

The development of an online Communities of Practice for an organization for grassroots start-up development, through the application of Participatory Design.

Masters Thesis
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Information Studies, 10th semester

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Abstract

This thesis seeks to identify those elements/practices salient for the success and sustainability of an online Community of Practice (CoP) by the case-study method for the build out of a grassroots, start-up development organization, Aarhus Soup, for entrepreneurs. As a means to encourage co-creation of the online CoP, the Participatory-Design method was utilized to identify those features perceived by the potential members to the CoP as most needed and desired in such an online community (OC). The case-study literature relevant to creation of OC CoPs was reviewed to determine what parameters were perceived as more or less effective in creating and sustaining an OC CoP. Through participatory design, conducted via interviews, and a workshop as derived from the data, this paper presents Aarhus Soup with a veritable menu of steps it should take, practices it should implement in order to achieve its goal of becoming a thriving online Community of Practice.

Introduction

Aarhus Soup is a grassroots crowdfunding initiative which brings together community building, entrepreneurship and soup to Aarhus. (Király, K., n.d.) (hereafter referred to as “Aarhus Soup” or “the Soup”) This initiative was started by C-cubed. C-cubed is an organization within Aarhus which helps facilitate projects between Danes and internationals. (Király, K., n.d.)

The concept of Aarhus Soup was inspired by Detroit Soup which is a series of peer-to-peer, micro-granting events. (Detroit Soup, n.d.)

The Soup is a community-building framework for grassroots start-up development for entrepreneurs. In practice, it stands for a food event where four project-makers chosen ahead of the event compete by presenting their projects to a group of supporters, who have all attended to eat soup. The supporters will listen to the pitches, and donate (50-100dkk) as the admission fee to participate in The Soup and receive a soup meal. The proceeds of the fee are used to create a common fund on the spot. At the end of the event the supporters will vote for which project they liked best. The project with the most votes wins the money pot. But the project pitchers don't just get the chance to win a small sum of money, the real 'winning' is the chance for these project makers to learn new skills, to form connections and build their network within the online framework of the Soup as well as the face-to-face potluck soup dinners that they frequent.

The Soup is quite new to Aarhus, with its first event taking place on February 13th 2021. As to the date of this thesis Aarhus Soup has held in total four events, totaling to sixteen project pitches and four project winners.

C-cubed wishes to expand the Aarhus Soup concept further into the digital realm as the present online offering is failing to gain traction. They want to enhance the online community with further networking opportunities, and through connection building which can be done simultaneously with the Soup events. This online community will be used to support and facilitate project makers within Aarhus.

This leads to questions on how an online community can support and expand upon the Aarhus Soup concept, and not least how one can go about designing such an online community.

Problem field

As mentioned above Aarhus Soup does in fact offer their participants of the events entry into a Discord server. Anyone can create a Discord server, organise and build up the channels that comprise it. Discord is a community building platform which offers an area of functionalities; such as voice call, video call, text messaging, and the customization of building up the server and its channels in a way which fits users' purposes. (Discord,

n.d.) Although Discord provides users a space to communicate about event day and also continue discussion after events, members are not active within it.

As an alternative, a website with a flawless user experience could be designed, but if the user does not want to contribute or is not motivated to stick around, then the online community is essentially ineffective. (Kraut et al., 2012 p. 6) This thesis will take a step back and look into the elements of a successful Online Community to create a sustainable Communities of Practice and look at the users' needs and desires rather than focus on the capabilities of the Discord server, as it is really the people and their practices which will define success or failure for this Online Community.

The utilization of Communities of Practice as the primary tool of analysis, specifically the identification and application of attributes of online Communities of Practice, to co-design with members/users a successful online Community of Practice for Aarhus Soup.

How can we build up a successful Online Community by developing a Communities of Practice for it? This paper seeks to determine those attributes necessary for a successful online Communities of Practice and design the Online Community with users. At completion, the author will share the results of the work and build the Online Community with the Aarhus Soup founders and members of the Online Community.

The basic assumption for this paper is that by working closely with the users, we can co-develop through Participatory Design and eventually build this Communities of Practice and thus design a successful Online Community.

Method and Theory

Aarhus Soup is not yet a Community of Practice, but its aim is to build a thriving and sustainable online Community of Practice.

Key questions of this paper: 1. How might elements of Communities of Practice assist Aarhus Soup in this endeavor to bring its online community to the level of a fully operational, member-driven, information-sharing Community of Practice that can support and expand upon the Aarhus Soup concept?; and 2. How then on this basis might a successful Aarhus Soup online Community of Practice be designed?

To investigate and gather insights on user motivations, Participatory Design could yield strong results. As the theories and methods revolving around participatory design are user-centric, these reasonably lead to a focus on the user throughout the design process.

