

Legitimate Peripheral Participation in Academic Communities of Practice – How Newcomers' Learning is Supported in Student Councils

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Abstract: A rather small part of lifelong learning happens in settings that are intentionally designed for learning. Much more knowledge is acquired through participative learning, i.e. social interaction within specific groups or communities. So far participative learning has only been vaguely described as legitimate peripheral participation, but facilitating influences of this process have not yet been investigated. In this paper the activities of senior members of communities of practice (faculty student councils) towards newcomers, so called socialization tactics, were examined. Twelve distinct socialization tactics were identified in interviews with 14 experienced members. Some of them were used in all communities of practice, some in none of them, and for some the use varied across the communities. Finally, a model of the effect of socialization tactics relative to community size, and time of exposure on newcomers' level of participation is presented, using HLM on data of 68 newcomers in 14 communities.

Legitimate Peripheral Participation in Communities of Practice

Learning has been described using several metaphors (Sfard, 1998; Paavola, Lipponen & Hakkarainen, 2004); one of them is the *participation* metaphor. This metaphor of participative learning views learning as a process of becoming a member of a certain community. This, for instance, requires the active use of the community's language during communication with other members of the community. Participative learning can also be found within more traditional learning settings, which are not explicitly designed for participative learning; student governments, student associations, and student councils are examples within higher education settings. Lave and Wenger (1991) conceptualize this type of informal learning that can occur within such participative settings as legitimate peripheral participation in communities of practice. Wenger, White, and Smith (2009) describe a community of practice (CoP) by three dimensions: domain, practice, and community. The *domain* is the shared interest and focus of attention of the CoP members. It defines the reason why the CoP is built and defines its "identity" for internal and external purposes. The domain is constantly discussed between the members and controversies can lead to a split up into separate CoPs. *Practice* as the second dimension describes the activities and thinking common to CoP members that is based on their shared experience and knowledge of the domain. *Community* describes the aspect that members of a CoP over time build a relationship of trust and mutual engagement. The members can take over different roles, from passive members in the periphery to more active ones; very important is the existence of legitimate and capable leading persons that hold the community together.

Newcomers who join a CoP undergo a complex process of learning and enculturation that shapes their identity as an active member of the community. Lave and Wenger (1991) describe this learning process as legitimate peripheral participation (LPP). The main focus of this perspective on learning is an increase of *newcomers' level of participation* within a specific CoP. A newcomer starts as a passive outsider and becomes over time a more capable and active member, accompanied by a transformation of the identity. This transformation includes a change in cognition, communication, and behavior towards the shared practices of a CoP and is based on a CoP-specific, socially shared learning history. An important aspect of this kind of learning is the question of legitimation of newcomers' participation. Lave and Wenger (1991) assume that there are more or less strict entry criteria or barriers in each CoP that are of great importance of newcomers' learning as they regulate the possibility of a newcomer to get a chance to learn. Only legitimate newcomers get access to community activities, information, and resources and those are important for peripheral participation. Peripheral participation describes the increasing involvement of a newcomer, starting with rather passive activities like observing senior members, then going on to take over simple and easily manageable tasks and later take over more responsibility and more complex tasks as full members.

The approach of legitimate peripheral participation in CoPs has attracted much attention and the community of practice concept has developed over time (see for example Barab & Duffy, 2000). Also a substantial scientific knowledge base on CoPs has been developed. However this research has focused so far mainly on two areas: (a) identifying CoPs in real world settings (see for example Safran (2009) for a community of home schooling parents); (b) investigating how CoPs can be initiated and facilitated, for example with focus on optimizing communication in organizations (Wenger, McDermott, & Snyder, 2002), in and around the classroom (Olitsky, 2007) or for workplace learning (Boyd & Lawley, 2009). There are only few systematic

studies about the core element of the initial theory: legitimate peripheral participation. We still know little what the underlying processes of this type of learning are and what factors influence them.

Socialization tactics of Senior Members and Other Influences on Newcomer Learning

The *time of exposure* to a CoP can be assumed to play an important role for the learning process of newcomers: The more time a newcomer spends in a CoP and with its members, the more opportunities for learning can occur. But it also can be assumed, that LPP may not be appropriately understood as “mere exposure effect”, in which only the amount of time spent by a newcomer matters. In contrast, Lave and Wenger (1991) name some examples of possible influences within the process of LPP like mentoring or exchange with other members of the CoP. Also empirical evidence for instructional influences that shape and influence the LPP process can be found. Lambson (2010), for example, showed in a case study on three newcomers in a CoP of literacy teachers that legitimate peripheral participation was influenced by strategies of an experienced senior CoP member. But so far, instructional strategies during the process of LPP have hardly been studied in a systematic way.

