

Master Thesis

Strategic Human Resource Leadership

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The contribution of learning communities to individuals' knowledge and skills

A study on how participation in a learning community precisely contributes to individuals gaining
new knowledge and skills

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Abstract

Organizations must be adaptable and agile in a constantly changing business environment. A benefit of learning communities, according to Jarvis, Holford, and Griffin (2013), is that they give individuals the chance to stay current with industry trends, pick up new skills and knowledge, and adjust to new problems and opportunities. However, the precise way in which these learning communities contribute to the skills and knowledge is still unclear (Clovin, 2015). Exploratory research should be used in order to delve deeper into the complexities and dynamics of learning communities, which lead to the following research question: “*How does participation in learning communities contribute to individuals’ skills and knowledge?*”. In order to come to an answer for this question, two studies have been conducted. The first study is a comparative case study, for this study interviews held for past research were analysed. For the second study, three participants of the learning community were interviewed before the first meeting and after the second meeting. These interviews were also coded and analysed which lead to some interesting results. Both studies provided the insight that there was a facilitating element: “*Participants being expected to not only get knowledge but also bring knowledge to the learning community*” which enhanced the participants’ commitment and learning process. Furthermore, study one revealed “*reliability of the meeting’s topic*” as another facilitating element that enhanced the learning process of the participants. *Reflection and active interaction* were the two elements in which learning communities contribute to individuals’ knowledge, according to the findings in study two. However, the contribution to individuals’ skills was less mentioned in both studies. Concluded, participating in learning communities contributes mostly to individuals’ knowledge through *reflection and active interaction*. Facilitating elements that enhance this contribution are “*Participants being expected to not only get knowledge but also bring knowledge to the learning community and reliability of the meeting’s topic*”. The contribution to the individuals’ skills seem to be more indirect, since participants mostly gain new knowledge which they can later on use in their daily activities.

Keywords: learning community – personal knowledge – personal skills – qualitative research

1. Introduction

Working conditions have changed significantly, as a result of the Covid-19 pandemic and technological innovations, employees need to constantly adapt themselves to new situations. In order to adapt to these new situations, employees need to develop their knowledge and skills to sustain their employability and increase the competitiveness of their organization (Crook, Todd, Combs, Woehr, & Ketchen, 2011; Lopez-Cabrales, Pérez-Luño, & Cabrera, 2009). For this very reason, organizations are focusing on the knowledge and skills development of their employees. The knowledge and skills of employees are for organizations a valuable resource that can lead to a competitive advantage according to the Resource Based View (Liao & Wu, 2009). The personal knowledge of employees plays an essential part in their job performance in order to fulfill their job effectively and efficiently (Colquitt, LePine, & Wesson, 2014). Furthermore, Huo Li & Qi (2020) argue that employees with a higher level of job-related knowledge are more likely to perform better in their job. Employees' personal skills also play an important part to their job performance. Personal skills like communication, problem-solving, adaptability and teamwork are prime examples of skills that contribute to job performance (Judge, Picollo & Illies, 2004). For instance, a study conducted by Ng, Eby, Sorensen & Feldman (2005) indicated that employees who had higher levels of emotional and social skills performed better on the job and were more likely to obtain good performance reviews. According to Li, Zhao, Liu & Zhang (2021), these knowledge and skills positively affect team performance, which in turn enhanced the organizational performance.

Organizations that put an emphasis on and invest into the development of their employees' knowledge and skills usually acquire a competitive advantage and achieve long-term success (Schmidt & DeShon, 2010). To achieve this, learning communities become increasingly popular to promote knowledge and skills development at work. In an ever-changing business environment, Organizations need to be flexible and able to responsive to changes. According to Jarvis, Holford & Griffin (2013), an advantage of learning communities is that they offer the opportunity to the participants to keep up with industry trends, acquire new skills and knowledge and adapt to new challenges and opportunities. Learning communities promote a continual learning mentality that enables organizations to survive in a quickly changing environment. (Jarvis et al., 2003). According to Wenger (2000), learning communities offer a cooperative setting where staff members can actively interact with one another, share their knowledge, and exchange best practices. By fostering the transfer of knowledge and skills among employees, this collaborative learning strategy improves the group's overall

understanding (Wenger, 2000). Employees can access a variety of knowledge and experiences by taking part in learning communities, which improves the development of their personal skills and knowledge. Furthermore, learning communities are an effective way for organizations to develop the knowledge and skills of their employees because of the applicability to the real world context (Ahn, 2011). One of the strengths of a learning community is the emphasis on the practical application to the everyday activities of the employees. A learning community provides the participants with the chance to engage in authentic problem-solving cases and apply their new knowledge and skills to their daily activities (Ahn, 2011). Due to this application based approach, employees can more easily apply their newly gained knowledge and skills to their job tasks. According to Wenger (1999) creating a learning community provides individuals with the opportunity to learn from each other, share perspectives, and engage in collaborative problem-solving. According to McMillan, Clifton & Stansfield (2013), learning communities have an edge over other skill-development programs because they place a strong emphasis on interpersonal communication, teamwork, and shared learning experiences. These communities offer an open environment that encourages critical thinking, in-depth study, and problem-solving abilities (Meyers, 2018).

Creating a learning community is an example of a supporting practice which an organization can employ. Learning communities are communities in which employees and experts from different organizations come together to learn and innovate from and with each other (Emanuel, Sijbom, Koen, & Baas, 2022). The formation of such a community can help to promote individual learning by providing participants the opportunity to create a social learning space (Wenger, Trayner & de Laat, 2011). Also, supporting individual learning by creating a learning community, make them feel more valued by the organization and helps them to get better career opportunities and personal growth (Lancaster & Di Milla, 2014). In these spaces, they can discover and further learning partnerships with other individuals related to a common domain. The aim of these learning communities is to create a shared practice by blending individual and collective learning. According to Hord (2009), learning within a learning community is a habitual activity in which a group learns how to continually learn together. To incorporate this kind of collective learning, the capacity for dialogue among the members must be fostered (Teague & Anfara Jr, 2012). A professional learning community must function as a democratic environment that allows dissent and debate among its members, and this can result in increased understanding and learning of the members (Hord, 1997). When educators learn together, new skills and strategies evolve as they question the

status quo in search of the best knowledge and practice (Hord, 1997). The creation of this shared practice requires both respect and the development of trust (Huffman & Hipp, 2003). These shared practices can become a resource for organization and assist in creating a competitive advantage. According to Colvin (2015), learning communities and the development of skills and knowledge are intertwined and varied. Although involvement in learning communities has been linked to beneficial learning outcomes, such as enhanced critical thinking and problem-solving abilities, the precise mechanisms by which these results are realized are still unknown (Colvin, 2015). In order to fully understand how collaboration, peer interaction, and resource accessibility affect skill and knowledge acquisition within learning communities, more research is required (Kobayashi & McGarty, 2014).

As has been mentioned earlier, helping employees to develop their knowledge and skills can create a competitive advantage for organizations. Moreover learning communities are according to Wenger et al. (2011) a way to help individuals acquire new knowledge and skills through individual knowledge. According to Knowles, Holton III & Swanson (2014), individual learning is a process by which an individual gains new knowledge, skills, and attitudes through their own efforts and experiences. It is a self-directed and self-regulated process that results in individuals gaining new insights and developing new skills that can improve their performance and effectiveness in their personal and professional lives (Merriam, Caffarella, & Baumgartner, 2007). Individual learning and learning communities might be regarded as opposing concepts, while they are rather complementary to each other. Individuals can form the foundation for the creation of a learning community by bringing their own knowledge and skill to the community (Wenger, 1999). But at the same time learning communities can provide support for individual learning by giving opportunities for feedback and collaboration with other individuals in the group (Wenger, 1999). So, individuals can gain new knowledge, broader perspectives and a greater sense of motivation and engagement in the learning process by combining individual learning and learning communities. It is therefore important to know how the participation in learning communities can help employees develop their skills and knowledge, since there is still no consensus about how participating in a learning community precisely contributes to individuals acquiring new knowledge and skills (Gao & Zhang, 2018). Furthermore, Stavros, Cooperrider & Godwin (2015) argue that It is difficult to make firm conclusions on learning communities' effects on the development of skills and knowledge since they involve a variety of contexts, including official educational institutions, internet platforms, and professional networks. It is challenging to generalize findings across contexts due to the distinct structures, goals, and

participant characteristics that each learning community functions under. Since there still is a lack of knowledge regarding the underlying dynamics inside learning communities, it is important to look at these in order to define the precise way in which they contribute to the knowledge and skills of individuals (Stavros et al., 2015). In conclusion, exploratory research is needed for understanding learning communities. According to Hesse-Biber & Leavy (2010), it enables researchers to delve into the complexities and dynamics of learning communities, comprehend the various contexts in which they function, and identify the nuanced processes by which they contribute to the gaining of knowledge and skills. Keeping this in mind, leads to the following research question: “*How does participation in learning communities contribute to individuals’ skills and knowledge?*”.