This paper is a case study on the use of Participatory Design in conjunction with theory on Communities of Practice to build the Aarhus Soup online community with the users as co-creators of the online community (a la Zhang & Watts, 2008). From this basis we established the following research question:

Which concepts and attributes of Communities of Practice might apply to the instant case (Aarhus Soup) using Participatory Design as the main mechanism of discovery of most relevant attributes of successful CoPs; and

To what end can participatory design be used in order to co-create/co-build central elements of the online CoP with members/users?

Theory

1. Practice theories- The basics.

Rouse cleverly describes 'Practice Theory' as an 'idiom', whose application extends from "the most mundane aspects of everyday life to highly structured activities in institutional settings" (Rouse, 2006, p. 499). Nicolini suggests with regard to the specialized and theoretical sense of 'Practice' that "to the extent it is unable to be translated into words . . . it can only be transmitted through custom, institutions, and processes of handing down," which is a way of saying that practice is both the act of repeating a certain action through learning that transforms into custom or tradition across a community or communities of actors. Rouse goes on to explain that the field has become so disparate and its applications so widespread, that the discipline lacks a unified theory (Nicolini, 2012, p. 1). Rather than kickstarting a unification process, he encourages the community of Practice Theoreticians to adopt a heterogeneous approach of 'practice theories.' As the definitive framework under the maxim that the sum is greater than any of its parts. Pilerot et al. (2016) praise the 'methodological pluralism' in Practice Theory as a 'strength'. (Hammarfelt, B., n.d.)

What is 'Practice' then in the context of this thesis? Simply put 'Practice' can be both passive and active—knowledge and action. In the context of practice theory, practice is customs and tradition. It is the processes such as learning, where by practice 'actors' acquire said practice. Practice lives through rituals or traditions, which are themselves practices.

As a verb 'to practice' can be both transitive (requiring an object, 'Practice the guitar!') or intransitive (so in the infinitive, 'Practice!'). As can be inferred from its definition, grammatical forms as noun and verb and usage within the context of a Theory of Practice, it is of course also language, which is a human 'practice' acquired through learning that instills actors with identity, community and meaning.

Nicolini calls for a 'tool kit' approach to practice theory. It is through the familiarization of practice theory and the selection of appropriate theory that the designer can conduct an adequate investigation on Aarhus Soup's possible community practices. (Nicolini 2013, pp. 10,11) This thesis's theoretical framework is not outlining all practice theory, instead it outlines the practice theory concepts (tools) which will aid in answering the problem formulation:

Which concepts and attributes of Communities of Practice might apply to the instant case (Aarhus Soup) using participatory design as the main mechanism of discovery of most relevant attributes of successful CoPs; and

To what end can participatory design be used in order to co-create/co-build central elements of the online CoP with members/users?

If we do not understand the correct community and their practice digitizing it will not be possible.

2. Community of Practice: Defined by its members.

Before we can define what concepts create an online community, one must turn to the concept of Communities of Practice (CoP). A CoP, as defined by Lave and Wenger, the originators of the term, define it as, “relations among persons, activity, and world, over time and in relation to other . . . communities of practice.” They describe CoP as “an intrinsic condition for the existence of knowledge” and therefore provide a fundamental condition for human learning, not least because it provides the interpretative support necessary for making sense of its heritage.” (Lave and Wenger 1991, p. 98)

CoP, according to Wenger in his 1998 book *Communities of Practice*, is his primary tool of analysis in a social theory of learning that is based upon four premises: 1. People are social beings; 2. Knowledge is demonstrated by competence in the context of community; 3. Knowing is active engagement in the world; and 4. Learning produces meaning. (Wenger, 1998, p. 4). In his theory of learning he identifies four elements of learning, namely Meaning, Practice, Community and Identity, each defined as “a way of talking about” meaning, practice, community and identity being a way of talking about how learning “*changes who you are*” [emphasis mine] (Wenger, 1998, p. 5).