Support strategies have, however, been studied in another research field, namely the field of organizational socialization. The socialization process of new employees in an organization has been found to be actively shaped by the members of the organization, the senior employees, and the newcomers by using so-called socialization tactics (Levine & Moreland, 1991). Several organizational socialization tactics which are used by senior employees to influence the learning process of newcomers have been identified by these authors: *Positive and negative welcoming* strategies were identified which are used in the very beginning of group entry to encourage newcomers to learn more, either because they are treated nicely or because they are harshly confronted with their shortcomings. Also several forms of patronage have been identified: senior members serve as *models, trainers, sponsors, masters or mentors* for newcomers. *Encapsulation* is another socialization in which newcomers are encouraged to spend their time for and with the group. *Consistent training* is a socialization tactic which is dependent on the senior members who send similar signals to newcomers and the tactic to *assess newcomers' knowledge* about the organization's culture can help senior members to decide how to shape the further progress of the newcomer's learning.

Another possible influencing factor on newcomer learning in CoPs might be the size of the community. Group size has repeatedly been identified as an important factor for social interactions (Moreland, Levine, & Wingert, 1996): For example, larger groups usually have access to more resources, which can increase their effectiveness and make them more resilient against worsening circumstances. On the other hand, compared to smaller groups, larger groups have more problems with coordination, misunderstandings, overlooking of situations in which individual members need help, or passivity as well as lower commitment and motivation of individual members. Those aspects seem also to be relevant for newcomer learning in CoPs, so CoP size could also be considered to be an influencing factor on legitimate peripheral participation.

Research Questions

So far, the role of socialization tactics in CoPs for the process of legitimate peripheral participation has not been investigated systematically. Hence the research questions of this study are:

1. *What socialization tactics are used by senior members in academic CoPs?*

We expect to find some of the socialization tactics already known in organizational settings (Levine & Moreland, 1991). It also seems likely that additional socialization tactics which are specific to CoPs can be identified.

For a better understanding of the LPP process, also the relation of the identified socialization tactics to the level of participation of newcomers within their CoPs is of interest:

2. *To what extent can the use of socialization tactics predict newcomers' level of participation in academic CoPs beyond time of exposure and CoP size?*

We expect to be able to model the relation between newcomer learning and the socialization tactics, including an evaluation regarding the usefulness of the single tactics.

Faculty Student Councils as Communities of Practice

For an investigation of socialization tactics in CoPs, faculty student councils as they can be found in many university systems, seem an ideal setting. The integration of newcomers plays an important role as membership is restricted to students before their graduation. This means that time of being a member is limited. For the survival of the community, the continuous integration of newcomers is essential and has to be done efficiently. Often student associations also have difficulties to attract newcomers, so they have to be especially careful to integrate the few who are interested in becoming members. In the German university system faculty student councils (FSC) are well-established and most of them show the general characteristics of CoPs.

Domain. A FSC usually consists only of students of one particular discipline. The main goal of a FSC is to influence, improve, and shape the study conditions in their school, according to the needs and wishes of the student body. For this reason, students negotiate among the members on what levels they are able and willing to act and what tasks and projects they want to work on. FSC activities range from organizing student parties to more abstract engagement in university policy-making.

Practice. The FSCs interact on a regular basis, mostly face-to-face but also online. The members of an FSC structure their work and community completely independent; some have leaders, assign specialized roles to individual members or even split up into specialized sub-communities. Other FSCs decide to make all decisions together. But in every case the work done by a FSC depends on the interest and engagement of its members. Within each FSC some kind of micro-culture develops which results in specific language and use of specialized terms to describe their activities and tasks as well as in shared opinions about relevant events and practices to deal with occurring situations.

Community. Student engagement in the FSCs involved in this study is voluntary and takes place during students' spare-time without any study-related reward. In most FSCs elections by the student body legitimate the FSC members as student representatives, but it is usually possible to be a member without being officially elected; also, some FSCs exist entirely without any legitimation by elections.

Method

Participants and Design of the Study

Fourteen faculty student councils (FSCs) of a German university voluntarily participated in this study. The number of members in the individual FSCs ranged from 6 to 22 with a mean of $M = 14.9$ members ($SD = 5.2$). All together 208 persons participated, 68 of them newcomers, who had been members of their particular FSC for less than 12 months. The disciplinary scope of the participating FSCs reached from disciplines in humanities to social science and science. The study was designed as a descriptive field study based on interviews and social network questionnaires.