Learning communities and the development of knowledge and skills have been linked and diversified, argues Colvin (2015). The precise way in which these advantages are realized are yet unknown, despite the fact that participation in learning communities has been connected to a positive effect on learning such as improved critical thinking and problem-solving skills (Colvin, 2015). By answering this question, the aim of this research is to generate more knowledge about in what way participation in a learning community contributes to individuals acquiring new skills and knowledge, hereby contribute to solving the knowledge gap about how participation in a learning community contributes to individuals gaining new skills and knowledge. This will be done by taking a closer look at the underlying elements that contribute to the learning process of individuals, which will make it easier to make generalizations in the future. It is furthermore important to get a better understanding about the elements that influence the contribution to the learning process of learning communities, in order to expand the overall theoretical knowledge about how learning communities contribute to individuals’ skills and knowledge. Moreover, it is important for organizations to get better insight in this, since it’s important for their sustainable existence (Kim, 2009). According to Smith & McGregor (2019), it is also important to get better insight in the elements, within learning communities, that contribute to the individuals’ skills and knowledge in order to develop specific methods and educational plans that enhance knowledge and skills development within learning communities.

2. Theoretical framework

2.1 Individual learning

According to Knowles et al. (2014), individual learning is defined as the process by which an individual acquires new information, abilities, and perspectives based on their own initiatives and life experiences. It's a self-directed and self-regulated process that provides people with the possibility to obtain new knowledge and master new skills that will benefit their performance and effectiveness in both their personal and professional life (Merriam, Caffarella, & Baumgartner, 2007).

There are various methods, such as formal education, practical experience, self-directed learning and feedback, through which an individual can learn new knowledge and skills (Marsick & Watkins, 1990). Knowles et al. (2014) argue that evaluating experiences, looking for chances to grow and learn, setting learning objectives, and actively taking these chances are required in order for an individual to learn. Furthermore metacognition, which is defined as the capacity of individuals to reflect on their own thoughts and learning processes, is regarded as an essential part of individual learning (Bandura, 1997). This means that individuals have to be aware of their own abilities and limitations, keep track of their learning development, and change their personal learning tactics when necessary. Merriam et al. (2007) argue that individual learning and collaborative learning are not incompatible with one another, but that participation in learning communities and teamwork can improve individual learning.

The two outputs of individual learning on which this research is going to focus on are personal knowledge and skills, since it is still unclear how participating in learning communities can contribute to an increase in these two elements (Gao & Zhang, 2018)

2.2 Personal knowledge

According to McLeod (2018), personal knowledge is about the knowledge that an individual gains through their personal experiences, interactions, and observations. Individuals possess unique personal knowledge which is subjective from nature, as it's based on their own perceptions and experiences. As it shapes the beliefs, attitudes and behaviours of individuals, personal knowledge is regarded as an essential component of human development (McLeod, 2018). The process of acquiring personal knowledge starts from infancy and continues throughout an individual's lifetime. Individuals acquire new personal knowledge through experiencing new things, such as social interactions and self-reflection and direct experiences,

which shapes their perception of the world and their place in it (McLeod, 2018). New knowledge can be gained by an individual through these experiences.

According to McLeod (2018), individuals have the opportunity to learn from other individuals and hereby deepen their perceptions about reality through social dialogue. Individuals can use self-reflection to critically think about their own perceptions and interpret them in such a direction that they are matching with their own values and beliefs. Furthermore, personal knowledge can help individuals in making decisions, solving problems and creative thinking (McLeod, 2018). Individuals can use their own knowledge to provide their own view on situations, which might help since there may be a lack of required knowledge in other sources. Individuals can share personal knowledge with others which can result in the creation of communities of shared knowledge.

McLeod (2018) argues that personal knowledge is a driving factor behind the learning and development of individuals. This knowledge is acquired by personal experiences, dialogues with others, and self-reflection and can lead to a change of individual's perceptions, behaviours and attitudes. Personal knowledge can be used in activities such as problem-solving, decision-making and creative thinking (McLeod, 2018)

2.3 Personal skills

Stichter, Stormont and Lewis (2015) define personal skills as the abilities, characteristics, and behaviours of an individual which helps them to be successful in the various elements of their life, including personal relationships and professional work. Examples of these skills are effective communication, problem-solving, teamwork, leadership, and adaptability.

It is impossible to underline the value of personal skills in the fast-paced, constantly-evolving world of today (Noonan, 2018). Employers are more and more looking for workers with good interpersonal skills to go along with their technical expertise. In fact, many job descriptions include specifications for soft skills like cooperation and communication, underscoring their significance in the modern economy. According to Noonan (2018), personal qualities such as good communication, empathy, and conflict resolution abilities can support people in creating and maintaining positive connections with others.

Personal skills can be acquired and improved over time by using a variety of techniques, including practice, self-evaluation, feedback, and training programs (Noonan, 2018). Individuals can participate in training courses or workshops, in order to develop their leadership or communication abilities. Moreover, individuals can pinpoint areas for improvement through evaluating their relationships with others or by asking their colleagues

or supervisors for input.

Taking this into consideration, personal skills are of crucial importance for success in many aspects of daily life, including close relationships, academic success, and career success (Noonan, 2018). Personal skills like effective communication, teamwork, leadership, problem-solving, time management, and flexibility are just a few examples that may be learned and developed through time using a variety of techniques like practice, training programs, self-reflection, and outside feedback (Stichter et al., 2015). According to Noonan (2018), in order to succeed both on and off the job, individuals should place a high priority on developing and improving their own abilities. According to the AMO-model developed by Appelbaum, Bailey, Berg & Kalleberg (2000), individuals must have the required Ability (knowledge, skills, and capacities), be Motivated (have the drive and commitment), and have the Opportunity (supporting environment and resources) to utilize their abilities effectively in order to perform well and achieve success. Learning communities can play an important role, since it provides participants with the opportunity to share knowledge. Sharing knowledge improves the abilities of the employees, since they can use this shared knowledge to acquire new skills (Wenger, Dermott & Snyder, 2002).

2.4 Learning communities

Learning communities are made up of people who join together to participate in a shared learning experience, frequently with the aim of improving their knowledge and expertise in a particular field or subject (Wenger et al., 2002). Since educators and researchers began to appreciate the advantages of collaborative learning environments that foster social contact, active involvement, and the sharing of various perspectives and ideas, the idea of learning communities has grown in popularity.

Participants in learning communities have the chance to learn from one another through conversation, reflection, and the sharing of resources and experiences (Wenger et al., 2002). Due to the opportunity for active participation in the learning process and the opportunity to draw from the knowledge and insights of others, this style of learning is frequently more interesting and successful than traditional forms of instruction (Johnson, Johnson, & Smith, 2014). Also, learning communities can foster a sense of connection and belonging, which can be crucial for people who may feel alone or alienated in their academic or professional settings (Wenger et al., 2002).

There are various forms of learning communities, from unstructured associations that get together frequently to talk about a subject of common interest to more formalized

educational initiatives that incorporate components of collaborative learning into their curricula (Wenger et al., 2002). In educational contexts, peer mentoring programs, project teams, and study groups are a few examples of learning communities. Learning communities can exist as professional networks, online forums, or communities of practice in professional contexts.

While, learning communities have broader effects on professional and educational systems in addition to being advantageous for individual students. Learning communities can increase student engagement, retention, and academic success as well as the development of professional skills and competencies, according to research (Johnson et al., 2014; Wenger et al., 2002). Additionally, the social and cooperative characteristics of learning communities can aid in dismantling conventional power structures and hierarchies, fostering a more democratic and inclusive learning environment (Wenger et al., 2002).

As a conclusion, learning communities are an important concept in education and professional development. Learning communities can encourage more effective and engaging types of learning, while also promoting a sense of belonging and connection among participants. This is achieved by presenting chances for social interaction, active engagement, and the sharing of varied viewpoints and ideas. The idea of learning communities is set to become more crucial as educators and other professionals look for fresh, cutting-edge approaches to encourage learning and development.

2.5 Linking learning communities, individual learning, personal knowledge and skills

Thomas & McGrath (2019) argue that the concepts individual learning, personal knowledge, personal skills and learning communities have an interrelationship with each other. Learning communities offer an open and collaborative environment that promotes individual learning, facilitates sharing of knowledge, and supports the development of personal skills (Thomas & McGrath, 2019). Individual learning and personal knowledge serve as the cornerstones for the development of personal skills, while these interrelationships have a significant effect on the development of the individual (Thomas & McGrath, 2019). As has been mentioned earlier by Wenger et al. (2002), learning communities provide participants with the opportunity to learn from each other. Thomas & McGrath (2019) came to similar findings such as that learning communities facilitate a supportive environment, where participants are provided with the chance of acquiring new skills and knowledge. This is also supported by Johnson et al. (2014). The authors mention in their research that participating in learning communities can help with the development of professional skills and competencies. Participants have the

chance to develop new skills and information by taking part in learning communities. The collaborative aspect of learning communities enables people to exchange experiences, learn from one another, and acquire understanding from many viewpoints. An example of a collaborative learning aspect is the use of intervisions within learning communities. An intervision refers to a collaborative working method where participants can learn from each other and solve problems by sharing their challenges, insights and experiences within a small group. According to De Haan and Nijhof (2014), intervisions are successful at encouraging the development of individual skills within learning communities. They discovered that intervisions inspire critical thinking, facilitate the transfer of learned skills into practice, and facilitate the exchange of knowledge and experiences. This improves the development of practical skills, provides a deeper comprehension of the subject topic, and improved critical thinking and problem-solving capabilities (Stavros et al., 2015). However, according to Kobayashi & McGarty (2014), a challenge for designing an effective learning community is to take the various factors into account that influence the learning process of the participants. The structure and design of the community, the degree of participation and engagement among its members, and the accessibility of resources and support systems can all affect how well learning communities promote individual learning and skill development (Kobayashi & McGarty, 2014).