These four elements are the structuring framework for a social theory of learning as described in the diagram from Wenger, 1998 page 5--

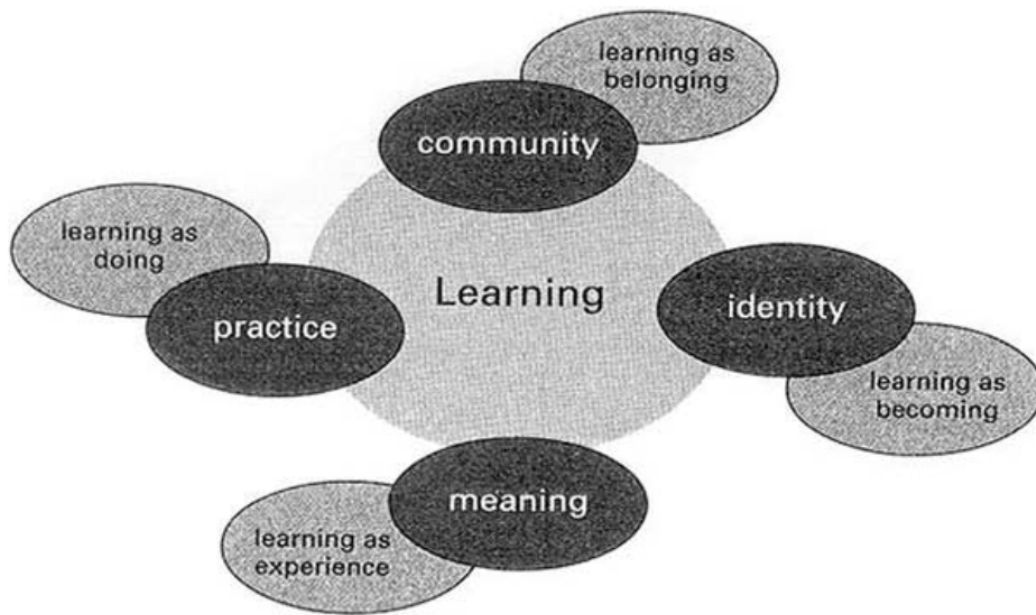


Figure (1) (Wenger, 1998, p. 5).

He argues that these elements are “deeply interconnected and mutually defining” (Wenger, 1998, p. 5) in that one could “switch out any of the four peripheral components with learning, place it in the center as the primary focus, and the figure would still make sense.” (Wenger, 1998, p. 5).

“Community” is “a way of talking about the social configurations in which our enterprises are defined as worth pursuing and our participation is recognisable as competence,” while “Practice” is “a way of talking about shared historical and social resources, frameworks, and perspectives that can sustain *mutual engagement* in action.” (Wenger, 1998, p. 5)

He combines community and practice into Communities of Practice or CoP to achieve a “more tractable” and therefore more definable “characterization of the concept of practice” as opposed to “less tractable terms like culture, activity, or structure” and to create “a special type of community -- a community of practice”. (Wenger, 1998, p. 72).

Wenger describes “three dimensions of the relation by which practice is the source of coherence of a community.” They are:

- *Mutual engagement*: How members of a community do whatever they do though practice. Practices are what sustain mutual engagement of community members. (Wenger, 1998, p. 73).

- *Joint enterprise (negotiated by the community)*: relates to what the community means, its rules, the shared interest of its members. This can include, “routines, words, tools, ways of doing things, stories, gestures, symbols, genres, actions, or concepts that the community has produced or adopted in the course of its existence, and which have become part of its practice” (Wenger, 1998, p. 83). This joint enterprise is negotiated by its members. (Wenger, 1998, p. 78).
- *Shared repertoire of resources*: ‘I call a community’s set of shared resources a repertoire to emphasize its rehearsed character and its availability for further engagement in practice . . . it reflects a history of mutual engagement and remains inherently ambiguous’ (Wenger, 1998, p. 83)

Additionally there is an important fourth element, “shared histories of learning” or “learning in practice [that] involves the three [above] dimensions.” (Wenger, 1998, p. 93)

- *Shared histories of learning*: “[L]earning in practice includes...evolving forms of mutual engagement, understanding and tuning the enterprise...developing their repertoire, styles, and discourses Learning is the engine of practice, and practice is the history of that learning.” (Wenger, 1998, pp. 95–6)

Another scholar in the field, Nicolini, states that CoPs are defined by the people, who are the actors which keep its practice alive. This group of people share commonalities and are in continuous communication with one another. They are aware of their shared commonalities and for the most part positive about the community they make up. (Nicolini, 2013, p. 90) “The notion of community emphasizes stability, commonality, reciprocity, what can be shared, boundaries, and rules of inclusion/exclusion. . . . To function and to bond their members together, communities have to pre-exist their constituents, who need to be socialized into their rules and ‘culture’.” (Nicolini, 2013, p. 89) Through CoP we can make sense of the community and activities we engage in. (Nicolini, 2013, p. 90)

3. Legitimate Peripheral Participation

Legitimate peripheral participation (LPP) refers to the way a person engages in the act of learning a practice and may refer to a number of modalities, an example of which is the apprenticeship (e.g a new member joining the Aarhus Soup online community). LPP occurs through a social practice in which the learner gets access to the society which upholds the practice and the knowledge of said practice through this society. Through LPP it is claimed that learning is a social process “about belonging, engagement,

inclusiveness and developing identities.”(Nicolini, 2013, p. 80) LPP is the socialization of new participants into the community’s practice.