Data sources and instruments

Socialization tactics. Socialization tactics were assessed using semi-structured, problem-centered interviews with 14 experienced senior members (one per FSC). Based on an interview guideline the senior members were first asked to describe their own position in the FSC and important aspects of their FSC like its history, aims and structure as well as the number of members. The second part of the interviews dealt with the FSC's socialization tactics. Here we used a two-fold procedure: First, the participants were asked to describe how the members usually influence the learning process of a newcomer in their FSC. After this open question, the senior members were directly asked about the use of each of the socialization tactics described by Levine and Moreland (1991). A qualitative content analysis was performed on the transcripts of the interviews. For that purpose a coding scheme was developed using a mixture of theory-driven top-down process and data-driven bottom-up process. The final coding scheme consisted of the following twelve categories: (1) *possibilities for (peripheral) participation*, (2) *legitimation*, (3) *positive welcoming strategies*, (4) *negative welcoming strategies*, (5) *model*, (6) *sponsoring*, (7) *master/mentor*, (8) *encapsulation*, (9) *consistent*, (10) *knowledge assessment*, (11) *accessibility of community knowledge*, (12) *providing information before community entry*. After training two coders reached an overall intercoder-agreement of $\kappa = .80$. After performing this qualitative analysis a score was built for each FSCs use of each socialization tactic, based on the amount of identified sub-aspects of the socialization tactics.

Level of participation. Newcomers' level of participation within the FSC was measured by an online-questionnaire. Participants were asked to indicate how intensively the participant had collaborated with the other FSC members during the last three months. A list of all FSC members was provided and the participant was asked to indicate the collaboration with each of them on a 10-point scale. Each newcomer's level of participation was computed as the mean of the ratings that this person received from the senior members.

Time of exposure. The time of exposure was also taken from the online-questionnaire, in which all members were asked since when they had been a member of their FSC.

CoP Size. CoP size was reported by the experienced senior members in the interviews.

Statistical Analysis

A statistical analysis with respect to research question 2 was performed. Hierarchical linear modeling was used as the data had a 2-level nested-structure – level 1 for the individual newcomer, and level 2 for the FSC. The only level 1 variable was the time of exposure to the CoP. Level 2 variables were CoP size and the use of the identified socialization tactics specific to each FSC. In a step-wise procedure potential level-2 predictors were included into the model based on t-to-enter statistics; always the variable with the highest t-value was included. Variables were grand-mean centered and all statistical tests were performed on the 5% level of significance.

Results

RQ1: Identification of socialization tactics

A qualitative content analysis of interviews with experienced members of 14 CoPs lead to the following results: The “classical” CoP socialization tactics providing *possibilities for (peripheral) participation* and *legitimation* are used to a great extent in most FSCs. They are part of the original LPP approach (Lave & Wenger, 1991) and their importance is supported by our findings. But also socialization tactics that have so far only been identified in research on organizational socialization (Levine & Moreland, 1991) are used in CoPs. However, the use of *positive welcoming strategies*, *encapsulation* and *consistent training* varies more between the FSCs than the use of classical CoP socialization tactics. Except for *positive welcoming strategies*, the organizational socialization tactics were usually not spontaneously reported by the FSC members. In the case of *encapsulation* and *consistent training* there are substantial differences between FSCs regarding the concrete implementation. *Encapsulation* is usually only a by-product of other activities and also *consistent training* is not sophisticatedly planned within the FSCs. When FSC members talked about aspects of *consistent training*, it became obvious that most FSCs had hardly ever discussed how to deal with newcomers, what problems they might have and how they could be supported. However, most of the FSCs had discussed how newcomers could be attracted. Therefore, parts of the *sponsoring* tactic that are also important to attract newcomers are commonly used in FSCs. Also the newly identified socialization tactic of *providing information before community entry* has its main purpose in the attraction of newcomers. Consistent with the finding that FSCs have a positive attitude towards newcomers and strongly welcome them, they report not to use tactics which could cause newcomers to leave the CoP like *negative welcoming strategies* or *knowledge assessment*. In general there is a lack of awareness regarding newcomers’ need for support among experienced members. Consistent with that finding, socialization tactics which require much coordination and planning among FSC members are also not found, especially serving as a *model* and/or *master/mentor*. Also the socialization tactic of providing *access to community knowledge* which also requires effort of senior members is hardly reported.