Concluded, learning communities are an effective learning method in facilitating individuals gaining new knowledge and skills. Learning communities enable individuals to engage in self-directed learning, gain from social interactions, and improve their skills and knowledge by offering a supportive and cooperative environment. Despite all these findings, there is still no consensus about how participating in a learning community precisely contributes to individuals acquiring new knowledge and skills (Gao & Zhang, 2018).

3. Methodology

3.1 Study overview

In this research, the following research question will be answered: “*How does participation in learning communities contribute to individuals’ skills and knowledge?*”. In order to come to an answer to this question, two study methods are going to be used; a comparative case study, where multiple cases will be analysed and compared in order to discover similarities and differences and a single-case study where there will be a more in-depth focus on the core concepts of this research.

The methodologies comparative case studies and single-case studies can be complementary to each other by providing different types of data to support an answer for a research problem. On the one hand, according to Gerring (2006) a single-case studies can show a thorough analysis of one particular instance while providing in-depth insights into the nuances and complexity of the phenomenon. On the other hand, comparative case studies have the ability to allow for a more thorough examination by contrasting several cases, allowing researchers to spot trends, patterns, and differences between settings (Yin,2014). By combining the breadth of comparative analysis with the depth of specific case studies, researchers can better comprehend the phenomenon by integrating these methodologies. (Bleijenbergh, 2016).

According to Ragin (2014), the use of both the comparative case study and single-case study method allows for triangulation of findings. By studying multiple cases, findings can be cross-referenced and validated which increases the reliability and credibility of the findings (Ragin, 2014). The use of a comparative case study helps in finding similarities and differences between cases which provides a stronger basis for drawing conclusions.

In summary, comparative case studies and single-case studies are complimentary research strategies that can offer various sorts of data to support a research issue. Comparative case studies are helpful for examining how policies or interventions function in various contexts, whereas a single-case study can provide a more in-depth understanding of the underlying concepts (Bleijenbergh, 2016). Researchers can provide a more thorough understanding of the concepts that affect the findings by combining these two approaches. This will particularly benefit this research because it provides various insights in how participating in a learning community really contributes to the personal skills and knowledge of individuals. The comparative case study will support the research outcomes by giving insight in how this participation leads to higher skills and knowledge in multiple cases while

the single-case study will provide a more in-depth analysis about how participation in a learning community contributes to individuals’ skills and knowledge.

3.2 Study 1 comparative case study

For study 1, the research method comparative case study will be used in order to assess the research question on the basis of interviews, which were conducted for previous research. This means that the data from these interviews is used in order to find an answer to our research question. The question: *“How does participation in learning communities contribute to individuals’ skills and knowledge?”* can be partially answered with the use of these interviews.

3.2.1 Data collection

The interviews were already performed in 2022 by a researcher for the leader project, which was a research about leadership learning communities in the logistics and transport industry. The analysis for this research will be done using this secondary data. Typically, three instances will be used, with each case involving interviews with the project manager, the facilitator, and at least two participants. Each participant is a native Dutch speaker who works in the care, logistics and transportation industry. There are three cases involving HR managers, and one case involving supply chain managers. Every participant joined the learning community voluntarily. Before the interviews, anonymity was promised to the respondents and permission was asked whether they could be recorded. For that reason, the transcripts won’t be in the appendix. Viewing these transcripts can be requested if needed. Below, there will be a table which provide a short overview of the respondents.

Name	Case	Rol in learning community	Student or professional
Respondent A.1	A	Participant	Professional
Respondent A.2	A	Participant	Professional
Respondent A.3	A	Participant	Professional
Respondent A.4	A	Projectleader	Professional
Respondent A.5	A	Facilitator	Professional
Respondent B.1	B	Participant	Professional
Respondent B.2	B	Participant	Professional
Respondent B.3	B	Projectleader	Professional
Respondent B.4	B	Facilitator	Professional
Respondent C.1	C	Participant	Professional

Respondent C.2	C	Participant	Professional
Respondent C.3	C	Participant	Professional
Respondent C.4	C	Participant	Professional

Table 1: Overview respondents study 1

3.2.2 Data analysis

The first step is to code these transcriptions because the interviews have already been conducted and transcribed. The interviews will initially be open-coded, and the key topics will become apparent as you go through each interview and interview fragment. This coding will be done based on theory. For personal knowledge, fragments will be coded that match with the following definition: “personal knowledge is about the knowledge that an individual gains through their personal experiences, interactions, and observations. Individuals possess unique personal knowledge which is subjective from nature, as it’s based on their own perceptions and experiences” (McLeod, 2018). For the coding of personal skills, quotes will be coded that match with the definition: “the abilities, characteristics, and behaviours of an individual which helps them to be successful in the various elements of their life, including personal relationships and professional work” (Stichter et al., 2015). Axial coding will be used to code the interviews following the open coding. This means that there will be examined which themes are related to one another. One overarching code will be created by combining these themes. The final stage will involve checking to see if there are any relationships or links between the various codes. When it occurs, these will be put into a broad category. On the basis of these categories, the results will then be written. The coding will be done with the use of Atlas.ti. During the coding of the interviews, focus will be set on the elements which support gaining of new knowledge and skills. Attention will be set on the facilitating and possible limiting elements in each case. Afterwards, the cases are going to be compared by examining the similarities and differences between various participants, project leaders and facilitators. These different opinions regarding the generation of knowledge and skills will be put into a table where a clear oversight is made for each case. Doing this will enable the researcher to make comparisons more easily, which will eventually lead to drawing results from the emerging similarities and differences in insights from the interviewees. The cases will be compared by using a table which contains all type of knowledge gained, facilitating elements and structural elements of each case.

3.2.3 Reliability and validity of the data

The credibility of this research will be strengthened through triangulation, since after the comparative case study, a single-case study will be held (Ragin, 2014). The dependability will also increase since interviews will be assessed until data saturation is achieved. Moreover, since all of the data will be taken into account when coding, the confirmability will grow because the starting position is zero. The previously mentioned coding scheme enhances the confirmability. After the data from the single-case study is included, the conclusions will be more reliable.

3.3 Study 2 single-case study

A single-case study in which a learning community will be established will be conducted in addition to this comparative case study. The learning community will consist of six meetings, with the first meeting taking place physically, while the other meetings being hybrid (online/offline). Additionally, examples from everyday life are worked on, and there is space for conversation and experience sharing. Participants are required to report important incidents throughout the program and provide and accept feedback from other students. In order to monitor the process over time and learn more about the program's performance, interviews are also done. Additionally, interviews will be done to monitor the procedure over time and assess the program's efficacy. Interviews will take place prior to the first meeting and following meeting two. The research question: "*How does participation in learning communities contribute to individuals' skills and knowledge?*" can be answered using the data gathered with the single-case study.

3.3.1 Data collection

Students from Radboud University will participate in the single-case study, and a learning community will be created for them. When they participate, the students will have free access to a leadership learning community. Data will be gathered in a variety of ways, including interviews that will be done twice, observations, and analysis of internal materials (such as posters, LinkedIn groups, and WhatsApp groups). Participants' data will be evaluated both before the first meeting and second meeting of the learning community. Below, there will be a table which provides an overview of the respondents.

	Respondent 1	Respondent 2	Respondent 3
Age	25	21	21
Study	International Economics & Development	Bedrijfskunde	Bedrijfskunde
Gender	Male	Female	Female
Attendance meeting	Two times physical	One time physical, second meeting absent	Two times physical

Table 2: Overview respondents study 2

3.3.2 Data analysis

With the use of interviews, observations, and internal documents if needed, the single-case study will be analyzed. Questions concerning, for example, their personal knowledge and skills before and after the second meeting will be measured throughout the semi-structured interviews. To assess variations between pre and after meetings of the learning community, the measurements pre-measurement (before to meeting one) and post-measurement (after meeting two) can be coded and analyzed. Interviewing respondents before meeting one and after meeting two provides an insight in the starting position of the respondents and their status after two meetings. Comparing this starting point with the point after meeting two, provides a more clear image about how learning communities contribute to individuals' skills and knowledge, since we can keep up with the progress from the start. At first, the interviews will be open-coded, and the key topics will become apparent as you go through each interview and interview fragment. Axial coding will be used to code the interviews following the open coding. This means that there will be examined which themes are related to one another. One overarching code will be created by combining these themes. The final stage will involve checking to see if there are any relationships or links between the various codes. When it occurs, they will be added into a broad category. On the basis of these many categories, the results will then be written. The coding will be done with the use of the program Atlas.ti. During the coding of the interviews, focus will be set on the elements which support gaining of new knowledge and skills. Attention will be set on the facilitating and possible limiting elements in each case. Afterwards, the cases are going to be compared by examining the similarities and differences between the participants. These different opinions regarding the generation of knowledge and skills will be clearly described in the result section and core concepts will be highlighted in the text. Doing this will enable the researcher to

come to insights more easily, which will eventually lead to drawing results from the emerging similarities and differences in insights from the interviewees.

