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Value creation in a learning community: an interprofessional partnership between nursing home care, education and students

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Abstract

Objectives: To assess the value created in a learning community – comprised of different professionals and nursing students – at a nursing home.

Methods: A case study approach was used. Data were collected between 2019 and 2021 through self-reports, observations and stories (interviews, diaries).

Results: The template analysis revealed nine transcending themes, six associated with preexisting value-creation cycles (expected, immediate, potential, applied, realized and transformative value) and three other relevant themes: contextual, factors and value-creation initiators.

Conclusions: A nursing home learning community comprised of diverse professionals in partnership with nursing students shows a variety of value creation and seems to potentially leverage interprofessional and lifelong learning activities, on top of formal nursing education. It is recommended to integrate the value-creation cycles into the processes of learning communities to promote collective decision-making. Research on both the final level of students involved and having residents participate in the learning community would be worthwhile.

Keywords: nursing education; learning community; interprofessional learning; value creation; nursing home care

Introduction

Caregivers must increasingly care for an aging population that has more complex problems. Responding to this, nurses need to work closely with professionals from other sectors and professions [1, 2]. A current problem in the Netherlands concerns the low number of bachelor-educated registered nurses working in nursing homes [3], with a mismatch between education and practice identified as one of the factors [4]. A proposed approach is learning communities (LCs) to connect working and learning for the benefit of health care organizations, educational programs and students [5].

Recent studies have provided some examples of community learning within nursing home care, where different collaborating professionals focus on learning and development around topics or challenges related to

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their own practice, for example, regarding person-centered care [6], end-of-life care [7], and COVID-19 infection control [8]. In addition, studies conducted in hospital nursing practice [9, 10] and non-health care-related fields [11–14] have shown that such communities can create value for those who are involved, such as practitioners, educators, or students. To investigate value creation, these studies used the framework of Wenger et al. [15], developed to promote and assess the value of learning powered by community involvement.

Although community learning within nursing home care appears to be an approach that integrates different sectors and professions to support learning and development in practice, studies on the value of learning promoted by community involvement in nursing homes are scarce. Specifically, nursing home LCs, in which several health care professionals and educators collaborate with nursing students, merit additional research. Research on learning communities in this specific context and composition contributes to understanding how members derive value from their community involvement to advance intensive collaboration and professional practice that will help address national and global elder care challenges. This study therefore set out to assess the value created in an LC – comprised of different professionals and nursing students – at a nursing home.

Literature review and framework

An LC and other related communities (e.g., community of practice) can be considered a form of community learning, and other researchers have described the community aspect as a shared identity around a common purpose or area of learning where individual and collective learning takes place in the development of mutual partnerships [15–17].

Wenger et al. [15] focused on the value that communities create when they are used for social learning activities. Their value-creation framework includes five different cycles, and over the past years, the value-creation framework has been further developed [18–20]. Throughout the current study, the following value-creation cycles were used: expected, immediate, potential, applied, realized, and transformative value.

Expected value refers to reasons, needs and expectations and resembles the value that drives members to participate [18]. *Immediate value* refers to community activities and interactions that can produce value in and of themselves. *Potential value* refers to generated knowledge capital, which holds value in its potential (even if it is never realized) and is expressed in different forms: human capital (personal assets), social capital (relationships and connections), tangible capital (resources), reputational capital (collective intangible assets) and learning capital (transformed ability to learn). *Applied value* refers to adopting and applying knowledge capital in other situations and represents value that identifies how practice has changed [15]. *Realized value* refers to performance improvement and reflects value related to the effects that practice changes have and makes a difference to what matters to members and stakeholders. *Transformative value* refers to the transformation of people's identities or the broader environment, and its value corresponds to a reconsideration of learning needs and what counts as success [15, 19].

According to Wenger et al. [15], the idea of the framework is to use the complementarity between indicators and stories across the cycles to build an integrated picture of the value created by communities.

Methods

Design

To assess the value created in a nursing home LC as comprehensively as possible, all value-creation cycles from the framework of Wenger et al. [15], including the cycle *expected value* proposed by Dingyloudi and Strijbos [18], were utilized for this study. A case study approach was selected in which an LC at a nursing home was studied between 2019 and 2021. This approach is aligned with the interpretative perspective and focuses on developing an in-depth description to provide an understanding of an issue or concern. Moreover, this research perspective offers the opportunity to focus on a specific context where people work, use multiple sources during data collection, and interpret participants' constructions of meaning [21]. The community of this study was purposefully

selected based on criteria related to composition and accessibility [21, 22]. In sum, a nursing home LC in practice comprised different professionals and students who could show different perspectives and were willing to participate.

Research case

The LC was officially initiated in September 2019 within a nursing home in the Netherlands. The focus was to develop a more realistic perspective on care for older persons among nursing students and to demonstrate the added value of bachelor-educated registered nurses in nursing homes. During two academic years (2019–2020, 2020–2021), monthly sessions were organized to meet each other physically. During these sessions, members organized learning activities and discussed different topics, such as person-centered care and nursing leadership. A kick-off meeting was held at the beginning of each academic year to create a collective perspective on learning, needs and desired outcomes. Due to COVID-19, monthly sessions were canceled in semester 2 of the first academic year and resumed in semester 1 of the subsequent academic year. From then on, members physically met again according to COVID-19 guidelines. In addition, there was the opportunity to participate in the sessions remotely.

Participants

Members of the LC were included. This group consisted of employees working in the nursing home or home care setting, nursing students in training, and lecturers and a researcher from higher professional education (Table 1).

Employees from wards or teams that did not have any of these nursing students in training were not involved in the LC and excluded from the study population. Table 2 provides an overview of the community members and gives insight into the size of the LC. A part of the participants were members during both academic years (2019–2020, 2020–2021), and another part of the members started or left half way as a result of an agreed internship period (20 or 40 weeks), an uncompleted internship, a new job or other work activities.

Data collection

Data were collected between October 2019 and April 2021 through completed and discussed self-reports, observations, diary stories and semistructured value-creation interviews using the value-creation framework to assess the value created (see [15, 18]). To capture value in terms of things that matter to the community members, self-reports and discussed expectations and outcomes were collected during eight sessions (four sessions in both academic years during semester 1). During the same sessions, the principal researcher (W.M.H) participated in person as an observer and made field notes following a general format, which was reviewed and pilot tested in advance. Each of the sessions was audio-recorded to assist in processing the field notes into observation reports, which were sent for review to a second researcher (C.W.) who participated in the LC as a member.