RQ2: Effects of socialization tactics on newcomers’ level of participation beyond time of exposure and community size

An exploratory HLM model was computed to describe the effects of time of exposure, CoP size, and the use of socialization tactics within a CoP on newcomers’ level of participation. This model included as predictors for newcomers’ level of participation *time of exposure* as a positive significant influencing factor ($\gamma = 0.210$; SE = 0.043; $p = .014$) and *CoP size*, which had a negative significant effect ($\gamma = -0.135$; SE = 0.034; $p = .003$). Regarding the effect of socialization tactics on newcomers’ level of participation a significant positive *interaction effect of sponsoring and time of exposure* ($\gamma = 0.669$; SE = 0.185; $p = .004$) was found. From all other identified socialization tactics only the newly identified CoP specific tactics *accessibility of community knowledge* ($\gamma = 3.704$; SE = 0.791; $p = .001$) and *providing information before community entry* ($\gamma = -2.123$; SE = 0.703; $p = .014$) were included as significant predictors, with the first having a positive effect and the latter having a negative effect on newcomers’ level of participation. This model explained 90% of the variance between FSCs and 31% of the variance between individual newcomers.

Discussion

Qualitative findings. Indeed, we were able to identify a range of socialization tactics that are used in CoPs. However, some of those that are widely used in organizational settings seem not to be used at all in academic CoPs. The used socialization tactics are characterized by two aspects: Their underlying idea is positive towards newcomers and they are easy to use. Some of the used socialization tactics have been known as socialization tactics from organizational contexts before (Levine & Moreland, 1991), some others seem to be unique for CoPs and more related to the concept of legitimate peripheral participation (Lave & Wenger, 1991). Additionally, the analysis showed that senior CoP members often are not aware that they have possibilities to support the learning processes of newcomers actively. The difference between the use of socialization tactics in organizational settings and those in CoPs is another interesting finding. Members of CoPs are voluntary and not paid for contributing, which makes it easier for them to leave at any time compared to employees in work groups. So in CoPs senior members think that it is more important that newcomers feel welcome and are not discouraged, resulting in the use of positive socialization tactics. Another difference between CoPs and organizational work groups is that in work groups the task of a particular new employee is usually predefined, whereas in a CoP newcomers have to identify themselves why it is meaningful for them to be part of the community and what tasks they want to take over. These needs seem to result in special socialization tactics for CoPs that are tailored to this problem.

Quantitative findings. Based on a quantification of the qualitative results an exploratory HLM model was developed to test the relative impact of the different socialization tactics, and to provide guidance for further research on legitimate peripheral participation. The identified model included beyond time of exposure

and CoP size three socialization tactics: if providing information before community entry was done elaborately in a FSC, this was related to a lower level of newcomer participation. However, if the FSC focused on providing access to community knowledge, this was related to a higher level of newcomer participation. Sponsoring, on the other hand, had a positive effect on the change of newcomers' participation level over time. This model explains the major part of the variance between the CoPs. Additionally it explains a substantial share of the variability between individuals. These results can be seen as evidence that the LPP approach by Lave and Wenger (1991) could be improved by including the socialization tactics of senior CoP members and aspects that are known to be important in other settings and from other areas of research as the size of a CoP. This leads to a better understanding of the underlying mechanisms of learning processes in CoPs.

Limitations of the study. Two limitations of this study have to be addressed: first, the measurement of the socialization tactics and second, the sample size. Measuring the use of socialization tactics with interviews can not be as accurate as observations of real behavior and it can be called into question how well the interviewees were able to observe and report about the socialization tactics that are used in their FSC. However, the interview partners were selected based on their experience within the FSCs and proved to be quite sensitive to the topic. Most of them were absolutely aware of the learning process of newcomers and had no problems to answer the questions. When they were asked about the different possible socialization tactics, many of them said at one point that they felt as if supporting their newcomers not enough, now as they were aware of all the possibilities; this is an indicator that social desirability did not play a big role during the interviews. Of course, some of the socialization tactics might be hard to observe and could be used mainly on an implicit level, like serving as a model, and so they could not be identified. In general, the interviews can be assumed to be trustworthy and that our findings might rather underestimate the existence and importance of the tactics. This is the same for the second limitation – the sample size, which is rather small for using HLM analysis. However, the small sample size would rather lead to an underestimation than to an overestimation of the effects. Nevertheless, this study is a first step towards a better understanding of the role of socialization tactics in LPP and future research with more accurate measurement techniques and a bigger sample size is needed.

Practical implications. One of the most important practical implications for FSCs and comparable CoPs might be to foster awareness among senior members that the learning process of newcomer can actively be shaped using socialization tactics. But not every possible socialization tactic seems to be helpful for newcomer learning. According to our model sponsoring should be fostered, as well as strategies that make community knowledge accessible to newcomers, for example by collecting helpful information and using supportive software like Wikis.

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