“Absorbing and being absorbed in the ‘culture of practice’ (. . .) might include (knowing) who is involved, what they do, what everyday life is like, how masters talk, walk, work, and generally conduct their lives, how people who are not part of the community of practice interact with it, what other learners are doing, and what learners need to learn to become full practitioners. It includes an increasing understanding of how, when, and about what old-timers collaborate, collude, and collide, and what they enjoy, dislike, respect, and admire. In particular it offers exemplars (which are grounds and motivation for learning activity), including masters, finished products, and more advanced apprentices in the process of becoming full practitioners” (Lave and Wenger 1991, p. 95).

For the online community to become a CoP we must establish what this practice will look like in the community. What are the users’ expectations, desires for the practice, how will the practice be conducted, how can the online community facilitate this/ese community practice(s), and how can new members be socialized into it?

LPP is defined as:

Legitimate - For a person to be LPP it is vital they are a part of the community's activities as an invested stakeholder. This means that learning a practice is not just a condition to be a part of said practice but also contributes to the evolution of the person as a member of the community. (Nicolini, 2013, p. 80)

Participation - Participation is the practice of learning by interacting with others. Learning is the ongoing involvement in the practice, if the user is unable to participate in the practice then learning does not happen. (Nicolini, 2013, p. 80)

Peripheral - Peripheral refers to the array of roles each participant embodies within the activities of the community. (Nicolini, 2013, p. 81) This concept of the peripheral within a practice also assumes that learning is not simply transferred from master to novice within a community, but rather everyone involved in the practice learns from one another. “Every interaction is an opportunity to learn and modify the ongoing practice.” (Nicolini, 2013, p. 81)

Defining online communities

In their book “How to build successful online communities: Evidence-Based Social Design” Kraut et al., 2012 define online communities as spaces online where people gather for an assortment of reasons: “to communicate, exchange information, to learn, or play.” These communities can be small groups to large communities with millions of users. What they have in common however is that members are in continuous communication within the group, over a period of time with some of their communication being online. (Kraut et al., 2012 p. 1) Not unlike offline groups online communities serve a broad range of purposes. Through the use of online communities users are presented with the opportunity to share information, learn from other members, develop social relationships and be entertained. (Kraut et al., 2012 p. 2)

It can be quite difficult to start an online community. With well defined and wildly popular online communities, like Facebook, and Instagram dominating the market, starting up one can be quite daunting. In their book Kraut et al. pose different techniques and design claims for designers to increase their chances of building a successful online community. Through the next part of this section we will go through elements of Kraut et al.’s work on how to build a successful online community. This advice will be taken into account while building Aarhus Soup’s online community.

Defining success

Kraut et al. 2012 discuss attributes which contribute to building a successful online community. First and foremost in order for an online community to become successful those who are involved need to put in effort to keep it running--as in they need to contribute to the content that the online community produces to uphold its practices. (Kraut et al., 2012 p. 21)

In more detail a successful online community fulfills these criteria:

- More members join than leave; (Kraut et al., 2012 pp. 4)
- New members are integrated into the community; (Kraut et al., 2012 pp. 4)
- There is a level of member’ commitment - members are willing to stay and contribute to the community. (Kraut et al., 2012 pp. 4)
- Members are encouraged to contribute - members contribute to the resources the community is built on; and (Kraut et al., 2012 pp. 5)
- Behaviour is regulated within the community - “control the trolls, commercial spammers, off topic posts.” (Kraut et al., 2012 pp. 5)

How might one motivate these types of interactions within an online community? In their book they pose several ways a designer can encourage interaction of users within an online community in order to achieve the above mentioned criteria. For the community to be successful, new members should be introduced to the community with relevant information on how the community works, it’s purpose, and expectations. There must be an inflow of relevant content, which is produced by its participants. The participants

should be encouraged to commit to the community as well as contribute to it. (Kraut et al., 2012 p. 6) This is done by the community providing value to the participants.