3.3.3 Reliability and validity of the data

Since genuine interventions are used rather than simulated ones in a laboratory setting, it can be stated that single-case studies strengthen this in terms of external validity, or how well the findings can be applied to another situation. On the other hand, the sample is somewhat tiny, which in turn reduces the external validity (Rosenberg & Yates, 2007). The fact that the single-case study is carried out following a thorough literature review and the comparative case study, which are used as the basis, will increase the internal validity, the degree to which the insights are believable and dependable. Due to the lack of randomization in single-case studies, it will be more difficult to confirm that all confounding variables have been eliminated, which would reduce the internal validity (Rosenberg & Yates, 2007).

4. Results of Study 1

In order to come to an answer for the research question: “*How does participation in learning communities contribute to individuals’ skills and knowledge?*” various interviews from earlier research have been coded. Firstly, the various cases will be described with quotes that mostly illustrate the opinions, about gaining personal knowledge and skills, from each participant, project leader or facilitator. After describing these cases, they will be compared to each other in order to discover similarities and differences. Based on these similarities and differences, an answer to the research question will be gathered.

4.1 Case A

Case A is about a learning community in the capacity logistics industry, where research is done into the capacity management of hospitals. Within this case, three participants, a facilitator and a project leader have been interviewed.

Some facts about case A:

- Number of people in the learning community: Growing bigger from 4
- Online/offline meetings: Online & Offline
- Format: Presentations/Discussions
- Duration of the session: 1 Hour
- In the appendix, a table can be found which provides an oversight regarding the type of knowledge/skills gained and the facilitating elements for gaining personal skills and knowledge

In Case A, participant A.1 mentioned: “Often it's not something I immediately start working on the next day, but it's something you take with you and then, when the time comes, like now with the one specific example concerning lying time, which we may have heard about six months ago in the learning community, but it's something you take with you and you think: oh, we want to do something with that in the future, and now is the time to actively approach that person and do something with it”. In this learning community, participants usually don't use the information immediately but they rather use the newly gained knowledge for future events, they use the knowledge in their future daily activities. Participant A.2 mentioned that he didn't necessarily think about using the newly gained information in his daily activities but that he subconsciously used this new knowledge. In contrast, participant A.3 mentioned the

following: “I understand. Also, do you manage to really make the information you get your own to make it applicable? Most things do, yes”. This individual mentioned that he used the information in his daily activities. Participating in the learning community helped him in acquiring new skills and knowledge about how to handle capacity issues in his daily activities. So, in Case A, participants mentioned that both knowledge and skills were acquired subconsciously and in practice.

These new knowledge and skills are partly acquired by the participants through *informal contact outside of the meetings*. As the project leader stated: “Yes, I think that was what was said last time, and I think it was even in relation to that they had spoken or contacted each other separately for a while or something like that If I remember correctly.”, which was an answer to a question whether the project leader thought that participants did something with the information that they acquired during the meetings. So in Case A, *the informal contacts outside of the meetings* was an element in which participating in a learning community can contribute to individuals gaining more knowledge or skills. The participant gained knowledge from each other in these *informal contacts*. This knowledge was mostly about how to deal with occurring issues in their work field. Participating in this community facilitated getting these *informal contacts*. Furthermore, the interviewee argues that *meeting physically* led to far more interaction than meeting online, which influenced the learning process of the participants. The presence of the facilitator who was already known to the participants did also help in stimulating the gaining of new skills in knowledge and skills, since participants were always interested in his point of view. Another element found in Case A, *commitment*, stimulated the gaining of new knowledge and skills in a learning community. This was best illustrated by the following quote from the facilitator: “So in other words, if people have to keep saying, as it were, hey, what have you done in the past two, three months and what are your results, and can I just see the 'figures', eh, the timeline and the outcomes? Yes, what I just said: after three months you say of oh yes, we haven't had time. But, after the second time then it becomes, then A, the audience doesn't pick that, and two, they find it very annoying themselves.” In this case, participants were almost forced to make sure that they *commit* to the learning community since the other participant wouldn't accept when they don't commit. This resulted in them gaining more knowledge about how to deal with the capacity issues in their daily activities.

Looking at Case A, participating in a learning community can contribute to individuals gaining more personal skills and knowledge by acquiring knowledge for future events or skills that can be used in their daily working activities. *The informal contacts which*

participants gain through the learning community, the commitment that was stimulated by the facilitator and *the physical meetings* where facilitating elements that supported the learning process of the participants from the learning community.

4.2 Case B

Case B is about a learning community in the capacity logistics industry, where research is done into the supply chain managers. Within this case, two participants, a facilitator and a project leader have been interviewed.

Some facts about case B:

- Number of people in the learning community: < 15, small group
- Online/offline meetings: offline & online
- Format: presentations/plenair/small group discussions
- Duration of the session: 1,5/2 hours
- In the appendix, a table can be found which provides an oversight regarding the type of knowledge/skills gained and the facilitating elements for gaining personal skills and knowledge

In Case B, participant B.2 gained new knowledge about how he could deal with energy drains and put more focus on energy givers. As he mentioned the following: “We once had a session on resilience, not so much the resilience of your company, but more of your inner self. That was great fun, it was about your energy drains versus your energy givers, for example. Then I drew such scales with my team (that was at my previous company, by the way) and everyone was allowed to call out: what for you is an energy giver and what is a drain? To see, can we throw those energy drains back to another department or so. Those are things when you talk about applying, though, those are things I did.”. Attending one of the meetings of this learning community provided the participant with the knowledge which he needed to apply a sort of reflection practice into his team, which was an example of a participant gaining new knowledge from participating in a learning community. The participant also mentioned that he used some knowledge learned from presentations during meetings to make adjustments to his practices, which can be regarded as him ultimately learning a new skill. This answer corresponds with the quote from participant B.2 who mentions the following: “Yes, I definitely... The fact that some companies are doing well with their measurement of their emissions, how do companies address ESG issues, how does their question structure run

within the company? From rolling up small issues, day-to-day issues, to strategic issues. Yes, that there are mirrors, actually it's just often mirrors that are held up, and then always reflecting to: what can I do with it? So that's actually a, yes, I like that.” In this quote, the participant mentions that he uses the knowledge gained from presentations of other participants to *reflect* on his own practices. So, in Case B, participants mostly gain new knowledge and skills from presentations of their fellow peers.

According to the project leader of Case B, gaining new knowledge is mostly achieved by on the one hand, emphasising the importance of bringing knowledge to the community instead of only retrieving knowledge and on the other hand, by exchanging experiences with each other in order to learn from this. An exemplary quote was the following: “Can you learn from each other there? Yes, can you learn from each other huh? By exchanging experiences and I know, In the first session we also did a brainstorming. Okay, so what topics are relevant now?”. The project leader furthermore mentioned that he stimulates the participants to share their experiences with the group in future meetings. In this way, he really stimulated them to *not only retrieve knowledge from the learning community but also bring some knowledge*. The facilitator in Case B mentioned that new knowledge and skills were mostly acquired through multiple methods. This was illustrated by the following quote: “learning from that speaker say, and from that speaker's knowledge and experience, and the other times, they really spar with each other. So that does make a big difference, and that combo is kind of fun.” which was an answer to a question about the impact of an external presenter and the overall interest in learning. The facilitator furthermore mentioned the importance of *the relatability of the meeting's topic* for the learning process of the participants. More knowledge was gained from meetings which were about the daily activities of the participants than from meetings about more specific topics which were less relatable for all participants. Lastly, the facilitator gave the answer “yes” to the following question: “Do you also notice that in that learning in that core group that they get to know each other better, that they can also respond to each other in a more focused way because they know each other's contexts, backgrounds by now?”. The learning process and the way participants can help each other was improved by *participants getting to know each other better*.

Concluding, case B shows that participating in a learning community can contribute to participants gaining more knowledge by letting them *reflect on their present practices* and by *facilitating presentations*. By *stimulating the participants to give something back to the community and using multiple learning methods*, the learning process of the participants was enhanced. This was furthermore achieved by *keeping the meeting's topics relatable* for the

participants and by *facilitating the opportunity for the participants to get to know each other better*.

4.3 Case C

Case C is also about a learning community in the logistics industry, where research is done into supply chain managers (in close collaboration with students). Within this case, two participants, the facilitator and project leader of the learning community have been interviewed.

Some facts about Case C

- Number of people in the learning community: 5/6 Companies and some students
- Online/offline meetings: Online
- Format: Kick/ Workshop session
- Duration of the session: 1/1,5 Hour
- In the appendix, a table can be found which provides an oversight regarding the type of knowledge/skills gained and the facilitating elements for gaining personal skills and knowledge.

In Case C, participant C.2 mentioned that at first, he joined the community in order to expand his personal network, but that he later on *gained multiple insights from working with interns* from which he learned a lot. An illustrating quote from how new knowledge is gained in Case C is the following from the same participant: “Yes I think that is mainly mirroring a, I shouldn't say a problem, of a challenge. Look you have more people who are at the same, I'll call it the same level for a moment. And everybody has the same thing, the same challenge just in slightly different form. And you don't have to reinvent the wheel anymore, and that was just very interesting. At some point you can really talk to your colleagues about, gosh, how did you solve that? Or what did you run into? And you can all work together alongside the supervisors for the students, so it was also very interesting for the company supervisors to also learn something there.”. In this learning community, the participant learned a lot from *exchanging experiences and knowledge with other participants while also working with interns on assignments*. Another interesting quote about the value of the interns was the following: “If you have a student and at some point he asks a question, you think, yes. Then you start thinking, yes, maybe he does have a point because he can be very uninformed. And that did change some things, and also just really blank questions. That I think, yes, okay.”.

