learning"* (C. A., active member, Romania).

A sense of urgency to solve pain points reinforced the level of engagement. For some members, the engagement was reinforced by a personal experience: *"Feeling stuck in an ineffective system while believing there must be a better way forward. For many, the personal pinpoint gives the urgency. This is what makes people take action and get actively involved"* (L.L.V., VCoP founder, Denmark,).

The energy brought by some people willing to have an impact was contagious. *"Working with a global team of enthusiasts always kept me back to the platform"* (E.M, active member, India).

Some members were excited about the opportunity to bring ideas to life by collaborating with other members: *"In the beginning, it is very abstract. Then, it starts to take shape. It is exciting, when its changes from an Excel file to something real"* (G.A, active member, USA).

Exclusive Resources and Activities

The community offered access to many exclusive resources and activities online like global calls, equivalent to online meet-up. There was a great way to drive engagement, allowing the members to connect and get inspired by sharing progress and through outside speakers. *"We need specific topics or activities to drive our engagement up like sessions on creating explanatory videos and other practical skills and tools"* (G.F., active member, Bolivia).

Some exclusive resources were available for free for the community members only, like the ExO methodology step-by-step and a one-hour course to help you to find your own MtP. The founder provided very detailed methodology, explained how to manage assignments in the group, how to define the problem and look for options. Thus, the

community members learnt tips and tricks on how to manage a team and lead a project. In return, the team was required to deliver a pitch deck and a synthetic presentation of the results of the workgroup. The sprint was giving a pace with weekly assignments and occasional disrupt sessions, where the team was presenting the intermediary results 5 weeks after the launch and final 5 minutes pitch in front of all the community, guests, and jury.

Another example of exclusive content is webinars with distinguished actors on the field. Their ideas inspire and broaden the community.

Despite a big number of interesting inputs, the founder sticks to keeping their majority free of charge. *"It matters to me that people don't have to pay to participate"* (L.L.V., VCoP founder, Denmark).

Energizing Leader

The community animator played a key role as a purposeful leader, welcoming, inspiring participant and driving his commitment: *"Lars* (the founder of *Educatefor.life) was an inspiring host and facilitator. Without an active host, things will not really happen even on the best platform"* (L.U., active member, Bolivia).

Tone of voice, attitude and different engagement levels proposed encouraged the participation of some members: *"Lars played a key role in creating a friendly atmosphere where everyone felt welcome and encouraged to contribute"* (C.W., core group, Denmark).

The positivity of the owner was contagious: *"Amazed by the enthusiasm of Lars to put that together and be continuously enthusiastic, so inspiring to have this motivation"* (P.S., active member, Denmark).

The animator was also amazed by the high level of engagement of the members, that reflect the passion they had for the MtP: *"I was amazed by people that joined the community. A community is always as good as its passionate members"* (L.L.V, VCoP founder, Denmark).

Constraint factors

Through the interviews, we identified some pitfalls that might have reduced the engagement but represent opportunities for improvement.

The fact that the community was an international one created the challenge for the community calls to have everyone connected at the same time: *"It was difficult to find the time for people already having a full-time job"* (E.M., active member, India). Most of the time, the community facilitator had to propose two time slots for the same conference. Same is true for some sprints mobilizing members from USA, Denmark and Australia.

The weekly assignment pace for the sprint was stimulating but overloading: *"It was difficult to keep up the pace of the sprint and find the time to meet"* (C.A., active member, Romania). The time required to follow the sprint was quite intense, especially given a great diversity of member profiles. As most of the members were volunteers, they could only allocate the time available depending on personal circumstances. For some members, the lack of time was one of the biggest barriers to active participation.

It was sometimes difficult to reconcile the community participation with a full-time job and family. *"How to prioritize time (personal life + work + volunteer program)?"* (E.M., active member, Mexico). *"We had to work weekends and late nights"* (L.U., active member, Bolivia). Some members admitted they could have endorsed a shared leadership on the content creation part: *"We could have rotating roles where we in shifts create a blog, video or something similar. Get others to play and learn and take lead"* (S.K., active member, Australia).

The online platform can be a constraint factor if appropriate content is not found or is not shared easily. *"We need a better platform for making easier to do things"* (J.Q., core group, Canada). Another issue is to navigate among the many notifications sent to members: some are global, others are specific to a sprint, third ones are related to a personal exchange with a member.