Online communities are built up by the people who are in them. People are not elements a designer can control, unlike the user experience upon which an online community is based. (Kraut et al., 2012 p. 6) However through principles of social design Kraut et al. 2012 argue that the designer can manage the online community to create a successful environment for communication among its members. (Kraut et al., 2012 p. 6)

“Many hands make light work, according to the proverb. But only if all those hands actually do some work. To be successful, online communities need the people who participate in them to contribute the resources on which the group’s existence is built.” (Kraut et al., 2012 p. 21)

To relate this to CoP, engagement and contribution between the people who make up a community is what creates a CoP. Without the actors’ mutual engagement the joint enterprise will not be negotiated, a shared repertoire will not be formed, and a shared history of learning cannot unfold. (Hsiao & Chiou, 2017) Hsiao & Chiou go further to make the point that one critical reason that determines and sustains an online CoP is its members’ motivations to actively participate in knowledge sharing. (Hsiao & Chiou, 2017) This leads us to theory on how to produce and encourage user engagement, contribution and motivation. As Hafeez et al. write in their paper little is known about online CoPs. This thesis will focus on those concepts, activities and practices that increase the likelihood of creating a sustainable online CoP.

Encouraging contribution

The kinds of contributions needed from participants of an online community differ from one online community to another. (Kraut et al., 2012 p. 21) The kind of content needed/desired by users of course should be investigated by the designer in order to create a successful Aarhus Soup online CoP. Kraut et al., 2012 explore encouraging contribution through the lens of motivators--these being individuals who fall into two social design categories: Intrinsic Motivators and Extrinsic Motivators. Intrinsic motivation is defined by the participant enjoying the task itself while an extrinsic motivator is a participant who enjoys the outcome of completing the task. (Kraut et al., 2012 p. 24)

Intrinsic Motivations

Intrinsic motivations are defined by the quality that they fulfil a basic desire. Kraut speaks of different practitioners defining intrinsic desires to be quite diverse, covering motivation for curiosity, autonomy, play, or hedonic pleasure. One practitioner (Reiss 2004) even defined sixteen types of joy which motivate people's engagement. (Kraut et al., 2012 p. 41) Kraut et al. put forward intrinsic motivators which engage people in

online communities by social contact, optimal challenge, mastery, and competition. Through these four types of motivations designers can design tasks for the users of online communities to encourage contribution through intrinsic motivation. (Kraut et al., 2012 p. 42) Kraut makes several design claims which can support motivating participants in this way.

Extrinsic Motivations

This type of encouragement takes the form of rewards. (Kraut et al., 2012 p. 52) Although this is a form of encouragement, designers should be aware that giving out rewards can have a negative effect on user engagement. Thus, this form of motivation might not be the best solution depending on the circumstances and objectives of the group. (Kraut et al., 2012 p. 52)

Kraut states that both psychologists and economists warn that rewards and other extrinsic motivations alike can “undermine their intrinsic interest in the task,” (Kraut et al., 2012, p. 58) which means it is important to note if the task itself is intrinsically motivating, there is not much need for extrinsic motivation (a reward). One study investigated this. It found small children were more likely to play with arts and crafts they enjoy if no reward was given vs. if they were rewarded for playing with them. (Kraut et al., 2012, p. 59) “When people perceive rewards as controllers of their behavior, rewards typically decrease their intrinsic motivation in the task.” (Kraut et al., 2012 p. 59) This is important to keep in mind when giving out rewards for behavior, as to not undermine the outcome of the motivation. One way to avoid this is giving the reward as positive feedback for their actions. This ends up benefiting intrinsic motivation. (example “you are doing a good job.”) (Kraut et al., 2012 p.59)

Encouraging commitment

Committed members of a community are vital to an OC’s survival. Users who feel a commitment to the OC will stay active within it, even contributing to the community with resources other members find valuable to their experience in the community. User commitment to the group is essential to keeping the community going. If the user is committed to the group they in turn are motivated to participate in keeping the group up and running. (Kraut et al. 2012, p. 77) Commitment to a group also leads to the users tolerating faults in the online community, like those that come about when the group is in the early stages or in the stages of growing and changing. (Kraut et al. 2012, p. 77)

Concepts of group commitment came long ago from field theory, which identified those aspects of a group's environment that encouraged commitment to a group. From these theories group psychology has evolved. Kraut et al. discuss in their book three kinds of commitment a designer can apply to an online group setting:

- Affective Commitment, “based on feelings of closeness and attachment to a group or members of the group.” (Kraut et al. 2012, p. 78)

- Normative Commitment, “based on feelings of rightness or felt obligation to the group” and (Kraut et al. 2012, p. 78)
- Need-based Commitment, “based on an incentive structure in the group and alternatives available to members from outside that increase the net costs of leaving the group.” (Kraut et al. 2012, p. 78)

Affective Commitment will be the focus of this paper, as the online community is just starting out. Members will be invited based on network. Ergo, Affective Commitment is the relevant kind of commitment to focus upon for the purposes of this paper.

Affective commitment: wanting to stay.

