

Exploring potentials of process reflection to support communities of small volunteer groups

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Abstract. Volunteers groups provide a large variety of valuable services for local communities, global non-profit organizations and online production communities. While larger volunteer groups and online communities enjoy the benefit of an underlying organizational structure that supports the organization of their activities, small volunteer groups usually lack this type of support. We conducted an exploratory study of five student organizations from two large North American universities to assess how they currently organize their activities and to identify potentials to support them. Our findings indicate a lack of both internal and external procedures. Based on our findings we discuss a community-based approach to support process reflection.

Keywords: volunteer collaboration, exploration, loosely coupled groups, process reflection.

1 Introduction

Volunteer groups are a cornerstone of society. They provide a large variety of valuable services that range from large short-term efforts to long term support for local communities. Examples for such efforts are support for elections [1], disaster relief [21], sports events [6], local food supply [23], local political activism [20], online production communities [24] and student organizations [10]. Most research investigating such volunteer groups focuses on understanding individual motivations [3, 19] to attract more volunteers or on providing means to improve volunteer retention behavior [9, 18].

There are however also studies that focus on how volunteer groups organize. Non-profit organizations typically employ a coordinator that splits larger efforts into manageable tasks which are then distributed to volunteers and carried out by them [8, 11]. Similarly open source and online production communities are usually led by a core group that takes over coordination tasks while the remaining volunteers decide for themselves which tasks they would like to carry out [2, 14]. Both thus have an underlying infrastructure that they build their efforts on.

Our work however focuses on small local volunteer that are not typically built on a stable infrastructure. Such groups are usually formed by individuals that are enthusiastic about a certain cause or issue and that share common values [3, 22]. They thus focus

most of their energy on the common cause at hand while not spending too much effort on planning the way their organization operates. They also commonly have to deal with a high turnover in membership. It thus does not seem feasible for them to focus on coordination approaches that are based on cycles of observing, analyzing, designing and structuring activities as can be found in the context of process management [7, 15]. Such groups however still need to coordinate their activities in order to reach their desired goals. In order to identify suitable means of supporting such groups to develop stable and effective practices we conducted an exploratory interview study with officers of five student organizations from two large North American universities.

Our study revealed that the organizations we studied mainly focus on organizing events throughout the year. Our findings also validate our initial assumptions that there is a lack of coordination especially between groups and frequent membership turnover. These aspects combined lead to a fragmented and largely episodic way of coordination that is mainly based on individual experiences. Based on these findings we propose an approach that combines a set of standard practices for each organization based on existing documentation and communication traces. These practices can subsequently be visualized and shared among a community of similar organizations in order to reflect on them. This approach can thus enable groups to continuously improve, to support the transition between membership generations and raise awareness about events and the way they are organized beyond the confines of individual groups.

2 Case study

To uncover how small volunteer groups operate we conducted an exploratory interview study with officers of student organizations from two large North American Universities. In the following we will report on the context of the study and our means of data collection and analysis.

2.1 Study context

Student organizations are volunteer groups that are created and run by students for students. They are usually connected to a specific school or department in a university. Every student organization creates its own mission based on the common interest of their creators and members (c.f. Table 1). In order to be recognized by the university and to receive funding, every student organization has to attain a certain number of members (usually ten) and run an annual election for a leadership board. A leadership board commonly consists of a president, vice-president and a business manager (c.f. S01 to S04 in Table 1). Some student organizations also have larger leadership boards (c.f. S05 in Table 1). Neither leadership nor members receive any monetary compensation for their service in a student organization.

Table 1. Student organizations analyzed.

ID	Goal / mission	Interview participants
S01	Support women in Information Sciences	President and

		Business manager
S02	Support doctoral students in Information Sciences	President
S03	Support students in Library Sciences	President and Business manager
S04	Support international students in Information Sciences	President and Vice-president
S05	Support local community organizations by providing data-driven services	Board members

2.2 Data collection and analysis

We designed our interview study to gain an understanding of how student organizations operate. The interview protocol consequently focuses on specific activities that were conducted by members and leaders of an organization (e.g. *“Please provide a short description of an activity [you recently (co-)organized].”*). It also includes questions about individual motivations to join alongside antecedents of retention behavior [3, 9, 18, 19]. We interviewed a total of ten officers from five different student organizations (c.f. Table 1). The interviews lasted between 40 and 57 minutes each.

We transcribed and coded the interviews using a coding scheme that covers basic aspects of coordination (actors, activities and resources [5]) alongside motivation and satisfaction. Our data analysis started with two researchers independently applying the coding scheme to the same part of the first interview. Afterwards we calculated the inter-coder agreement based on Cohens-Kappa [4] for each code and discussed those with low scores in order to reach a common understanding about how to apply each code. After three rounds both researchers coded the remainder of the data. Following the guidelines by Landis and Koch [13], we found moderate (0.41 – 0.60) to substantial (0.61 – 0.80) scores for Cohens-Kappa for all relevant codes. The complete interview protocol, coding scheme and scores can be obtained by the authors upon request.