To reflect different perspectives and maximize understanding [21] about the value created, six members that represented different participating professions or positions (i.e., key figures) voluntarily recorded diary stories after participating in the monthly sessions using a voice recorder and reflective pocked card (Supplementary material 1A). An overview of community members who participated in the diaries and the number of diaries collected can be found in Appendix A (Table 3). In addition, 14 community members with different membership durations, professions or positions were interviewed on a voluntary basis to further explore relevant topics regarding the value created. In advance, an interview guide (Supplementary material 1B) was drafted, reviewed and pilot tested based on the indicators and templates of Wenger et al. [15] and inspired by other value-creation studies [18, 23, 24]. Member interviews were semistructured in nature, and focused on the overall value of the participation and specific value-creation stories

Table 1: Members who constitute the learning community.

Community members	Description
Registered nurses	Licensed nurses working on a nursing home ward or in the home care team
Nurse aides	Nursing assistants working on a nursing home ward who provide basic daily care
Coaches	Professionals from the nursing home or home care setting who coach and mentor nursing students in practice
Team leaders	Managers working at the operational management level of the organization who are responsible for the function of their care team(s)
Nursing students	Students enrolled in a higher professional education program to obtain a bachelor's degree in nursing
Lecturers	Teachers working at the University of Applied Sciences who teach and train nursing students
Researchers	Researchers working at the University of Applied Sciences who conduct research

Table 2: Overview of community members during semester 1 of both academic years.

Community members	Affiliation	n
Academic years 1 and 2		
Registered nurses	Nursing home	1
Nurse aides	Nursing home	4
Coaches	Nursing home	1
	Home care team	1
Team leaders	Nursing home	2
Lecturers	University of Applied Sciences	2
Researchers	University of Applied Sciences	1
Academic year 1		
Registered nurses	Nursing home	1
	Home care team	1
Nursing students ^{a,b}	University of Applied Sciences	7
Academic year 2		
Registered nurses	Nursing home	2
	Home care team	1
Nurse aides	Nursing home	1
Coaches	Home care team	1
Nursing students ^c	University of Applied Sciences	8

^aFive third-year students were stationed as interns at a nursing home ward, two third-year students within the home care team.

^bThree of the seven students left the internship prematurely during semester 1. ^cOne first-year student, four third-year students and one fourth-year student were stationed as interns at a nursing home ward, two third-year students within the home care team.

obtained from members' meaningful moments. Due to the COVID-19 pandemic, the interviews were conducted remotely by video calling (ZOOM Video Communications) during semester 2 of each academic year.

Data analysis

A template analysis was chosen, which is a form of qualitative data analysis – characterized as a style of thematic analysis – and emphasizes a balance of flexibility and structure in how it handles textual data. This analysis style, which encourages deep coding to develop themes extensively and promotes a process of developing, revising and refining [25, 26], closely aligns the aim and method of this study.

The template analysis stages suggested by Brooks et al. [25] and King and Brooks [26] were applied: 1) familiarization with data; 2) preliminary coding; 3) clustering; 4) producing an initial template; 5) applying and developing the template; and 6) final interpretation. Recorded data were transcribed, a subset of data was read to become familiar with the data, and the preliminary coding was independently performed by two researchers (W.M.H., A.M.T.L.) with *a priori* themes in mind (Supplementary material 2). Because these *a priori* themes were broadly defined, data-driven (open) coding was enabled at this stage. Then, both researchers and the researcher who was a member of the LC (C.W.) discussed the emerged codes and structured these into meaningful clusters by using ATLAS.ti 9 to organize emerging themes and produce an initial template. Subsequently, the initial template was applied to additional data and further developed by refining, merging and inserting new themes. All stages involved an iterative process of identifying, rereading, modifying, reflecting and determining consensus between the three researchers to finalize the template and interpret the coded data.

Ethics and procedures

Several procedures were followed to ensure the quality of the study, taking into account the principles of the European General Data Protection Regulation (GDPR) 2016/679. First, an application was submitted to the regional medical Ethical Committee, and approval was obtained from the nursing home board. After providing written and verbal information about the study and voluntary participation, written consent was obtained from the members and attendees during the observed sessions, key figures, and interviewees to collect the data (e.g., audio records). During processing of raw data into text, personal data were excluded by pseudomization prior to data analysis and stored securely. Second, to pay close attention to the research context and dynamics, memos and case summaries

were immediately written by the principal researcher after data collection to focus on aspects that were not easily addressed in coding, and to reflect on own thoughts and feelings. In addition, independent coding was performed at the preliminary coding stage, and a full record of the template development was saved. An extensive log with reflections and memos was kept to document emerging thinking processes during the analysis, changes made to the template versions and the reasons for interim changes [26]. Third, multiple consolidated criteria for reporting qualitative studies (COREQ) were followed [27].

Results

The results section is structured into three paragraphs to provide a comprehensive picture of the value created. First, the final template including the emerged themes is presented. Second, an outline is given of the value created in the LC, which is detailed third, with three narratives including key quotations drawn from members' meaningful moments.

Template and emerging themes

Figure 1 shows the final template, including the transcending themes and underlying themes. The final version of the template consists of nine transcending themes and shows more transcending themes than the six predefined *a priori* themes. Furthermore, 27 underlying themes were included, of which each transcending theme included two or more themes. Of the 27 themes in total, six were designated integrative themes [25]. These themes (shown in *italics*, Figure 1) were designated as such because they integrated into more than one of the transcending themes. Both the content description of the themes and the template including the lower-level coding can be found in the Supplementary materials 3a, 3b, and 4.