Affective commitment falls into two categories: 1) Identity based - deals with the user's identity being attached to the group. Here the user feels they are a part of the group. 2) The second kind is bond-based which is related to the user's connection to other group members. Here the user feels close to others in the community. (Kraut et al. 2012, p. 79)

Those who form a Identity-based affective commitment to the online group will want to continue the development based on their feelings of attachment to the group as a whole. Where people having a bond-based attachment only feel attached to the group based on individuals in the group, not the group as such. (Kraut et al. 2012, p. 79)

According to Festinger, Schachter, and Back's (1950) theory of group cohesiveness, people who categorize themselves within a group, as in they feel like they belong in a group due to a similarity they have with the group, end up committed to it. This is because of a bond they share with other members. The bond could come from gender, location, education, activities, etc. Any kind of identifying characteristic that all members share can heighten commitment to the group. When starting up a new online community in order to decrease dropout and increase commitment it may be wise to invite people to join the community who share the same characteristics as the others. In the case of Aarhus Soup, the commonality that they could share is the fact that they are all project makers based in Aarhus. Through social identity theory, selecting members to join an online group who identify with said group creates strong ties between the person and the group. (Kraut et al. 2012 p. 80)

Literature review

The following studies were included in this thesis to investigate how others have approached studying CoPs in OCs. The first study by Hafeez et al. was included as their report falls within a similar domain as this thesis. The study examines an already-established entrepreneurial knowledge-sharing message board. Hafeez et al.'s study

gives this thesis a look into how a study like this approached CoP in an online setting. The last two articles, (Zhang & Watts, and Tseng & Kuo) although not in the same domain as this thesis, contain interesting insights into CoPs within online communities that are relevant to our case and were thus included.

Hafeez et al.

In their case study on *youngentrepreneur.com* Hafeez et al. (2018) points to a lack of knowledge around entrepreneurial learning in online communities. Their work investigated how entrepreneurs learn and then share knowledge within an online CoP, and what were the motivating factors for participation in this online CoP. (Hafeez et al. 2018, p. 714) They observe that there are few if any studies of online CoPs in regard to entrepreneurs, leaving a gap in knowledge pertaining to the field. (Hafeez et al. 2018, p. 714) Hafeez et al.'s (2018) research poses the question 'what do entrepreneurs learn from CoP websites and how can we measure their engagement'? Although this study does not relate to the building of a CoP website, certain research concepts, particularly why entrepreneurs engage in CoPs, may be beneficial to this thesis.

While there are important differences between *youngentrepreneur.com* and Aarhus Soup OC (large international 'message board' v. local practice community, respectively), there are enough points of commonality that the former's experience would still be relevant to The Soup.

A challenge that Hafeez et al. point to is that little is known about what plays a role in the failures of online CoPs, as much of the research focuses on evaluation of user contribution and there is a lack of focus on enabling motivations for participation of users in online CoPs. (Hafeez et al. 2018 p. 715) Another challenge is knowledge sharing. For online CoPs to be successful users need to be motivated to share knowledge in the community. (Hafeez et al. 2018, p. 716) The study investigates users' engagement in online CoP and what themes and factors contribute to the users engagement, and the intensity of engagement through the activity and life of different topic threads. (Hafeez et al. 2018, p. 717) They conducted a deductive approach to data collection.

Nevertheless, the study pointed to engagement, participation, and a sense of belonging as key to survival of a joint enterprise maintained through learning repertoire. Further they argue that knowledge sharing is a fundamental reason for online CoP success because OC's are an exceedingly efficient knowledge-sharing tool, not least due to internet applications that allow efficient communication of implicit or tacit knowledge (Hafeez et al., 2018, p. 716). Storytelling in an online CoP allows for communication of

symbolic meaning and provides for a social context through which a online CoP may maintain a participant's interest and keep them engaged in the group. (Hafeez et al., 2018, p.717).

Using realism (i. e. combination of interpretivism and positivism) coupled with a deductive approach within the context of a case study illuminated the important factors for success of CoP's:

- Storytelling as a tool for information sharing and generating meaning (Hafeez et al., 2018, p. 730);
- Collectivism and reciprocity are most common motivators for engagement;
- Socialization such as face-to-face meetings 'after hours' outside of the online context important;
- Online context allows opportunity for tacit knowledge to become explicit knowledge adoption of 'appropriate devices' (Hafeez et al., 2018, p.730);
- Comprehensive engagement measurement tool allows moderators to measure to increase engagement (no explanation here how).

They identify eight motivators: collectivism, reciprocity, personal gain, respectful, environment, altruism, technology, interest of seeker, selflessness, and outspoken personality (Hafeez et al., 2018, p. 730).

Their finding that the most common successful combination as stated above was collectivism and reciprocity, while storytelling is useful for knowledge transfer/sharing/meaning-making in the online context (Hafeez et al., 2018, p. 731).