The participant mentions that he adjusted his practices because of the knowledge he gained from the intern's questions. The interviewee also mentioned that he *contacted his fellow participants outside of the meetings* in order to gain new knowledge about customs documentation. Participant C.2 mentions that the participants have a say in the topics of the meetings from meeting one. He furthermore names specifically that he *learned new presentation skills from a meeting of the learning community*. This was best illustrated by the following quote: "Yes, yes, well. How useful anyway a good preparation is and that it doesn't all have to be typed out because then it becomes more of a read-aloud story and also just. Starting a presentation by making a very powerful statement. Just very short, very powerful and that someone is triggered right there to keep listening." ,which was an answer to a question about what he learned about presentation skills. From this specific meeting about presentation skills, participants *learned new personal skills through presentations*.

According to the project leader of Case C, the focus was specifically on the expertise of the participants regarding the design of the meetings. He mentioned that they made use of the knowledge of a participant to help other participants gain more knowledge and skills through a presentation. This was best illustrated by the following quote: "For example, in the last TIP, in TIP 5, we had an intern at one of the companies, who was doing something with ecrm eh for his internship assignment, with that digital waybill, well, he had accumulated such a lot of knowledge, he gave a presentation eh two or three times during meetings.". the project leader furthermore mentioned that he adjusted the design to the needs of the participants. They made the meetings more pragmatic than meetings in another community. In order to stimulate the learning process of the participants, the project leader and the facilitator made sure that the participants not only retrieved knowledge from the learning community but also brought input to the community. This was best illustrated by the following quote of the project leader: "Yes, We also gave them assignments at some point beforehand in preparation. For that meeting then he always did a follow up bin on it as well. To make sure Everybody did deliver something now." According to the facilitator, participants in case C always had a say in the topic choice of the meetings. This made sure that the participants were kept committed to the community, which stimulated the gaining of new skills and knowledge.

Looking at Case C, participation in a learning community can relate to a higher level of personal skills and *knowledge by letting participants exchange their experiences and letting them work with interns*. These interns can add value to the learning process by asking critical

questions and by providing new insights through assignments in which their supervisor has to participate. *The contacts which a participant gains through the meetings* are also ways in which a learning community can indirectly lead to participants gaining new knowledge and skills. Facilitating elements for the learning process in this community like *giving the participants a say in the topic choice, adjusting the working method to a more pragmatic method and stimulating the participants to bring knowledge to the community* did stimulate the learning process of the participants in this learning community.

4.4 Comparing the cases

	Case A	Case B	Case C
Type of knowledge/skills gained	Gain new knowledge to use in future events	Gain new knowledge by reflecting on their own team practices	Gaining new knowledge through exchanging experiences with other participants
	Knowledge used for improving personal skills	Knowledge gained through presentations	Personal skills adjusted because of intern's questions
			Personal knowledge gained through informal contacts outside of meetings
			Personal presentation skills learned from meetings
Facilitating elements for gaining personal skills and knowledge			
Topic choice		Relatability of the meeting's topic	Relatability of the meeting's topic
Working method configuration	Physical meetings	Usage of multiple learning methods	Working method adjusted to the participants
Commitment expectations	Commitment through expectations	Participants being expected to not only get knowledge but also bring knowledge to the learning community	Participants being expected to not only get knowledge but also bring knowledge to the learning community
Social relationships	Informal contact outside of the meetings	Participant getting to know each other better	
Structural elements	Case A	Case B	Case C
Amount of participant	Growing bigger from 4	< 15, small group	5/6 companies and students
Online/offline meetings	Online & offline	Online & offline	Online
Format	Presentations/discussions	presentations/plenair/small group discussions	Kick-off/ workshop-sessions
Duration	1 hour	1,5/2 hours	1/1,5 hours

Table 3: Cases comparison study 1

Looking at the cases which have been described in the text and table above, participating in a learning community results in individuals gaining new personal knowledge and skills.

Similarities between the cases are that in all three communities, the participants mentioned

that they gained new knowledge. However, there were some differences. In Case A, both new knowledge were gained but mostly for future events of activities, while in Case B only knowledge was achieved instead of knowledge and skills. In Case C, both knowledge and skills have been acquired by the participants. Looking at the facilitating elements of the cases, comparisons between Cases B and C can be seen regarding the elements “*Participants being expected to not only get knowledge but also bring knowledge to the learning community*”. And the “*Relatability of the meeting’s topic*”. These two facilitating elements seem to enhance the learning process of the participants of a learning community. These two elements correspond with the findings of Wenger et al. (2002) in which it has been mentioned that through sharing experiences, learning communities can contribute to individuals learning new knowledge and skills. These findings also correspond with the study of Johnsen et al. (2014), which gathered that due to active participation in the learning process and the opportunity to draw knowledge from others experiences. Learning communities are more interesting and successful than other forms of instructing. Looking at the *commitment expectations* of Case A, and the element of Case B and C “*Participants being expected to not only get knowledge but also bring knowledge to the learning community*”. Similarities have been discovered that in all three cases, participants are expected to not only attend the meetings but also give something back to the learning community. This “*bringing something back to the community*” also enhances the learning process of the community according to the interviewees from the cases. This also corresponds with the findings of Wenger et al. (2002) and Johnsen et al. (2014) where they mention that the sharing of experiences and active participation are crucial elements of learning communities for contributing to the knowledge and skills of the participants. Another similarity between the cases is that *the way in which a meeting is designed, has to be linked to the wants and needs of the participants*. As has been mentioned in all three cases, the learning community was designed to match with those wants and needs. In Case A, the meetings were held physically instead of online in order to improve the amount of interactions, while in Case B various learning methods were held in order to improve the learning process of the participants. In Case C, a more pragmatic working design was used in order to keep the participant focused on the learning community. An interesting difference between the cases was the use of interns in Case C in comparison with the other cases. Working on assignments with interns led to new insights for the participants of the learning community. This would be an explanation for the reason why personal skills were gained on a higher level than in the other cases.

5. Conclusion Study 1

Taking these elements into account, leads to the following answer to the research question: “*How does participation in learning communities contribute to individuals’ skills and knowledge?*”. Some facilitating elements, “*Participants being expected to not only get knowledge but also bring knowledge to the learning community*” and “*The relatability of the meeting’s topic*” have been discovered. These elements are according to the cases, facilitating elements for enhancing the learning process of individuals participating in a learning community. Furthermore, the element: “*Participants being expected to not only get knowledge but also bring knowledge to the learning community*”, which is a kind of you take something from the learning community, so you have to give something back mechanism. This mechanism makes sure that participants are more committed to the learning community, which enhances the learning process of the participant and therefore the contribution of the learning community to the individuals’ knowledge and skills. This is also consistent with the findings of Wenger et al. (2002) and Johnsen et al. (2014), who highlight that active participation and the sharing of experiences are essential elements of learning communities that enhance participants' knowledge and abilities. Lastly, it has been found that all three cases *linked the design of the learning community to the wants and needs of the participants*, this provides the information that there is not necessarily one perfect design for a learning community according to the findings within each case.

Concluding, participating in a learning community contributes to the individuals’ knowledge when the facilitating elements “*Participants being expected to not only get knowledge but also bring knowledge to the learning community*” and “*The relatability of the meeting’s topic*” are in place, this contribution can be even further enhanced. However, there is according to the cases not one design fits all since each design was linked to the wants and needs of the participant. There is also not much mention about the contribution of participation in a learning community to individuals’ skills within the cases. Only in Case C there was specifically mentioned that participation contributed to an individual learning a new personal skill.

6. Results study 2

6.1 Before meeting 1

For this study, three different respondents were interviewed in order to get a clear picture of their preferences regarding learning environments, current knowledge and skills about leadership and expectations for the learning community. Respondent 1 mentioned the following regarding environments in which he learns a lot: “A good learning environment. Well what I just said excites you enough to think for yourself. To come up with your own initiatives with solutions with thoughts that can be discussed there again, but that you at least engage in consciously looking for yes what I say, new possibilities, new solution and that here also then Feedback comes back to you, of which you then know that will regardless of whether or not the feedback can be critical, but can still be positive or negative.” This corresponded well with the preferences of Respondent 2 who mentioned that she learned the most in an interactive environment, in which feedback is given about the assignments that she worked on. Respondent 3 mentioned the following: “I think because my expectation is that it can be quite interactive with such a group because you were talking about a network after all. I think you keep the motivation high if you really involve people, like how do you think about it? How could you change it and so on.” which also corresponds with the highly interactive working methods preferences of her fellow peers. Later on, she added that participants should not only get knowledge from the meetings but also bring knowledge to the learning community. This matches with the element found in study 1 “*Participants being expected to not only get knowledge but also bring knowledge to the learning community*”. Further in the interview, she also argues that a small group with highly motivated members was the prime example for a learning environment, in which she learned the most. This also corresponded to her peers’ preferences.