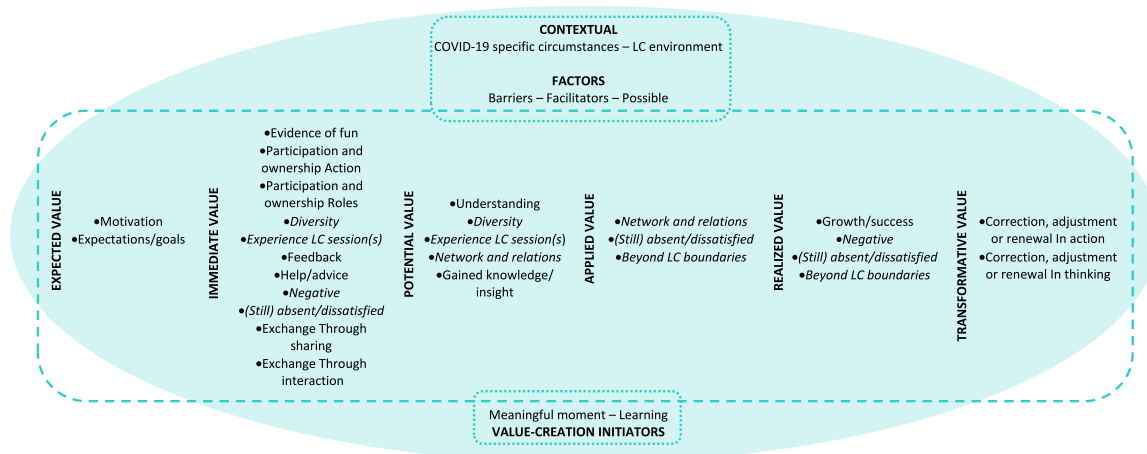


Figure 1: Final template (6.3) including transcending themes and underlying themes. This template version shows the emerged transcending themes (9) and the underlying themes (27). Five presented transcending theme names (immediate value, potential value, applied value, realized value and transformative value) are drawn from the value-creation cycles proposed by Wenger et al. [15] and Wenger-Trayner et al. [19], and one (expected value) is drawn from those of Dingyloudi and Strijbos [18]. Emerging underlying themes presented in *italics* refer to the emerged integrated themes (6).

Outline of value creation

This outline describes the value creation in the LC along the emerged themes. To illustrate the coherence with the template (Figure 1), transcending themes incorporated into the outline are specified by abbreviations (ev, expected value; iv, immediate value; pv, potential value; av, applied value; rv, realized value; tv, transformative value; con, contextual; fac, factors; vci, value-creation initiators).

Expected value (ev) was reflected in members' motivation to participate, including the associated expectations and aims. Although some members were extrinsically motivated to participate (e.g., involvement is inherent in the internship) or expected potential barriers (e.g., much work), learning together on various topics and learning methods was a motivator for many of them. Moreover, they expected to share practical examples with each other, shape the positioning of registered nurses in care for older persons, gain insight into students' experiences and progress, and offer each other tips, advice and help.

Community activities and interactions related to the physical monthly LC sessions, preparation meetings with students, and interactions that occurred outside of these gatherings. Being facilitated to physically meet each other – also during the COVID-19 pandemic in accordance with guidelines – in a stimulating and atmospheric LC environment where members are respectful and open to each other was indicated as pleasant and important (fac/con). This also applies to learning communally with and from each other, which was described as being able to continue learning as a professional, different from traditional classroom learning, activating learning in interaction. Meaningful moments were primarily identified by members as those related to immediate value, with, for example, case discussions and students chairing being recurring moments (vci). Perceived indicators of *immediate value* (iv) concerned the sharing of gained insights, available knowledge, announcements, information and members' experiences. Although members experienced conversations (e.g., due to time constraints [fac]) that did not always provide the desired depth and response or certain topics were not yet addressed during the conversations, the dialogs, discussions and brainstorming moments were generally appreciated. Participation and ownership were reflected in members' actions (e.g., being prepared, providing input on content and design, actively participating) and in fulfilling roles in relation to each other. For example, students receive opportunities from various professionals to practice leadership by serving as chairs during LC sessions. Although some professionals (e.g., from home care or education) were not always present during the monthly LC sessions (fac), the direct convergence of various professions, job/education levels, and work contexts were appreciated, as well as the provision of feedback, help and advice. Expressions of fun were perceived in laughing and joking. In addition, members repeatedly associated fun with interactive learning and learning in other ways (e.g., using a quiz, less classroom-like) (vci).

Regarding *potential value* (pv), knowledge and insights from the LC related to topics covered (e.g., self-sufficiency, leadership, palliative phase) were obtained. Based on the practice-based content and experiences gained during LC sessions, members experienced transfer opportunities to their own contexts where they worked and learned as professionals or students. In addition, members developed a sense of understanding (human capital) that was referred to in terms of becoming aware of important issues (e.g., person-centered care), finding recognition or affirmation from others (e.g., while discussing cases), and becoming visible what you stand for and who you are (e.g., mutual expectations, personal feelings). During the process of community building, expectations, reflections and diverse perspectives were made explicit. This way, members got to know each other, their relationships extended, changed or led to connection, for example, the connection between student and professional that reaches another level (social capital). Members also referred to engaging students in the learning of professionals and using learning or mentoring methods together that could be supportive in their own work and learning contexts (learning capital). Community participation gave members access to new or other resources, such as online learning and presentation platforms, peer-to-peer coaching methods or health care-related tools (tangible capital).

Applied value (av) was shown by applying knowledge, ideas and working methods gained from the LC sessions within one's work or learning context. Sometimes application did not yet take place because members expressed that the content of activities and interactions did not sufficiently match their own practice, for

example, because new knowledge had not been generated or because products were not already available or usable. Community participation served as an incentive to share and discuss knowledge, ideas and working methods with those outside the LC (e.g., colleagues). Members mentioned more consciously identifying issues in their own practice as a result of the sessions, for example, regarding leadership styles (LC2) and the current status of oral care (LC7). Developed LC connections and relationships were utilized to provide assistance and support in residential care or in the guidance of students.

Indications of *realized value* (rv) were mainly related to the involvement of bachelor students in the LC. According to members, these students grew in their own abilities, confidence and cooperation, where they achieved accomplishments of which they could be proud. Over time, the LC developed as a whole in terms of process and design, within which students were more in charge. Members cited that the positioning of students within nursing home wards and teams led to a change among other professionals (e.g., colleagues) where students were more accepted and given the opportunities to fulfill their roles. Members believed that the connection between the LC and the outside environment could be further strengthened in terms of the current involvement of nonmembers. In addition, examples of outcomes were mentioned within nursing home wards, such as an improvement in reporting or the introduction of a wound classification model.