Zhang & Watts

Zhang & Watts in their case study take a Chinese travel site that focuses exclusively on backpacking and backpackers.

It was not always the case that scholars believed that CoPs could develop online. Zhang & Watts for instance made the argument in 2008 that CoPs indeed can and do. The authors believed the question at the time of the writing of their article of whether CoPs could also be online remained an open question and sought with their article to establish it as a fact that CoPs develop online and as such even have advantages over their offline cousins.

Applying the case-study method on this travel forum, Zhang & Watts look at the following factors for successful creation of an online CoP: engagement, joint enterprise, identity, shared repertoire and knowledge management.

With regard to the instant site, engagement was encouraged by knowledge exchange through questions-and-answers messaging on specific issues dealing with community concerns in this backpacking OC. Further commitment was engendered through coordination between members to find travel partners through timetable and itinerary messages leading to face-to-face meetings which solidified the social participation (next study) and socialization (as identified in Hafeez et al.). Finally, the authors point to social-media style messaging through 'progress reports' to others while on the road through the 'seed-messages' function of the website that further solidified engagement (Zhang & Watts, 2008, p. 61).

Joint Enterprise was another key feature of success according to Zhang & Watts as the online forum was limited to backpacking in China and maintained by a dual, self-enforcing system of member interpretation of the limiting rule and moderators that provide disincentives for violations (deletion of perceived inappropriate messages and threads). (Zhang & Watts, 2008, p. 62).

Identity was enhanced not only through learning (knowledge sharing), but also through a number of clever actions such as a member designed logo agreed to by all members. The authors believed that this process drives community as a sense of belonging to the group, and then the fruits of this joint effort were made available to all members in different forms (patch for backpacks being a popular item). Another joint activity was the adoption of a mascot (donkey) and nickname for the site 'donkey pot', members now 'proudly' call themselves 'donkeys'. (Zhang & Watts, 2008, p. 63).

This online travel forum CoP 'developed a rich shared repertoire that included local vocabularies, FAQs, help files, the best article selection, and the gonglue message format, which suggested that the members were able to not only adapt to the online environment but also take advantage of it' (Zhang & Watts, 2008, p. 66).

Tseng & Kuo

Study of Social Participation and Knowledge Sharing Teacher CoP Tseng and Kuo, 2013, Lit Rev 3.

Empowering teachers through know-how transfer through online CoPs. Know-how transfer is a key aspect of Aarhus Soup and its success or failure as an online CoP.

In their literature review Tseng & Kuo (2013) point out that social participation is critical to promote cognitive factors such as 'connectedness, trust, empathy, altruism, and reciprocity among social members' (Tseng and Kuo, 2013, p. 38) which are attributes of a successful online CoP according to the authors. In this case study the authors look at an online forum for school teachers designed to encourage exchange of know-how and emotional support relevant to the members.

They looked at the following elements which they believed were key: 'Tie strength', Social commitment as collective force to share know-how, member expectations and their relative ability at self-assessment (called self efficacy here) to mediate know-how sharing behavior which is further described in the figure below:

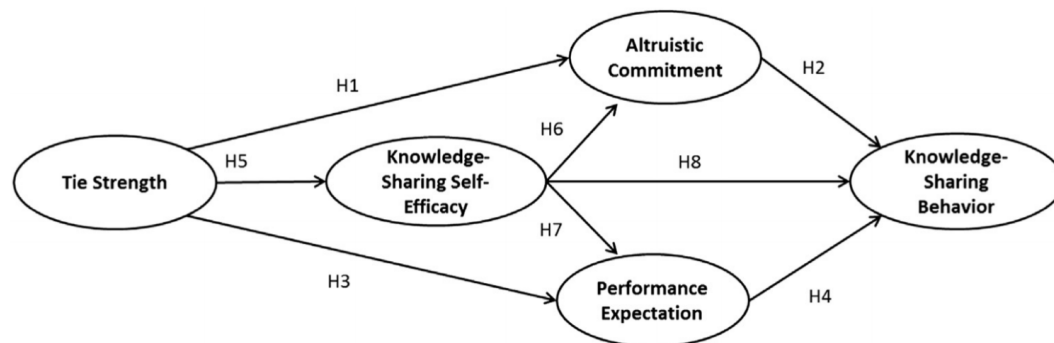


Fig. 1. Research model.

Figure (2): (Tseng & Kuo, 2013, p.40)

The above diagram could be amended to include an arrow from Knowledge-Sharing behavior back to Tie Strength which would complete the loop to create a diagram of the virtuous cycle that is a key takeaway from these three studies. Additionally, the implication that say, Knowledge-Sharing could be put in the central position with lines moving to and from each element and still makes sense, echoes Wenger's observation about his own diagram explaining the social theory of learning.