Some challenges appeared at the sprint team level. Some members experienced challenge to find their place in the community: *"Challenging to find the right team to collaborate with, find alignment with the team and have a team with an active leader to move forward"* (E.M, active member, India).

Factors of motivation according to level of participation

The research shows that community members with different levels of participation are attracted by different motivation factors.

TABLE 1

Members' sources of motivation according to their level of involvement in the community of practice

Source of motivation / Level of participation	Competency: opportunity to grow and to learn	Autonomy	Relatedness	MtP to achieve an impact	Exclusive resources and activities	Energizing leader
Core group	X	X	X	X	X	X
Active member	X		X	X	X	
Peripheral member			X		X	

"I like this community because it gives me access to a unique diverse set of documents" (M.V, USA, periphery). Peripheral members expect from the community content and feeling of belongingness. *"Majority are here for a knowledge piece they can't get elsewhere or an informal discussion"* (L.L.V, VCoP founder, Denmark).

On the other extreme, core group draws motivation from all the factors but especially the leader and the global purpose. *"MtP was a life-changer for me inside and outside the community"* (C.W., core group, Denmark). *"Lars is the guardian of the vision and the example we line up with"* (J.Q., core group, Canada).

In between, active members concentrate on acquisition of skills (competence) and are motivated by transformation purpose. *"Educatefor.life is a hard and soft skills factory where we learn useful tips and exchange good practices to make education better"* (C.A., active member, Romania).

Overall, the higher the participation level, the broader is the motivation required and the expectations from the community. Concurrently, more one receives from the community, more is he disposed to contribute.

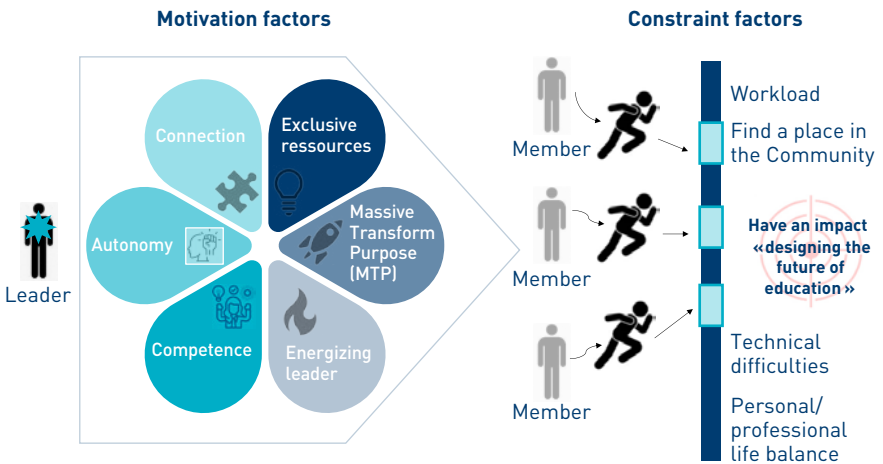
Discussion and contribution

The results of our study confirm the motivation factors identified in SDT theory: willingness to learn and to become more competent, freedom of choice in selecting in which topic to invest time reflecting high degree of autonomy, and pride to belong to an international network.

However, on top of this, the qualitative analysis revealed three new dimensions of motivation not yet explored in the literature: motivating and enthusiastic leader, unique content and activities encouraging the participants to push their own boundaries, and a visionary goal involving a change of *status quo*. Finally, the research identified distinct motivation factors within the community corroborating the fact that communities don't make up homogeneous groups (Carpentier, 2021).

FIGURE 1

Motivational factors to participate in a virtual community



The emerging dimensions of motivation reflect the evolution of VCoP as a phenomenon whereas a differentiated motivation approach opens new opportunities in making the knowledge sharing more effective. First, VCoP goes beyond social network. As such, it needs a "line of sight" or a vision to guide and sustain the efforts and the time invested in it. This concern is particularly relevant in post-Covid era. On one hand, the remote work is more flexible (Estagnasié, 2023, p.187). On the other hand, there is collision of home and office temporalities (De Vaujany *et al.*, 2023).

Second, VCoP grows in size. As users explore the possibilities of a virtual network and discover its advantages over a physical network, they realized that an online platform gives access to a wide number of contacts which they would have hardly come across otherwise. Consequently, a larger community needs a focused leader to channel its activity. On this point, Burger-Helmchen & Cohendet (2011) illustrate the necessity of a balance between control and spontaneity. While the first lead to a feeling of domination, the latest results in taking wrong overall direction.