Regarding *transformative value* (tv), members expressed restructured or renewed perspectives with regard to professional competencies (e.g., leadership, collaboration, change management), where some of the examples mentioned indicate transfer in behavior, such as a student who has developed a new perspective on leadership and therefore consciously chooses a person-oriented instead of a directive leadership approach. Additionally, a restructuring or renewal of professionals' perspectives was indicated regarding the LC inclusion of bachelor students and associated learning. For instance, professionals who now had a clearer perception of what bachelor nursing students could add to professional practice and learning within a nursing home. Such perspectives appeared to transfer in some cases into the reform of working methods and strategies, for example, changing the student hiring policy regarding internships and adding questions as learning intervention to an existing course for caregivers.

Narratives drawn from meaningful moments

The presented narratives are drawn from three meaningful moments told by members: 1) a case discussion, 2) using a digital learning platform (Kahoot), and 3) student placements. These moments are highlighted because they demonstrate the created value in more detail, with the narratives telling how such moments can be meaningful to different members, what value is created and how this value becomes visible across cycles. The same abbreviations from the outline are also integrated into the narratives, and references are made to member key quotations presented in the produced template.

Narrative 1 'A case discussion' starts with a meaningful moment told by one of the students (student-a). The narrative with key quotations illustrates how members found value regarding different value-creation cycles during their peer-to-peer coaching when they discussed a case about a resident with attention-seeking behavior (Box 1, Figure 2).

Box 1: Narrative 1 'A case discussion'.

A meaningful moment indicated by student-a during LC6 concerns discussing a case regarding a resident with attention-seeking behavior (vci). By using peer-to-peer coaching, members strive to exchange experiences and deepen their knowledge (ev). During this session, members discuss and explore the case where multiple useful ideas and suggestions are mentioned and new insights are gained (iv/pv). Despite the lack of time, they think along and take the problem seriously (fac/con). Then, student-a decides to apply one of the suggestions in practice: observing resident-x. The student discusses the observations with the psychologist (av), and the psychologist adjusts the written resident approach accordingly (rv). Because this approach is rarely read by colleagues, student-a decides to discuss this with them (av). As a result, the night shift reports improve regarding the resident's nighttime sleep (rv). Student-a shares this experience during LC7 and receives positive feedback from other members (iv) that is considered meaningful (vci). Additionally, student-a cites that a new view has emerged among colleagues about the application of soothing medication (tv).

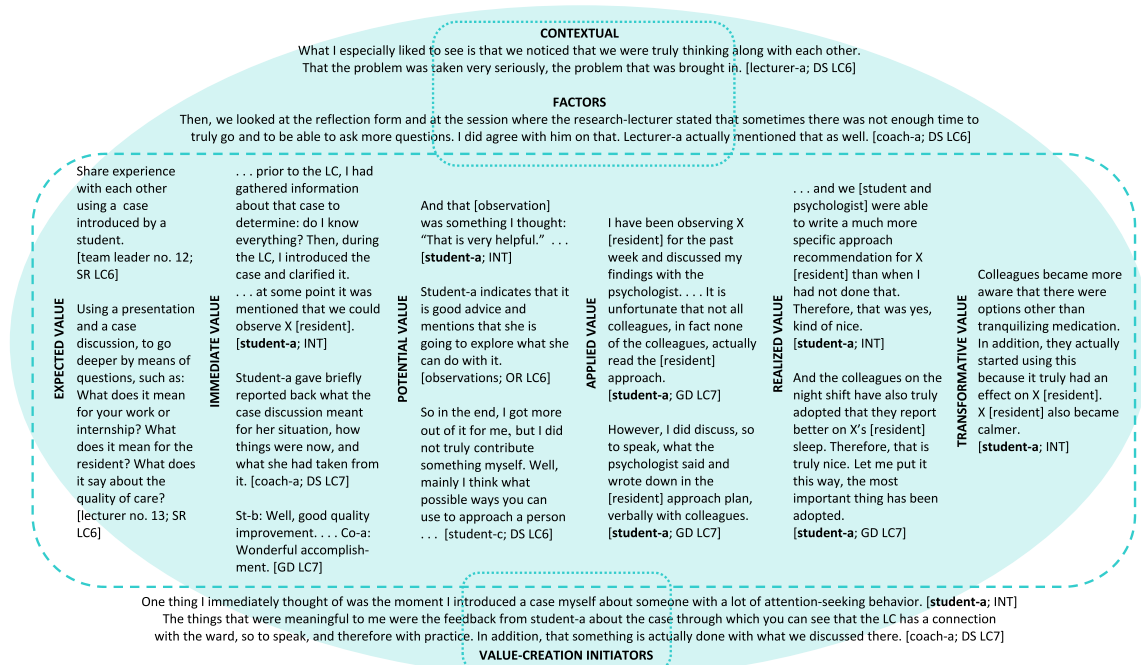


Figure 2: Key quotations of narrative 1 'A case discussion' presented in template. The abbreviations in the figure refer to the data sources and session numbers of the learning community. DS, diary story; SR, self-report; INT, value-creation interview; OR, observation report; GD, group discussion; LC6, learning community session 6; LC7, learning community session 7.

Narrative 2 'Using a digital learning platform (Kahoot)' starts with a meaningful moment told by one of nurse aides (nurse aide-a). The narrative including key quotations (Appendix B1, B2) shows how members associated evidence of enjoyment with interactive and other forms of learning specifically related to digital learning platforms. Narrative 3 'Student placements' starts with a meaningful moment told by one of the team leaders (team leader-a). The narrative including key quotations (Appendix C1, C2) shows how an LC in cooperation with bachelor nursing students put things in motion for both students, education and practice, specifically by placing these students in nursing home teams. In this narrative, the team leader mentioned COVID-19 circumstances. Other data also indicated the pandemic conditions at the time, such as the interim cessation of monthly sessions (2nd semester, study year 1), members' absences, mandatory distance and wearing of mouth masks. Based on the experienced circumstances, members explicitly mention a preference for an LC format where you can physically meet, for example, as cited by nurse aide-b:

Well, I do support just doing it [the LC] physically as a group. Because you can look each other, feel each other slightly more than with the computer, I think. ... So I also like to see such a group together and feel the atmosphere. That is lacking when you use the computer.