The respondents all had some objectives regarding what they wanted to learn during this learning community. In general, they all wanted to develop their leadership skills. An exemplary quote was the following by Respondent 1: “Much broader is probably just that I've just never consciously thought about it very much before. And what does it actually all involve and is something like that in Leadership community with which to do it together, is a very nice thing to develop further in this and do consciously”. In this quote, the respondent states that he didn't consciously thought about leadership and that he wanted to further develop his knowledge about leadership together with the other participants. Respondent 2 mentioned the following regarding what she wanted to develop during the learning

community: “I think maybe how you indeed come across so. Yes skills that can help guide what it is whether it is hockey training or well something else. So how best to do that, how what kind of attitude is important, how do you behave, what kind of interaction is important. Things like that.”. These two quotes corresponded with the view of Respondent 3 who mentioned that she hoped to learn certain leadership skills in order to deal with particular situations.

Concluded, the respondents mentioned some interesting things which corresponded with the findings of study 1. All three mentioned the *importance of interaction* and one stressed the crucial element of *the need to not only get but also bring knowledge to the learning community*. They furthermore mentioned the intention to really develop their leadership skills and knowledge and Respondent 1 especially mentioned that he wanted to develop his knowledge about leadership together with the other participants of the learning community.

6.2 After meeting 2

In order to get to an answer for the research question, the same three respondents have been interviewed to get some insights in how participating in a learning communities contributes to the knowledge and skills of individuals. Interestingly, Respondent 1 mentioned that he found the first two meetings very fun and educational. Participating in the learning community mostly enabled him to critically reflect on his own thoughts about leadership through discussions with his fellow peers. This provided him with new insights on how he could deal with certain situations. This corresponds with the view of Respondent 2, who mentioned that she not necessarily learned something new yet, but that she exchanged her views about leadership with others. An exemplary quote about how learning communities can contribute to the knowledge of individuals was the following statement from Respondent 3: "I also really liked the fact that in the first meeting, we had to write down the qualities that you have and that you would like to learn in order to look at others. What do other people think are important qualities of a leader that make me think about that? Yes, do I think so and Why not Why yes, so That's what I did learn from it is that with critical incidents you can learn something yes to If you start reflecting on that and also learn more about the traits of a leader.”. The exchanging of critical incidents between the participants provided her with the knowledge that she can learn and gain new insights from reflecting on past incidents. She gained more knowledge about the traits of a leader during this learning community. Respondent 3 also mentioned that she intends to use this way of reflecting on incidents in her

later professional life. So, all respondents name *reflection* as one of the important activities in which the learning community contributes to them gaining new knowledge. This did compare with the findings from De Haan & Nijhof (2014) who mention that reflecting on experiences is an important element regarding the contribution of learning communities to individuals' knowledge and skills.

Another positive aspect of this learning community was best illustrated by the following statement from Respondent 1: "Uhm, yes very positive because I think everyone stands. Cliques are not necessarily formed. Everyone is open to learning from each other. So I'm also not afraid to share things in this group things here, and everyone also looks for each other to learn from each other." He points out that everyone is open to learning from each other and is motivated to do so, which helps him in sharing information within the group. He also mentions that the group specifically expressed that they want to learn from each other. This corresponds with the thoughts of Respondent 2 who mentions that *every participant has a very open attitude and is eager to learn from each other*. This helps her and others to contribute and learn something within the community according to Respondent 2. Another exemplary quote for this is the following statement from Respondent 3: "In the second meeting, we were also divided into smaller groups and it's just great that Everyone is very open, so they immediately think along with you, because then it was my turn to name a critical incident and Everyone immediately thinks along and really reacts to it. So yes, there is a lot of interaction between Everyone, which is really nice, despite the fact that it is actually a very mixed group.". So, *active interaction* is another aspect that has been mentioned by the participants that contributes to the success of the learning community regarding their learning process. This working method and *active interaction* compares a lot with the intervision method mentioned by De Haan & Nijhof (2014), in which they mention that this *active interaction* is an important element in which learning communities contribute to individuals' knowledge and skills.

Taking these things into account, this study provides the insights that *reflection and active interaction* are ways in which a learning community contributes to the knowledge of individuals.

7. Conclusion study 2

Taking both the findings from the interviews before meeting 1 and after meeting 2 into account, leads to the following answer to the following research question: “*How does participation in learning communities contribute to individuals’ skills and knowledge?*”.

According to the respondents, the element found in study 1 “*the need to not only get but also bring knowledge to the learning community*” is a recurring element that contributes to participants gaining more knowledge in a learning environment. The respondents furthermore stress the intention to develop their leadership knowledge and skills with their fellow peers. These two elements are consistent with the findings of Wenger et al. (2002), which suggest that learning communities may support individuals in acquiring new information and skills by encouraging the sharing of experiences. These results are also consistent with a study by Johnsen et al. (2014) that found that learning communities are more engaging and effective than other teaching methods due to participants' active involvement in the learning process and the chance to benefit from others' experiences. After meeting 2, the concepts of *reflection and active interaction* came mostly forward regarding how learning communities contribute to the personal knowledge of the respondents. These concepts compare with the findings by De Haan & Nijhof (2014), who mentioned that through interventions, participants of learning communities are able to reflect about their own experiences and from others. Through *reflection*, the respondents stress that they gained new insights about their view on leadership and how they could handle certain situations differently. One of the respondents specifically stressed that she intends to use this way of looking at situations in her professional life. The respondents also mentioned that through *active interaction*, their learning process was enhanced. This did also compare with the findings of De Haan & Nijhof (2014), who mentioned that *active interaction* enhanced the learning process of individuals. Though sharing experiences and an open attitude of the other experiences, it was easier for the respondents to contribute and learn something about leadership within the meetings. Sharing critical incidents and actively discuss it was a prime example of how new knowledge was gained in this learning community. This is also consistent with the findings of Wenger et al. (2002) and Johnsen et al. (2014), which highlights that engaged involvement and the sharing of experiences are essential for the success of a learning community in contributing to the personal knowledge and skills of individuals.

So, participation in a learning community contributes to individuals’ knowledge by letting them *reflect and actively interact*. All three respondents were before meeting 1

prepared to *actively interact* with each other, which could be a reason for the success of this learning community. However, there was not much mentioned about a contribution to the respondents' skills. Learning communities seem to mostly contribute to the individuals' knowledge and not really to their skills according to this study.

8. Discussion

8.1 Overall conclusion

Taking the conclusions of study 1 and 2 into account, we can come to an overall conclusion regarding the research question: “*How does participation in learning communities contribute to individuals’ skills and knowledge?*”. Participation in a learning community seems to mostly contribute to individuals’ knowledge, since in both studies not much has been mentioned about participants gaining new personal skills. In study 1, contribution to personal knowledge has been made in all three cases while only in Case C a specific contribution to personal skills was found. The first facilitating element found in study 1 was: “*Participants being expected to not only get knowledge but also bring knowledge to the learning community*”. This element can be considered as a sort of when you want to learn something, you have to give something back to the community mechanism. This mechanism ensures that participants are more committed to the learning community, which improves the participant's learning process and, as a result, the learning community's contribution to the knowledge and skills of individuals. This did compare with the findings from Wenger et al. (2002) and Johnsen et al (2014), who mentioned that sharing experiences and active participation are key elements regarding the contribution of learning communities to individuals’ knowledge and skills. Furthermore, The second facilitating element found in study 1 “*The relatability of the meeting’s topic*” meant that the contribution of learning communities to the individuals’ knowledge and skills can be enhanced by keeping the meeting’s topic relatable for the participants. The topic should be about everyday activities of the participant in order to enhance the learning process of the participants. This compared with the findings of Johnsen et al (2014).

Looking at study 2, the first interesting finding was that the respondents mentioned in their first interviews the need for the first facilitating element found in study 1 “*Participants being expected to not only get knowledge but also bring knowledge to the learning community*”. They mentioned that their experiences from past learning environments learned them that bringing something and not only getting something out of meetings is an important element for their learning process. It enhanced the contribution of the meetings to their personal knowledge. They also mentioned beforehand that they wanted to acquire new knowledge and skills jointly with their peers. These opinions corresponded with the findings by Wenger et al. (2002) and Johnsen et al, (2014). The findings from the interviews after meeting 2, provided the insights that the respondents mainly gained new knowledge through

reflection and *active interaction*. These two concepts compared with the findings of De Haan & Nijhof (2014), were they mentioned that the intervision method, which is frequently used in learning communities, contains both *reflection* and *active interaction*. These two concepts were important contributions to gaining new knowledge according to De Haan & Nijhof (2014). *Reflection* was regarded as looking back at own experiences and thinking about what could have gone better or done differently by the respondents of study 2. *Active interaction* was about the interactions during the meetings. Contributions to the respondents' knowledge were made through the *active interactions* during discussions. These discussions were mostly about experiences that a random participant of the learning community shared in small groups. This sharing of experiences and engaged involvement are also supported by Wenger et al. (2002) and Johnsen et al. (2014) regarding the contributions of participating in a learning community to individuals' skills and knowledge.