Last, VCoP increase in number. We have mentioned that some domains demonstrate a sizeable popularity of this type of functioning to share experience. In this context, differentiating and accessible content appears as a must: in practice, users have a large choice and spend only a few minutes on a web-platform to check if it corresponds to their interests. A parallel can be drawn with crowdsourcing (Howe, 2006) which retains users' attention by satisfaction to solve complex issues (Schenk & Guittard, 2012), self-esteem or new skills (Jouny-Rivier & Renault, 2020).

On a different level, our study presents a managerial contribution. It consists of constructive feedback to the community on its functioning and of extension of our conclusions to other communities. The present empirical study resulted in a set of recommendations for the improvement of Educatefor.life. Finally, our results can be used by other organizations to build and maintain a virtual community of practice. This concerns primarily the use of adequate motivation factors according to the level of participation. As opposed to the widely used approach that consists of considering all members as equally committed, the suggested new approach recognizes the reality of differences in the interest level and proposes levers to keep onboard the various subpopulations. Thus, more passive members at the periphery will be presented with activities/resources that are difficult to find outside the community, the active members will be given an opportunity to gain in competence whereas the core group will be consolidated with overarching mission and the leader. The target is to satisfy the participants and to get the maximum of their contribution whatever their level of involvement.

Conclusion

Since their existence, virtual networks facilitated the information sharing. Several researchers studied the motivation of knowledge community members to share their knowledge. However, these studies consider community members as a homogenous population, particularly when it concerns their motivations (Carpentier, 2021). On top of that, recent papers point out an unequal division of the workload within these communities: a minority of the members create most of the valuable content, with another small proportion editing and commenting and majority of members only reading (Carpentier, 2021). Hence, understanding what motivates the productive minority is essential to the growth of the communities. Our study falls in with this target as scholars recognize gaps in the field.

The existing literature mostly concludes to two main types of motivators: intrinsic and extrinsic (Wasko & Faraj, 2005; Chiu *et al.,* 2006). However, self-determination theory (SDT) unveils a third kind of motivation when *individuals* integrate extrinsic motivators and make them internal (Deci & Ryan, 2000). This theory suggests that the regulation of extrinsically motivated behaviors become internalized if the individual feels autonomous, competent in a task, or socially related (Ryan & Deci, 2000).

The aim of this study was to identify and analyze the factors motivating and constraining participation in VCoP. Our findings show the relevance of the SDT, according to which, people are motivated to grow by three universal psychological needs: competence, autonomy, and relatedness.

Our research also showed that the self-motivation is also driven by three other factors: MtP to achieve an impact, exclusive resources and activities, an energizing leader.

The sense of belonging to a purposeful community willing to achieve a positive impact is a key driver, along with the enthusiasm and experience of the community leader in driving the members' engagement, through meaningful activities and content. Globally, people find time and motivation to get involved, when it is useful for them, either to learn something new, solve a personal pain point or develop their network. The quality of content and the diversity of the members appear to be crucial to attract and retain active members.

Finally, the study qualified the motivation factors by integrating the level of participation as an analysis dimension. This new paradigm gives insight on how to make communities generate more value for members and the organization by targeting each sub-population with appropriate incentives.

The research presents three main limits and perspectives. The first limit is the choice of a single community as a sample. Such design is criticized for hindering a comparison. We suggest in future research to involve other companies from the same or a different activity domain. The second limit is a short observation period. Educatefor.life is a young community, and it would be interesting to extend the analysis over a longer period to measure the effects of the exchanges between members. At the current stage, we identified some elements that would potentially impact the dynamics of this community, but their actual impact is yet unknown. Besides, new elements can emerge later. Hence, our conclusions are valid for a given development stage and could not be generalized. The choices made by *"Educatefor.life"* to motivate its members could also be compared with other similar VCoP, and the impact of the online tool as a motivation factor could also be assessed.