Discussion

This study aimed to assess the value created in an LC – comprised of different professionals and nursing students – at a nursing home. The results of the study show that by using the value-creation framework of Wenger et al. [15], the created value of learning in a nursing home LC can be assessed.

The findings reveal the variety of value created regarding each cycle, as well as across cycles, in which the perspectives of different members were a rich source of data. This supports the ideas of Guldberg et al. [28] and Booth and Kellogg [23] about value-creation stories allowing the surface perspectives of different individuals

and illustrating how members' value derived from their participation can travel multiple cycles. Although the present study generally surfaces different perspectives and creates a varied picture of the value created, no real signs of reputational capital (potential value) are detected. In contrast, however, previous studies in other fields have found that membership is valued through the recognition of others in their organization [12], the reputational inspiration gained from being part of the network [29], and the collective voice in broader discussions and policy [23]. The lack of real signs of reputational capital may be explained by the fact that stakeholders outside the LC (nonmembers), who potentially are able to elaborate their perspectives on the reputation of the LC, were not included during the current study (e.g., residents, colleagues, managers, external partners).

One interesting finding is that value in some of the members' stories traveled across the value-creation cycles and found their way back into the LC itself. This matches the *loop* explanation originating from Wenger-Trayner et al. [19] and Wenger-Trayner and Wenger-Trayner [20]. In short, different types of value can take the form of a *flow* and flows across value-creation cycles. When a flow returns to an earlier point by feeding back a story into the learning of a community, a *loop* is created. For example, the first narrative in the present study: the student who introduces a case during an LC session (starts at immediate) → finds one of the suggestions useful (flows to potential) → tries this suggestion and discusses it further outside the LC (flows to applied) → resulting in modification of the approach plan to improve night shift reporting, which seems to reflect a new perspective on care among colleagues (flows to realized, transformative). However, the flow does not end with the student's story. The student then discusses the experiences with LC members during a follow-up session; they are impressed and compliment the student (loops back to immediate). Such loops might inspire others to adopt or try something similar in their own context [19, 20].

The template analysis reveals that some of the expected value data matched the data regarding the realized value created, for example, the desire to enthuse bachelor students for care for older persons and strengthen the position of registered nurses by the realized growth of these students and team professionalization (see narrative 3). Previous studies also noticed the link between community aims and the data analyzed [28, 30], in which common goals may have nurtured the community design, processes or reflections. The matches in this study between the data of these value-creation cycles may have become notable due to the kick-off meeting, which was held at the beginning of each academic year to create a collective perspective on learning, needs and desired outcomes. It is conceivable that discussing these items within the LC revealed what members considered to be of value with respect to individual and collective intensions, and they acted accordingly. For instance, professionals gave students the opportunity to practice leadership by serving as chairs during LC sessions, which supports the idea of Dingyloudi and Strijbos [18] with respect to expected value, that values themselves are shaping factors that may guide future behavior.

Another finding is that members mentioned that digital attendance at online or hybrid gatherings was sometimes limiting to participation and engagement. A possible explanation might be the importance of a sense of connectedness, familiarization between members, growth of trust and satisfaction of contribution, identified by Mavri et al. [31] as contributors to community participation and engagement, which were conceivably experienced by the members during their physical activities and interactions during semester 1 of the first academic year. Therefore, it seems possible that members particularly preferred physical LC sessions and resumed these, where possible, immediately during the second year for the benefit of community building.

This study contributes to the information of bachelor-educated registered nurses in nursing home care by showing the collaboration between different professionals and bachelor nursing students in an LC. The current results revealed the growth of nursing students' competencies and described the effects on caregivers inside and outside the LC. For example, students experiment with leadership, supporting colleagues in handling procedures and being an example in applying learning or care assets. These competencies are in line with those identified by Backhaus et al. [32], who showed that desirable competencies for bachelor-educated registered nurses in nursing homes are most related to leadership and coaching, while traditionally more attention has been given to the development competencies related to nursing expertise and technical skills. In the current study, this more 'traditional attention' is reflected by the lecturer's perspective, who worries about students' knowledge and skill level given the supervision of nursing home caregivers.

Although concerns about knowledge and skill level were not specifically surveyed among students, the present results do not indicate such signs of concern among them. A possible explanation may be the distinction between formal and nonformal learning [33–35], where the lecturer primarily values formal learning associated with certification and students are more attuned to features of nonformal learning, such as learning taking place outside the classroom, the structure of learning support through the LC concept and learning originating from members' development needs. It is conceivable that LC involvement may predominantly emphasize nonformal learning, which enhances competencies such as leadership, role modeling and coaching. These competencies are appreciated by most members and, according to Backhaus et al. [32], are considered important for bachelor-educated registered nurses because they might lead to improvements in nursing home care.

Strengths and limitations

A strength of this study is the collection of members' stories and self-reports in combination with observations. Observations provide depth in value-creation stories, allowing researchers to better understand the perspectives of members toward values, and how they are communicated to others [18, 24]. Other strengths are the roles that researchers have taken and allocated in the field, the detailed description of the process and context important to the study, and the researchers' reflexivity [36] by noting thoughts and feelings during moments of data collection, keeping a shared log including reflective notes, and discussing own reflections in the research team.

Despite the substantial amount of qualitative data collected, there are also limitations. This study did not include data from nonmembers (i.e., those outside the LC who did not participate as members) to assess the value created. Therefore, it was not possible to collect nonmembers' perspectives, and it is unknown whether there was actually no evidence of reputational capital. In addition, the principal researcher fulfilled the role of *observer-as-participant* [37, 38] during eight LC sessions, which gave access to members and their resources and allowed the researcher to focus on what needed to be observed. However, participating in these sessions only as an observer may still influence the members under study and may have reduced the researcher's personal involvement or led to biased observation descriptions. These issues were reasonably addressed by using peer feedback obtained from another researcher who participated as a full member and the collection of members' own stories. Finally, a note of caution is due here since this study was conducted in a nursing home partly during the COVID-19 pandemic. The pandemic guidelines substantially changed the research context in terms of the restrictions of physical meetings and data collection, and the study must therefore be read in this context. For example, not all participating members could be observed during the LC sessions because some participated online and were not projected on a screen in view of the principal researcher. Moreover, the planned face-to-face interviews were ultimately conducted through video interviews, with the associated opportunities and technological challenges outlined by Saarijarvi and Bratt [39]. Nevertheless, this study adds what opportunities exist to sustain such LCs in nursing homes and how value creation can be examined even in times of pandemic.