3 Findings

As expected we found a large variety of motivations for individuals to participate in student organizations. These range from identifying with the values of the group, fostering individual careers, interest in the topic of the organization, previous bonds with members, networking, having fun and gaining new skills. These motivations mainly matched with the nature of the respective organization (e.g. organizations that are more career oriented attract members that state fostering their career as their main motivation: *“This organization provided an opportunity for networking”*).

The main activity of the groups we studied evolved around the organization of events (*“my responsibilities are primarily to organize and oversee [...] events”*). Some organizations also engage in projects to support local communities (*“[they] wanted to make sure that their current clubs and the clubs that they are building are in the places where they are most needed”*, 18).

When analyzing how student organizations plan and execute their activities we found that they all follow a similar structure based on the following four steps: Initiation, planning meeting, task distribution and follow-up. While those steps are common among all student organizations, there is a considerable difference between how they are executed in detail. For some particular events **task development** is described as “*kind of a routine*” because these events are “*hosted [...] annually [...] during the year*”. There are however also events that are not part of the regular event calendar. For such events student organizations typically use a different approach that starts e.g. with a “*brainstorming and some realistic talk about what we [can] get done*” before developing tasks. After the task have been developed they are typically **distributed** in a democratic way (“*sort of self-picking*”). When it comes to **coordinating task execution** the different student organizations take different approaches. Some assign a designated coordinator for an event (“*I was in charge of organizing everything*”) while most organizations take an approach where “*tasks are divided once and considered done afterwards*” (16). This approach however proved to be risky since people are not always reliable and commit to tasks that they do not carry out (“*There are some people that commit to something and still don't make it*”) which consequently led to frustration.

In addition to the organization of events which mainly takes place internally, student organizations occasionally also work with external partners. Such activities mainly involve the respective school a student organization is registered in. All student organizations have to hold elections, register in a school (“*we had to reregister our student organization*”) and deal with the process of reimbursement of expenses for events (“*I handle all the reimbursements*”). All of the student organizations at the same school have to go through the same process. There is however no exchange of practices between student organizations. Every organizations develops their own way of dealing with these tasks. Moreover, it is usually the responsibility of a single member of the leadership team to “*deal with reimbursements*” and that member conducts the process in a way that appears to be feasible for her / him. However, when that member leaves the organization, the respective knowledge becomes lost, and the incoming member has to start from scratch (“*when I leave it will be kind of a bummer for the next president to realize how to do that*”) since such practices are commonly not documented.

Frequent membership turnover is a common characteristic of volunteer groups and student organizations are no exception. It is thus surprising that there seems to be no strategy in place to organize turnover effectively. Some organizations have acknowledged this problem and try to solve it by “*trying [...] to create documents describing what we did to start the organization*” or by organizing a “*leadership retreat [...] to connect the incoming board members [...] with the outgoing ones*”. These activities are however limited to single organizations and not shared between them.

Throughout the interviews it became clear that there is a desire among the members of the student organizations we studied to improve the way they organize activities (“*I think that we could have been more on top*”, “*I think as an organization [...] we could be doing better*”). Some organizations are even trying to address this issue by creating documentation or organizing transfer events like the aforementioned leadership retreat. These efforts are however still fragmented and not shared between organizations.

4 Implications and outlook

Our findings indicate that the student organizations we analyzed operate in similar ways and face similar issues. They mainly focus on organizing events. For recurring events some organizations follow established practices while most events are organized in a hands-on way with no clear process or guidance. In addition, we found that established practices are based on the experiences of individual members and are hardly documented. This makes the departure of experienced members hard to overcome. Moreover, every organization develops, cultivates and continuously reinvents their own practices and does not share them with similar organizations. It is thus likely that different organizations make similar mistakes.

Student organizations also have to cooperate with external partners on several occasions. The most common external partner in our case is the respective school the organization is registered in. Despite these activities being practically identical between student organizations, each organization develops their own approaches towards them which leads to the same previously discussed issues.

Our findings indicate a potential for process improvement particularly between student organizations. Especially processes that all organizations have in common such as registering an organization or asking for reimbursement could and should become common practice across organizations. It is however unlikely that student organizations will engage in formal cycles of process analysis and improvement. We thus propose an approach that is built on analyzing existing data from group communication tools such as Slack and planning documents such as Google Documents and Spreadsheets. This analysis will inform the creation of simple process diagrams which include sequences of activities, involved actors and resources required [12]. We propose an easy to use and easy to learn modeling notation such as SeeMe [12] in order to reduce the additional cognitive overhead of having to interpret complicated business process diagrams. We are confident that members of student organizations can use such models even if they are not experts in creating and using models because research has shown that people are capable of using and modifying simple models of processes they are familiar with [17]. The diagrams can be viewed, shared, discussed and refined by multiple student organizations through discussions on models using a web based graphical modeling tool [16]. The aim of visualizing the processes is to increase awareness about practices beyond the boundaries of a single student organization. This allows for a broader audience to discuss and reflect practices which helps to improve and spread them. Refined processes can then subsequently be implemented e.g. as a combination of Google Spreadsheets which feed a connected Slack bot. Our approach poses minimal additional overhead since most organizations use some form of documentation to track activities already. It does however allow them to discuss and reflect about their activities which will support student organizations to overcome ineffective and error prone practices.