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APPENDIX 1

Profiles of sample members

Initials	Country of work	Gender	Interview duration	Status	Function/company
J.Q.	Canada	F	1h15min	core group	Executive Director of the Fastrack Institute
C.A.	Romania	M	1h10min	active member	Transformation Partner at Wanted Transformation
G.A.	USA	M	50 min	active member	Consulting company owner (self-employed)
C.W.	Denmark	F	1h30min	core group	Former PlayFutures Manager (LEGO Foundation)
J.P.	Belgium	F	1h05min	core group	Project manager at European Medical association
M.V.	USA	F	35min	periphery	Revelon consultant
P.S.	Denmark	M	55min	active member	Co-founder of an ExO company, growing SME exponentially and board member
L.L.V	Denmark	M	2h10min	Founder/core group	Founder of Educatefor.life and Chief Delivery Officer at Open ExO
E.M.	Mexico	M	53 min	active member	Marketing Director, OpenExO
C.A.	Denmark	M	1h10min	active member	Co-owner of Startup company
E.M.	India	W	1h	active member	Facilitator of workshops, short courses, design thinking, self- employed
G.F.	Bolivia	F	45min	active member	Director UPB Virtual at Universidad Pontificia Bolivariana
L.U.	Bolivia	F	1h10min	active member	Communicative design producer at UPB virtual
S.K	Australia	F	1h20min	active member	OpenExO Coach, internationalization and transformation consultant

APPENDIX 2

Interview Frame

Contact person (Name, first name, age, country):
Function in the community: **Core group** / **Active member** / **Observer**
Date and time of appointment: ___ / ___ / ___ ___ h ___
Duration of the appointment: ___ h ___
Introduce the study and its targets *Possibility of recording the interview?*
Interviewee presentation
1. What is your professional background? - What is your occupational status (retired, student, freelance/consultant, employee, looking for a job, maternity/paternity leave)? - What is your domain of expertise (designer, sales, marketing etc.)?
2. What is your personal background? - Do you have children? Are they in school/university? - What are your views on education system? What are its major drawbacks?
Motivations and participation in the community
3. Why did you join educatefor.life? - What is a community for you? Are you part of any other community? - How you knew about the existence of educatefor.life? - What were your key motivations to join? - How educatefor.life can contribute to improve education system?
4. What is your engagement in educatefor.life? - How would you qualify your participation to community (active in exchanges, regular reader, occasional reader, non-use)? - What would have motivated you to be more engaged and make the community more successful next time (tools, content, training, animation, other)? - Did you participate in 10-week sprint? If yes, as active member/observer? What do you think about this experience?
Advantages and constraints of the community
5. What are the advantages of the community? - What is the most exciting and motivating in community experience (people, content, tools & methodology, process & animation)? - Did you learn? What did you learn? Would you say community is the right place to learn? - Did you gain in autonomy? How you gained in autonomy? - Did you extend your network? What type of network is it? - Can you identify any other major takeaways for you from the community?
6. What are the key challenges? - What difficulties did you face (technical, human interaction related, lack of time, other)? - How did you overcome these difficulties or what can be done to overcome them? - If you could do it again, what would you do differently? - What should be the next steps with this community?