Implications

This study helps to understand the diverse experiences and possibilities of LC involvement in nursing home care, including the value created. It is recommended to integrate the framework of Wenger et al. [15] into the learning processes of LCs. For example, and in line with previous suggestions of Wenger-Trayner and Wenger-Trayner [20], by stimulating professionals and students, as well as organizational stakeholders to interact about how an LC can assist in collective decision-making to promote value creation. This might also help to ground community learning more collectively in terms of nonformal learning on top of formal nursing education.

Future research could provide an answer to whether claims regarding the final level of bachelor students placed within a nursing home LC are plausible. For example, by using formal assessments to measure inter-professional collaborative competencies, such as communication, team function, and a resident/family-centered collaborative approach (see [40]) or integrating epistemic student outcomes related to indicators of realized value

(see [31]). With respect to strengthening reputational capital (potential value) and promoting interprofessional skills concerning a resident-centered collaborative approach, further work regarding LC involvement of professionals, nursing students, but also residents would be worthwhile. A community-based participatory research approach is therefore recommended because this approach engages multiple community partners in the research process and can benefit the quality of health through tailored interventions or by translating research findings into policy change [41].

Conclusions

This study has shown that value creation emerges in a nursing home LC, also when the LC comprises diverse professions (both from nursing home care and education), in partnership with nursing students. Learning with and from each other within an LC in practice demonstrates a variety of value creation that is meaningful to nursing home practice, education and nursing students alike. It is precisely the involvement of students within such LCs that seems to potentially leverage the movement of diverse professions to learn together, work toward new collaborations, and continue to grow professionally. In this sense, such movements regarding interprofessional and lifelong learning activities may possibly contribute to the commitment of future bachelor-registered nurses to nursing home care in consideration of staffing shortages and increasing complexity of care.

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Informed consent: Informed consent was obtained from all individuals included in this study.

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Appendix A

Table 3: Overview of community members (key figures) and collected diaries.

Community members	Academic year(s)	Total diaries per member	Mode of collection
Registered nurse ^a	Year 1	2	Face-to-face
Registered nurse ^b	Year 2	2	Face-to-face
Coach	Year 1 and 2	8	Remotely
Lecturer	Year 1 and 2	4	Remotely
Nursing student ^c	Year 1	2	Face-to-face
Nursing student ^d	Year 2	2	Face-to-face

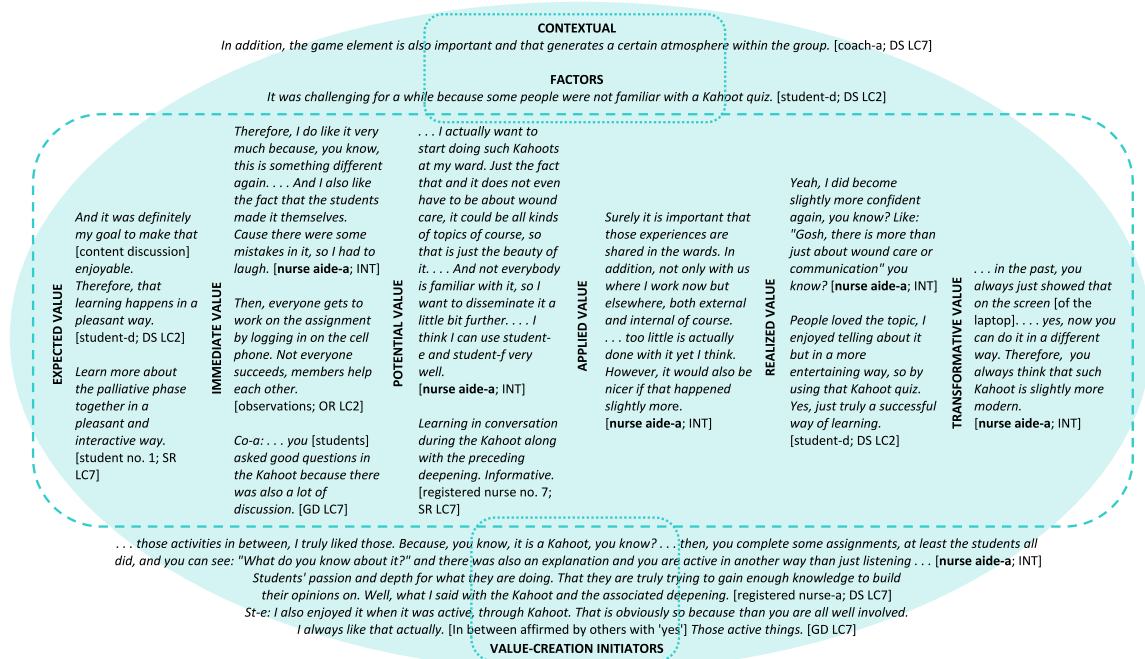
^aOnly member during the 1st academic year (2019–2020). ^bMember since the 2nd academic year (2020–2021). ^cThird-year student who left the learning community prematurely during the 1st academic year (2019–2020). ^dThird-year student, member since 2nd academic year (2020–2021).

Appendix B1: Narrative 2 ‘Using a digital learning platform (Kahoot)’

Nurse aide-a indicates working with the digital learning platform (Kahoot) useful during the LC sessions, and a registered nurse finds the resulting passion of students and their deepening valuable (vci). This platform, introduced by students, gives members pleasure, encourages them to help each other and initiates conversations (iv). Based on this experience and the possibility of utilizing students’ expertise, the nurse aide sees possibilities in implementing this learning platform within the ward to make colleagues more familiar with it (pv). Although, in the beginning, some members are not familiar with the platform (fac) and generated knowledge or experiences do not always translate into the working context yet (av), achievements are already being accomplished individually. For example, a student who has set a personal goal in advance (ev) and achieved this goal by using the learning platform or nurse aide-a who is more confident (rv) and has gained a new view on the application of more ‘modern’ learning resources (tv). The platform is related to interactive learning (vci), which is also sometimes an expectation (ev) and fosters the atmosphere of the LC environment (con).