References

1. Boulus-Rødje, N., Bjorn, P.: Design Challenges in Supporting Distributed Knowledge: An Examination of Organizing Elections. In: Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems. pp. 3137–3146 ACM (2015).
2. Cataldo, M., Herbsleb, J.D.: Communication networks in geographically distributed software development. In: Proceedings of the 2008 ACM conference on Computer supported cooperative work. pp. 579–588 ACM (2008).
3. Clary, E.G. et al.: Volunteers' motivations: A functional strategy for the recruitment, placement, and retention of volunteers. *Nonprofit Manag. Leadersh.* 2, 4, 333–350 (1992).
4. Cohen, J.: Weighted kappa: Nominal scale agreement provision for scaled disagreement or partial credit. *Psychol. Bull.* 70, 4, 213 (1968).
5. Crowston, K., Osborn, C.S.: A coordination theory approach to process description and redesign. (1998).
6. Cuskelly, G. et al.: Volunteer management practices and volunteer retention: A human resource management approach. *Sport Manag. Rev.* 9, 2, 141–163 (2006).
7. Dumas, M. et al.: *Fundamentals of Business Process Management*. Springer (2013).
8. Farrell, J.M. et al.: Volunteer motivation, satisfaction, and management at an elite sporting competition. *J. Sport Manag.* 12, 4, 288–300 (1998).
9. Galindo-Kuhn, R., Guzley, R.M.: The Volunteer Satisfaction Index. *J. Soc. Serv. Res.* 28, 1, 45–68 (2002).
10. Harper, S.R., Quaye, S.J.: Student organizations as venues for Black identity expression and development among African American male student leaders. *J. Coll. Stud. Dev.* 48, 2, 127–144 (2007).
11. Harrison, D.A.: Volunteer motivation and attendance decisions: Competitive theory testing in multiple samples from a homeless shelter. *J. Appl. Psychol.* 80, 3, 371 (1995).
12. Herrmann, T.: SeeMe in a nutshell - the semi-structured, socio-technical modeling method. (2006).
13. Landis, J.R., Koch, G.G.: The measurement of observer agreement for categorical data. *biometrics.* 159–174 (1977).
14. Liao, Q.V. et al.: Improvising Harmony: Opportunities for Technologies to Support Crowd Orchestration. *Urbana.* 51, 61801 (2016).
15. Mendling, J.: Foundations of Business Process Modeling. In: Syed, M.R. and Syed, S.N. (eds.) *Handbook of Research on Modern Systems Analysis and Design Technologies and Applications*. pp. 189–222 IGI Global (2010).
16. Nolte, A., Herrmann, T.: Facilitating Participation of Stakeholders during Process Analysis and Design. In: *COOP 2016 - Proceedings of the 12th International Conference on the Design of Cooperative Systems*. pp. 225–241 Springer International Publishing (2016).

17. Nolte, A., Prilla, M.: Anyone can use models: Potentials, requirements and support for non-expert model interaction. *Int. J. E-Collab. Spec. Issue Collab. Usage Dev. Models.* 9, 4, 45–60 (2013).
18. Pearce, J.L.: *Volunteers: The organizational behavior of unpaid workers.* Routledge (1993).
19. Preist, C. et al.: Competing or aiming to be average?: normification as a means of engaging digital volunteers. In: *Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing.* pp. 1222–1233 ACM (2014).
20. Saeed, S. et al.: Analyzing political activists' organization practices: findings from a long term case study of the european social forum. *Comput. Support. Coop. Work CSCW.* 20, 4–5, 265–304 (2011).
21. Soden, R., Palen, L.: Infrastructure in the Wild: What Mapping in Post-Earthquake Nepal Reveals About Infrastructural Emergence. In: *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems.* pp. 2796–2807 ACM (2016).
22. Zhu, H. et al.: Organizing without formal organization: group identification, goal setting and social modeling in directing online production. In: *Proceedings of the ACM 2012 conference on Computer Supported Cooperative Work.* pp. 935–944 ACM (2012).
23. Greece: Social Kitchen - the Other Person - Al Jazeera English, <http://www.aljazeera.com/indepth/inpictures/2015/09/greece-social-kitchen-person-150921110028671.html>.
24. Wikipedia, <https://www.wikipedia.org/>.