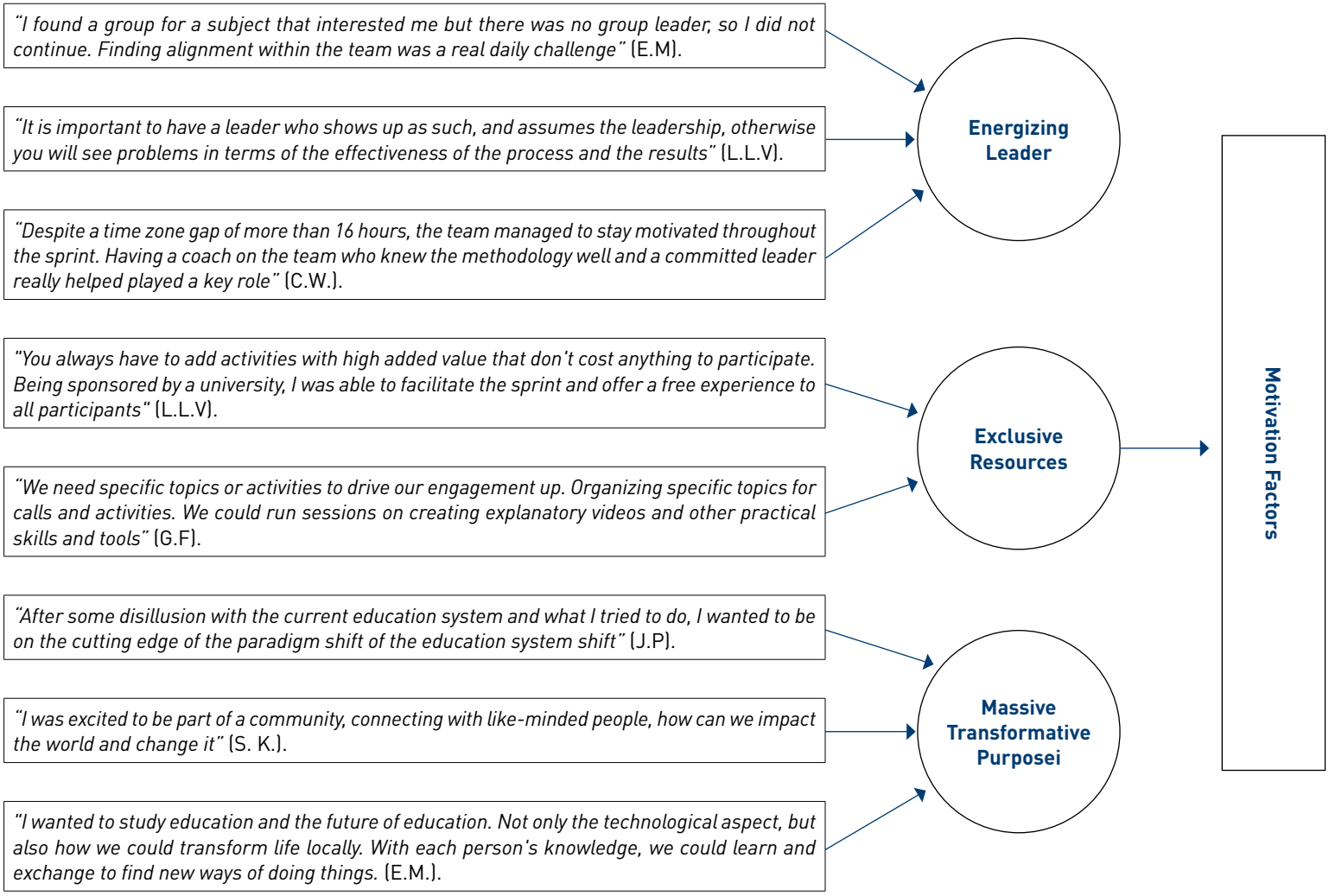
APPENDIX 3

Illustration of the coding process

Verbatims	Initial code (1st level)	Category (2nd level)
"I decided to join due to a personal interest in innovation in Education and the technology space. This community gives us a perfect opportunity to work with Edtech. I love learning. I expected to gain new knowledge from interactions with the community and I did." (L.U., active member, Bolivia).	Competence	**Factors of motivation**
"Very inspiring to meet so many amazing persons that I would never have met without this participation". (C.A., active member, Romania).	Relatedness	
"All the conditions were brought to empower the community member experience. They were free qnd atonomous to decide which session to attend, how to mobilise the available online and networking resources" (C.W., core group member, Denmark)	Autonomy	
"I was excited to be part of a community, connecting with like-minded people, how can we impact the world and change it" (S. K, Australia, active member).	Massive Transformative Purpose: to achieve an impact	
"Amazed by the enthusiasm of Lars (the founder of *Educatefor.life) and his team to put that together and be continuously enthusiast, so inspiring to have this motivation"* (P.S., active member, Denmark).	Energizing Leader	
"It is so intense. as much as I would have love to be active. not enough time. the point about that: if you want to participate meaningfully, you need to understand that time commitment". (J.Q., core group, Canada).	Lack of time	**Constraining factors**
"Each week was dedicated to achieving a specific objective and deliverables. Some of the team had to postpone or stop their participation, because they could not cope with the rhythm". (C.W., core group member, Denmark)		
"We need a better platform for making easier to do things" (J.Q., core group, Canada).	Difficulties to use the online platform	

APPENDIX 4

Illustration of the coding process



APPENDIX 5

Examples of 10-week "Sprint"

Name of Sprint	Objective
University of the Future	to explore the role of universities in the future
Entrepreneurial Education	an educational program where the students develop their own startup during the course
Life Long Learning for SME"	(for Leaders/Owners and their teams) to solve the problem on lack of ongoing up-skilling in Small and Medium Enterprise (SME's),
"Non-Neurotypical Learners"	about a quarter of our global population belong in this category that often gets excluded from schooling environments,
"WOM'UP in Morocco	empowering women in rural villages, by leveraging technology and local heritage for a more connected and prosperous global village
Zen Masters	to publish a book about self-regulation and mindfulness for children
"Gamified Design of ExO's"	a social game that prepares you to think and act exponentially while you help solving the world top problems,
AVE-Romania	business leader network establishing a private initiative to offer better education in Romania