Abbreviations: ev, expected value; iv, immediate value; pv, potential value; av, applied value; rv, realized value; tv, transformative value; con, contextual; fac, factors; vci, value-creation initiators.

Appendix B2: Key quotations of narrative 2 ‘Using a digital learning platform (Kahoot)’ presented in template



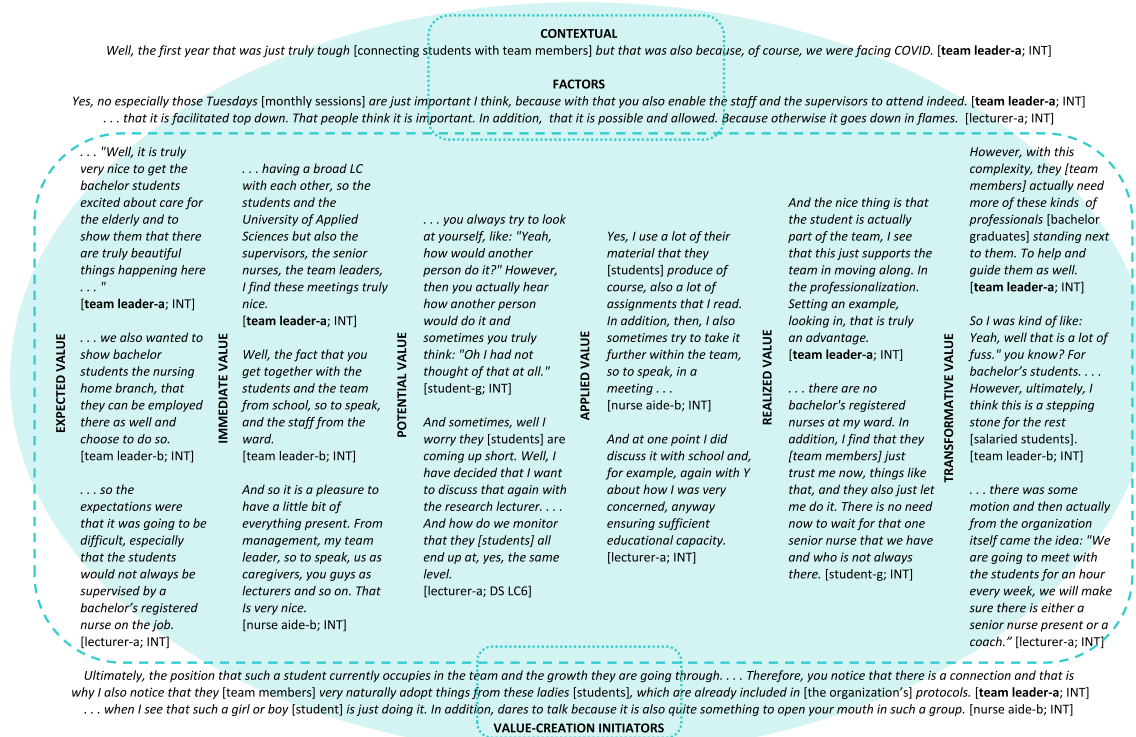
The abbreviations in the figure refer to the data sources and session numbers of the learning community. DS, diary story; SR, self-report; INT, value-creation interview; OR, observation report; GD, group discussion; LC2, learning community session 2; LC7, learning community session 7.

Appendix C1: Narrative 3 ‘Student placements’

Students’ growth and roles within the teams are indicated as meaningful (vci), and team leaders hope that bachelor students will become more interested in working in elderly care through their LC participation. Although the lecturer’s expectations are in the same line, there are also concerns (ev). Because of ongoing concerns about whether students are achieving equivalent final grade levels, the LC lecturer continues to consider courses of action (pv) and undertakes interim measures that allow for reform of the learning environment, such as the introduction of weekly student meetings (av/tv). Although creating the connection between students and the team in the first year of the LC was still difficult due to COVID-19 (con), the LC ensures that a diversity of people come together (iv), issues are viewed from different perspectives (pv), and student knowledge is used and discussed (av). Colleagues seem to gain more trust, consider students as role models and act accordingly to work together on professionalization (rv). Support from the organization to participate is identified as facilitating (fac), and team leaders recognize that recruiting bachelor interns is important and necessary to move forward with the teams (tv).

Abbreviations: ev, expected value; iv, immediate value; pv, potential value; av, applied value; rv, realized value; tv, transformative value; con, contextual; fac, factors; vci, value-creation initiators.

Appendix C2: Key quotations of narrative 3 ‘Student placements’ presented in template



The abbreviations in the figure refer to data sources: DS, diary story; INT, value-creation interview; LC6, learning community session 6.