Taking both cases into account, an overall conclusion can be formed and an answer to the research question can be formed. Firstly, two facilitating elements have been discovered "*Participants being expected to not only get knowledge but also bring knowledge to the learning community*" and "*The relatability of the meeting's topic*". The first facilitating element was found in both studies and seems to enhance the contribution to the learning process of the participants by making sure that they are more committed. Furthermore can be concluded that *reflection and active interaction* are both elements within a learning community that contributes to individuals' knowledge. *Reflection* is an occurring element which is prominent in study 2 and is found in Case B of study 1. *Active interaction* is also found in Case C in study 1 and an important element in study 2. Lastly, it can be concluded that learning communities mostly contribute to individuals' knowledge and less to their personal skills. In both studies, there was little mention of participants actually learning a new skill during meetings. Only in Case C a participant gained a new personal skill. Looking at the research question: "*How does participation in learning communities contribute to individuals' skills and knowledge?*", it can be concluded that participation in a learning community contributes to individuals' knowledge. This contribution is mainly through *reflection and active interaction*, the facilitating elements "*Participants being expected to not only get knowledge but also bring knowledge to the learning community*" and "*The relatability of the meeting's topic*" can enhance this contribution to the personal knowledge of individuals.

8.2 Interpretation of the results and theoretical contributions

The results of this research do correspond to the existing literature regarding the contribution of participating in a learning community to the individuals' knowledge and skills. As Wenger et al. (2002) and Johnsen et al. (2014) already mentioned, learning communities contribute to the knowledge and skills of the participants through sharing experiences, discussions, reflection and active participation. This compares with the facilitating elements found in both studies. The first facilitating that was found "*Participants being expected to not only get knowledge but also bring knowledge to the learning community*" can be regarded as a mechanism that makes sure that participants need to contribute to the learning community if they want to learn something from it. This makes the participants more committed, which in turn improves their learning process and so increases the learning community's contribution to their knowledge. Secondly, the facilitating element "*The relatability of the meeting's topic*" implies that it is important for facilitators of learning communities to keep the meeting's topic close to the participants. Keeping the topic about the participants' daily activities enhances their learning process because they see the purpose of the meeting. In both studies, it was also mentioned that knowledge was mostly gained through *active interaction* and *reflection*. This did compare with the studies of Wenger et al. (2002), Johnsen et al. (2014) and De Haan & Nijhof (2014). *Reflection* has been described by the respondents of study 2 as looking back at past experiences and critically look at what could have been done differently or better. *Active interaction* can be seen as actively discuss about shared experiences. Participants in small groups all give their opinions on the experience and share their thoughts about what could have been done differently or better.

The similar findings between the existing literature and the two studies confirms the value of learning communities regarding the development of personal knowledge of individuals. There is still no consensus about how participating in a learning community precisely contributes to the personal knowledge and skills of individuals (Colvin, 2015) and how this is affected by collaboration, peer interaction and resource accessibility (Kobayashi & McGarty, 2014). However, this study makes a contribution to solving this problem by providing the insight that participating in a learning community mainly contributes to individuals' knowledge through *reflection* and *active interaction*. The learning process of individuals can further be enhanced by implementing the facilitating factors: "*Participants being expected to not only get knowledge but also bring knowledge to the learning community*" and "*The relatability of the meeting's topic*". In both studies, there was not much

evidence on the contribution of learning communities to the personal skills of individuals. This link seems to be mostly indirect, since individuals mostly gain knowledge in learning communities which they can later on apply in their daily activities.

8.3 Practical contributions

Added to the theoretical contributions, this study also has some practical implications. These implications are significant for educators and managers who want to develop the knowledge of their employees. The ways in which a learning community can contribute to the personal knowledge of individuals, highlighted by this research, can make it more clear for organizations on why learning communities are an effective method for developing their employees' knowledge. Furthermore, educators can be more mindful by reading this study on what aspects they could incorporate into their learning community. *Opportunities for reflection and active interaction* seem to be essential elements regarding the contribution of learning communities to individuals' knowledge.

Concluded, this research provides some practical insights for educators and managers who want to develop the personal knowledge of their employees. By being more aware of how learning communities contribute to the personal knowledge of participants, educators can make sure that there is enough focus on these elements. As for managers, they now have a better overview on how learning communities can contribute to the knowledge of their employees. They can use this in their decision making regarding educational and development programs.

8.4 Limitations and future research

Like every research, there are some limitations in this research. The first limitation relates to the research design of study 1. The sample size for this study was small due to resource restrictions, which might have limited how broadly the results could be applied. Similar to study 1, study 2 relied on information from only two of the six learning community meetings that were scheduled, which may have given an inaccurate picture of how participating in a learning community contributes to the knowledge and skills of individuals. Future research should look into a similar research design, where the researcher participates in the learning community from the beginning until the end. Doing this, overcomes this limitation and may result in getting a more accurate picture on how participating in a learning community contributes to the knowledge and skills of individuals.

Another limitation comes from Study 1's retrospective design, which involved

interviewing participants after all of the meetings had concluded. The depth of insights that could have been gained from real-time data collecting may have been constrained by this method's recall bias. Additionally, as the researcher of this study, I was not actively involved in conducting the interviews in study 1 because they were based on previously gathered data. The depth and alignment of the data collected may have been affected by the study question's lack of specificity and the lack of direct contact with participants.

In order to overcome the limitations of this research, and hereby expanding the understanding about how learning communities contribute to the individuals' knowledge and skills, various directions for future research are recommended. Firstly, as has been mentioned earlier in this chapter, future research should adopt the same research design as study 2 on a larger scale from the start until the end of the learning community. Doing so, may provide a more accurate picture about how participating in a learning community contributes to individuals' skills and knowledge. Additionally, future research could do more interviews than only three. At least half of the participants could be interviewed, which would lead to a more robust and nuanced conclusion, since it incorporates more perspectives and experiences.

Concluded, despite the fact that this research has revealed the elements affecting the contribution of learning communities to the personal knowledge of individuals, it is important to acknowledge the research's limitations. The understanding about the contribution of participating in a learning community to the individuals' personal skills and knowledge can be furthered. This can be done by overcoming the limitations of this study in future research, such as by increasing sample numbers, using a longitudinal research method, and assuring active involvement in data collecting.

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Appendix

Appendix 1: Codes study 1

- (Gezamenlijk) doel learning community
- Behoefte leren in LC
- Bijeenkomsten zijn kort van te voren gepland
- Bijeenkomsten zijn vooruit gepland
- Communicatie: Contact buiten de bijeenkomsten
- Communicatie: Oppervlakkig contact
- Community building
- Community-ontwikkeling: Groepsdynamiek
- Community-ontwikkeling: Interactie bevorderen
- Community-ontwikkeling: Sociale interactie
- Community-ontwikkeling: Uitdagingen bij interactie
- Contextuele waarde: Belang van fysieke aanwezigheid
- Continue deelname: Deelnemen aan de LC
- Digitale communicatie
- Gebruik van werkvormen
- Gedrag/interactie
- Gemeenschappelijke verwante afwegingen
- Gezelligheid
- Hybride meetings
- Informatie delen
- Kennis delen
- Kennis opbouwen

- Kritisch denken: Alternatieve oplossingen overwegen
- Kritisch denken: Analyseren
- Kritisch denken: Analytisch denken
- Kritisch denken: Discussie
- Kritisch denken: Evalueren
- Kritisch denken: Feedback vragen
- Kritisch denken: Open staan voor feedback
- Kritisch denken: Praktisch denken
- LC onderwerpen voor de lange termijn
- LC onderwerpen korte termijn
- Motivatie: Active rol
- Motivatie: Normatieve afwegingen
- Motivatie: Persoonlijke voordelen
- Netwerken
- Offline omgeving
- Online omgeving
- Ontwerpkeuzes
- Ontwerpkeuzes
- Percepties met betrekking tot leren
- Persoonlijke kennis
- Persoonlijke vaardigheden: Persoonlijke attitudes
- Persoonlijke vaardigheden: Persoonlijke capaciteiten
- Persoonlijke vaardigheden: Persoonlijke eigenschappen
- Praktische toepasbaarheid van geleerde kennis

- Psychologische veiligheid: Deelnemers durven mening te uiten
- Psychologische veiligheid: Deelnemers geven elkaar feedback
- Psychologische veiligheid: Deelnemers leren elkaar kennen
- Psychologische veiligheid: Deelnemers vertrouwen elkaar
- Psychologische veiligheid: Wederzijdse ondersteuning
- Reflecteren leerproces
- Rol facilitator
- Samenstelling learning community
- Samenwerking
- Studenten-bedrijven samenwerking

Appendix 2: Tables Cases study 1

Type of knowledge/skills gained	Quote participants	Quote facilitator/project leader
Gain new knowledge to use in future events	“Often it's not something I immediately start working on the next day, but it's something you take with you and then, when the time comes, like now with the one specific example concerning lying time, which we may have heard about six months ago in the learning community, but it's something you take with you and you think: oh, we want to do something with that in the future, and now is the time to actively approach that person and do something with it”	
Knowledge used for improving personal skills	“I understand. Also, do you manage to really make the information you get your own to make it applicable? Most things do, yes”.	
Facilitating elements for gaining personal skills and knowledge		
Informal contact outside of the meetings		“Yes, I think that was what was said last time, and I think it was even in relation to that they had spoken or contacted each other separately for a while or something like that If I remember correctly.”
Physical meetings		the interviewee argues that meeting physically led to far more interaction than meeting online which influenced the learning process of the participants.
Commitment through expectations		“So in other words, if people have to keep saying, as it were, hey, what have you done in the past two, three months and what are your results, and can I just see the 'figures', eh, the timeline and the outcomes? Yes, what I just said: after three months you say of oh yes, we haven't had time. But, after the second time then it becomes, then A, the audience doesn't pick that, and two, they find it very annoying themselves.” In this case, participants were almost forced to make sure that they commit to the learning community since the other participant wouldn't accept when they don't commit.