References

1. National Academies of Sciences, Engineering, and Medicine. The future of nursing 2020–2030: charting a path to achieve health equity. Washington DC: The National Academies Press; 2021.
2. Nursing and Midwifery Council. Future nurse: standards of proficiency for registered nurses; 2018. <https://www.nmc.org.uk/globalassets/sitedocuments/standards-of-proficiency/nurses/future-nurse-proficiencies.pdf> [Accessed 9 Oct 2022].
3. Backhaus R, Verbeek H, van Rossum E, Capezuti E, Hamers JPH. Baccalaureate-educated Registered Nurses in nursing homes: experiences and opinions of administrators and nursing staff. *J Adv Nurs* 2018;74:75–88.
4. Backhaus R, Jochem I, Reijnders-Paffen H, Meijers JMM. How to position, attract and retain registered nurses in nursing homes: a qualitative, explorative study. *J Long-Term Care* 2021;0:192–200.
5. Hanze University of Applied Sciences Groningen. Bachelor of nursing 2020: a future-proof programme profile 4.0; 2018. <https://www.hanze.nl/assets/academie-voor-verpleegkunde/Documents/Public/2018%20BSc%202020%20LOOV%20Engels%20for%20mail%20and%20ISSUU.pdf> [Accessed 9 Oct 2022].
6. Vrerink A, Jacobs G, Mulder A, ten Kate L. From fact to meaning: care practitioners' hermeneutic competence development in residential care for persons with dementia. *J Aging Stud* 2022;61:101003.
7. Fosse A, Ruths S, Malterud K, Schaefel MA. Doctors' learning experiences in end-of-life care – a focus group study from nursing homes. *BMC Med Educ* 2017;17:27.
8. Baughman AW, Renton M, Wehbi NK, Sheehan EJ, Gregorio TM, Yurkofsky M, et al. Building community and resilience in Massachusetts nursing homes during the COVID-19 pandemic. *J Am Geriatrics Soc* 2021;69:2716–21.
9. Heemskerk WM, Dauphin SLM, van Dorst MA, Bussemaker M, Wallner C. A learning community within nursing practice: the value created by the activities and interactions during the early stage of community development. *Nurse Educ Pract* 2021;57:103242.
10. Heemskerk WM, Renden PG, Warning TD, Wallner C, Bussemaker J, Dikken J. The impact of community learning during a participatory nursing research project. *J Cont Educ Nurs* 2023;54:131–44.
11. Baas M, Schuur R, van den Berg E, Huizinga T, van der Rijst R, Admiraal W. What's in it for me? A mixed-methods study on teachers' value creation in an inter-institutional community on open educational resources in higher education. *Educ Inf Technol* 2023;28:6049–74.
12. Bertram R, Culver DM, Gilbert W. A university sport coach community of practice: using a value creation framework to explore learning and social interactions. *Int J Sports Sci Coach* 2017;12:287–302.
13. Dingyloudi F, Srijbos JW, de Laat MF. Value creation: what matters most in communities of learning practice in higher education. *Stud Educ Eval* 2019;62:209–23.
14. Triste L, Debruyne L, Vandenabeele J, Marchand F, Lauwers L. Communities of practice for knowledge co-creation on sustainable dairy farming: features for value creation for farmers. *Sustain Sci* 2018;13:1427–42.
15. Wenger E, Trayner B, de Laat M. Promoting and assessing value creation in communities and networks: a conceptual framework (Report No. 18). Heerlen: Ruud de Moor Centrum, Open University of the Netherlands; 2011.
16. Stoll L, Bolam R, McMahon A, Wallace M, Thomas S. Professional learning communities: a review of the literature. *J Educ Change* 2006;7: 221–58.
17. Vrieling E, van den Beemt A, de Laat M. What's in a name: dimensions of social learning in teacher groups. *Teach Teach* 2016;22:273–92.
18. Dingyloudi F, Srijbos JW. Examining value creation in a community of learning practice: methodological reflections on story-telling and story-reading. *Seminar.net – Int J Media Technol Lifelong Learn* 2015;11:209–22.
19. Wenger-Trayner B, Wenger-Trayner E, Cameron J, Eryigit-Madzwamuse S, Hart A. Boundaries and boundary objects: an evaluation framework for mixed methods research. *J Mix Methods Res* 2019;13:321–38.
20. Wenger-Trayner E, Wenger-Trayner B. Learning to make a difference: value creation in social learning spaces. Cambridge: Cambridge University Press; 2020.
21. Creswell JW, Poth CN. Qualitative inquiry & research design: choosing among five approaches, 4th ed Thousand Oaks, CA: SAGE Publications; 2018.
22. Palinkas LA, Horwitz SM, Green CA, Wisdom JP, Duan N, Hoagwood K. Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Adm Policy Ment Health* 2015;42:533–44.
23. Booth SE, Kellogg SB. Value creation in online communities for educators. *Br J Educ Technol* 2015;46:684–98.
24. Smith S, Smith L. Assessing the value of action learning for social enterprises and charities. *Action Learn Res Pract* 2017;14:230–42.
25. Brooks J, McCluskey S, Turley E, King N. The utility of template analysis in qualitative psychology research. *Qual Res Psychol* 2015;12: 202–22.
26. King N, Brooks JM. Template analysis for business and management students. London: SAGE Publications; 2017.
27. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care* 2007;19:349–57.
28. Guldberg K, Achtypi A, D'Alonzo L, Laskaridou K, Milton D, Molteni P, et al. Using the value creation framework to capture knowledge co-creation and pathways to impact in a transnational community of practice in autism education. *Int J Res Method Educ* 2021;44:96–111.
29. Clarke L, Galvin C, Campbell M, Cowan P, Hall K, Magennis G, et al. Assessing the value of SCOTENS as a cross-border professional learning network in Ireland using the Wenger–Trayner value-creation framework. *Oxf Rev Educ* 2021;47:79–97.

30. Heemskerk WM, Warning TD, Brus F, Snoeren MMWC. The potential for learning within hospital learning communities: the interplay between nursing practice and education to support research ability. *Int J Nurs Educ Scholarsh* 2020;17:20190114.
31. Mavri A, Ioannou A, Loizides F. Value creation and identity in cross-organizational communities of practice: a learner's perspective. *Internet High Educ* 2021;51:100822.
32. Backhaus R, Verbeek H, van Rossum E, Capezuti E, Hamers JPH. Future distinguishing competencies of baccalaureate-educated registered nurses in nursing homes. *Geriatr Nurs* 2015;36:438–44.
33. Eraut M. Non-formal learning and tacit knowledge in professional work. *Br J Educ Psychol* 2000;70:113–36.
34. Rogers A. The base of the iceberg: informal learning and its impact on formal and non-formal learning. Opladen: Barbara Budrich Publishers; 2014.
35. Van Scheppingen A, Bierlaagh D, Vleugel L, Wallner C. Ervaringsleren voor zorgprofessionals en studenten. *Onderwijs Gezondheidszorg* 2021;45:26–9.
36. Flick U. An introduction to qualitative research, 6th ed. London: SAGE Publications; 2018.
37. Gold RL. Roles in sociological field observations. *Soc Forces* 1958;36:217–23.
38. Saunders MNK, Lewis P, Thornhill A. Research methods for business students, 8th ed. Harlow: Pearson Education Limited; 2019.
39. Saarijarvi M, Bratt EL. When face-to-face interviews are not possible: tips and tricks for video, telephone, online chat, and email interviews in qualitative research. *Eur J Cardiovasc Nurs* 2021;20:392–6.
40. Lauckner HM, Nickerson Rak C, Hickey EM, Isenor JE, Godden-Webster AL. Interprofessional and collaborative care planning activities for students and staff within an academic nursing home. *J Interprofessional Educ Pract* 2018;13:1–4.
41. Israel BA, Eng E, Schulz AJ, Parker EA. Methods in community-based participatory research for health, 2nd ed San Francisco, CA: Jossey-Bass; 2013.

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