Case A

Type of knowledge/skills gained	Quote participants	Quote facilitator/project leader
Gain new knowledge by reflecting on their own team practices	“We once had a session on resilience, not so much the resilience of your company, but more of your inner self. That was great fun, it was about your energy drains versus your energy givers, for example. Then I drew such scales with my team (that was at my previous company, by the way) and everyone was allowed to call out: what for you is an energy giver and what is a drain? To see, can we throw those energy drains back to another department or so. Those are things when you talk about applying, though, those are things I did.”.	
Knowledge gained through presentations	“Yes, I definitely... The fact that some companies are doing well with their measurement of their emissions, how do companies address ESG issues, how does their question structure run within the company? From rolling up small issues, day-to-day issues, to strategic issues. Yes, that there are mirrors, actually it's just often mirrors that are held up, and then always reflecting to: what can I do with it? So that's actually a, yes, I like that.”.	
Facilitating elements for gaining personal skills and knowledge		
Participant being expected to not only get knowledge but also bring knowledge to the learning community		“Can you learn from each other there? Yes, can you learn from each other huh? By exchanging experiences and I know, In the first session we also did a brainstorming. Okay, so what topics are relevant now?”
Usage of multiple learning methods		“learning from that speaker say, and from that speaker's knowledge and experience, and the other times, they really spar with each other. So that does make a big difference, and that combo is kind of fun.”

<p>Relatability of the meeting's topic</p>		<p>Yes both, but if it is the former, then it works best. Then we attract the most people and yes, if it is also applicable to a broad group. To give an example: that mentally resilient in the covid period, everyone can relate to that, even though... But and in addition a topic like: how do you organise your city logistics when zero emission zones come into effect? Yes, that doesn't apply to everyone either, that depends of course on your products that your company trades. So then you notice: there's a different dynamic in that.</p>
<p>Participant getting to know each other better</p>		<p>the facilitator gave the answer “yes” to the following question: “Do you also notice that in that learning in that core group that they get to know each other better, that they can also respond to each other in a more focused way because they know each other's contexts, backgrounds by now?”</p>

Case B

Type of knowledge/skills gained	Quote participants	Quote facilitator/project leader
Gaining new knowledge through exchanging experiences with other participants	“Yes I think that is mainly mirroring a, I shouldn't say a problem, of a challenge. Look you have more people who are at the same, I'll call it the same level for a moment. And everybody has the same thing, the same challenge just in slightly different form. And you don't have to reinvent the wheel anymore, and that was just very interesting. At some point you can really talk to your colleagues about, gosh, how did you solve that? Or what did you run into? And you can all work together alongside the supervisors for the students, so it was also very interesting for the company supervisors to also learn something there.”	
Personal skills adjusted because of intern's questions	“If you have a student and at some point he asks a question, you think, yes. Then you start thinking, yes, maybe he does have a point because he can be very uninvolved. And that did change some things, and also just really blank questions. That I think, yes, okay.”.	
Personal knowledge gained through informal contacts outside of meetings		The interviewee also mentioned that he contacted his fellow participants outside of the meetings in order to gain new knowledge about customs documentation.
Personal skills learned from meetings		“Yes, yes, well. How useful anyway a good preparation is and that it doesn't all have to be typed out because then it becomes more of a read-aloud story and also just. Starting a presentation by making a very powerful statement. Just very short, very powerful and that someone is triggered right there to keep listening.”
Facilitating elements for gaining personal skills and knowledge		
Relatability of the meeting's topic		: “For example, in the last TIP, in TIP 5, we had an intern at one of the companies, who was doing something with ecrm eh for his internship assignment, with that digital waybill, well, he had accumulated such a lot of knowledge, he gave a presentation eh two or three times during meetings.”.

Working method adjusted to the participants		Those you have to, yes, those you have to We don't have to do anything but to keep them on their toes it has to, it all has to be approached much more pragmatically than such a so-so target group in JOI.
Participant being expected to not only get knowledge but also bring knowledge to the learning community		“Yes, We also gave them assignments at some point beforehand in preparation. For that meeting then he always did a follow up bin on it as well. To make sure Everybody did deliver something now.”

Case C

Appendix 3: Interview questions study 2

Interview question before meeting 1

Thank you once again for your participation in the LeaderCommunity and for taking the time to engage in this interview. Our graduate research focuses on exploring knowledge and skills, motivation, and fostering a positive learning climate within a Learning Community. We assure you that your responses will be processed anonymously. Would it be acceptable for us to record this interview to ensure accurate results?

Please provide us with the following basic information:

- What is your age?
- What are you currently studying?
- Do you have a side job? If yes, please specify where you work and your position.

Now, let's move on to the interview questions:

1. How would you define leadership based on your understanding?
2. How do you personally describe a leader, and what is the reason behind your description?
3. What specific characteristics do you believe make someone a leader?
4. Could you share any challenges you have encountered while practicing leadership?
5. Have you previously participated in a learning community? If so, what are your expectations from this current Learning Community experience?
6. What knowledge and skills do you hope to acquire during your involvement in this learning community?
7. How do you anticipate gaining knowledge and skills within the learning community?
8. Could you describe any prior experiences you have had with leadership?
 - a. If you have no previous leadership experience, please share any related experiences you have had.
9. If you were in a leadership position, how would you describe your current leadership style?

- a. If you have no previous leadership experience, please describe the leadership style you would adopt if you were in a managerial role.
10. In terms of leadership, where do you feel you have space for growth or improvement?
11. What motivates you to participate in the learning community?
12. How can organizers of the learning community ensure that participants remain motivated throughout their involvement?
13. What factors could potentially limitate your motivation to engage in the learning community?
14. To what extent do you intend to attend all learning community meetings?
15. In what situations do you feel safe within a study or work-related group?
16. How comfortable do you feel providing feedback or expressing your opinion in a study or work-related group?
17. Can you describe a learning environment where you felt you learned a lot?
18. What were the social aspects of this environment? For example, motivation levels, psychological safety, social interactions, and group dynamics.
19. Could you share an example of a learning climate in which you had positive experiences and were able to learn a great deal as a result?
20. What are your expectations regarding the design of the Learning Community?
21. What are your expectations regarding how the Learning Community will be managed?
22. Do you prefer physical or online meetings in terms of motivation and fostering a positive learning climate?
23. Please explain why you have a preference for this particular format of meetings.

Thank you for your cooperation in providing us with valuable insights for our research.

Interview question after meeting 2

1. Overall, how would you describe your experience with the meetings thus far?
2. In what ways do you envision applying the skills you have acquired during the learning community in your future professional and personal life?

3. What has motivated you to consistently participate in the learning community? Which factors have played a significant role in this motivation, and which factors have not?
4. Have you encountered any obstacles while participating in the learning community, and if so, how have you managed to overcome them?
5. How did you perceive the physical and online meetings? Which format do you prefer, and why, particularly in terms of motivation and fostering a positive learning climate?
6. How did you find the process of group formation within the learning community?
7. What specific activities were undertaken to establish trust within the group?
8. In what ways do different work formats, such as plenary sessions or small group discussions, contribute to stimulating group formation?
9. Can you provide examples of situations where you have experienced significant learning within the learning community?
 - 9.1. How do you believe you could have maximized your learning and gained more from the learning community experience?
10. What advice or tips would you offer to future participants to make the most out of their learning community experience?
11. What recommendations would you give to the learning community organizers to enhance the value of future meetings?
12. Lastly, based on your experience, would you recommend the learning community to others seeking to improve their personal and professional skills and knowledge? Why or why not?

Thank you for your ongoing participation and valuable insights.

Appendix 4: Codes study 2

- Belang van fysieke aanwezigheid
- Belemmering
- Communicatie: Constructieve |(opbouwende) communicatie
- Communicatie: Contact buiten de bijeenkomsten
- Community-ontwikkeling: Groepsdynamiek
- Community-ontwikkeling: Groepsdynamiek
- Community-ontwikkeling: Interactie bevorderen
- Community-ontwikkeling: Sociale interactie
- Community-ontwikkeling: Uitdagingen bij interactie
- Contextuele waarde: Belang van fysieke aanwezigheid
- Continue deelname: Deelnemen aan de LC
- Deelname learning community
- Deelnemer voelt zich veilig
- Gebruik van werkvormen
- Gebruik van werkvormen
- Kennis opbouwen
- Kritisch denken: Discussie
- Kritisch denken: Discussie
- Kritisch denken: Feedback vragen
- Kritisch denken: Open staan voor feedback
- Kritisch denken: Open staan voor feedback,
- Kritisch denken: Praktisch denken
- Leeromgeving
- Motivatie: Active rol
- Motivatie: Persoonlijke voordelen
- Offline omgeving
- Online omgeving
- Percepties met betrekking tot leren
- Praktische toepasbaarheid van geleerde kennis
- Psychologische veiligheid: Deelnemers durven mening te uiten
- Psychologische veiligheid: Deelnemers geven elkaar feedback

- Psychologische veiligheid: Deelnemers leren elkaar kennen
- Psychologische veiligheid: Deelnemers vertrouwen elkaar
- Psychologische veiligheid: Wederzijdse ondersteuning
- Reflecteren leerproces
- Rol facilitator
- Samenstelling learning community
- Samenwerking