The case-study method of teachers' online community looked at demographics of users (sex, age, positions in schools, work experience in years, etc.), frequency of use and percentage breakdown and examined members' "network ties, prosocial commitment, performance expectation, self-efficacy, and their knowledge-sharing behavior" (Tseng & Kuo, 2013, pg. 42).

Their findings include the identification of closer connections among CoP members leads to greater recognition and altruism toward others (similar to collectivism and reciprocity in Hafeez et al., 2018). Membership fosters a pro-social attitude or the social commitment to encourage the sharing of knowledge and solve members' problems whether emotional or substantive (Tseng & Kuo, 2013, p. 43) and agrees with Hafeez et al. and Zhang & Watts that face-to-face enhance connection and social commitment of online CoPs.

Key Insights and Applications from the Literature Review:

The Hafeez et al. study subject and its conclusions have many congruities with this paper's. For instance it is an online entrepreneur community similar to that of Aarhus Soup. Conclusions they draw with regard to storytelling for the purpose of information transfer and meaning generation in the context of learning are powerful attributes of successful CoPs ability to impart learning. Another interesting commonality is the determination that collectivism and reciprocity in the context of "bottom-up emerged" online communities from the bulk of members rather than in "top-down managed" by a small group, was the "most common combination of motivators" and should be encouraged through fostering further social ties among members as the feeling of belonging to a group motivates members to take actions to foster the welfare of the group. (Hafeez et al., 2018, p. 730). Groups whose members receive help from the group with whom they identify are then more likely to experience higher commitment and receive contributions from those members.

Figure 2 A hierarchical model of online social structures for knowledge management

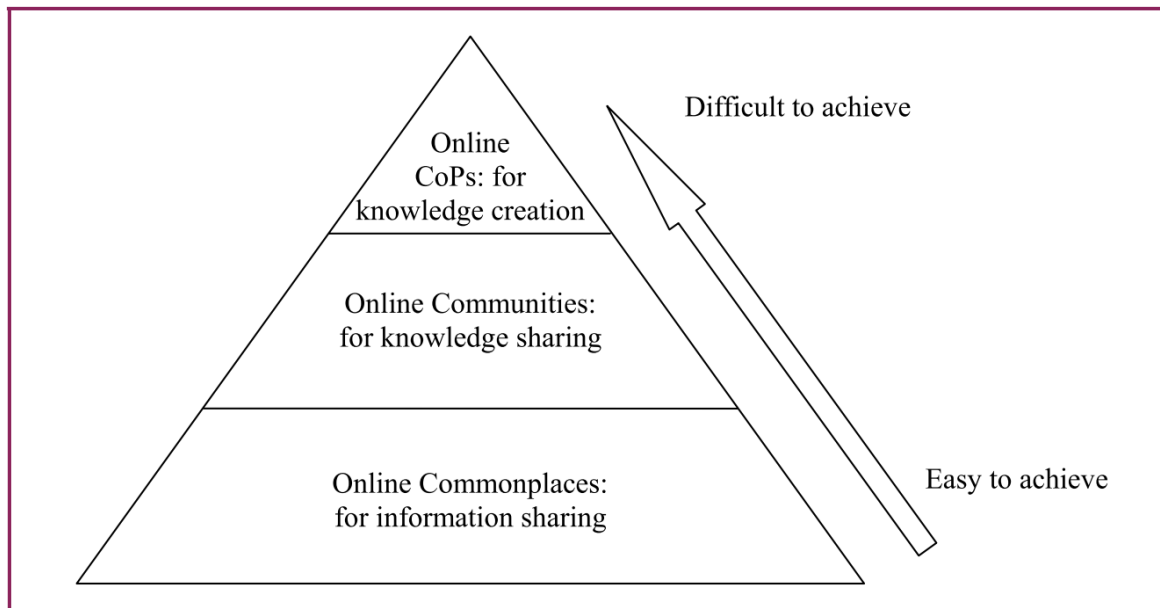


Figure (3) (Zhang & Watts, 2008, p. 68).

As can be seen from Zhang & Watts Knowledge-Sharing Hierarchy pyramid, one can reasonably draw the conclusion that as to information sharing in the context of an online commonplace, collectivism and reciprocity may be achievable through “bottom-up emergence” of an online commonplace-based exchange of information. Further applying the Hafeez et al. findings, collectivism, which includes an identification with the group for the member, in turn could bolster commitment to and an identification with the community for members leading to a virtuous cycle encouraging reciprocal acts of information exchange and support. In addition, the co-creational aspect of the backpacking site and their effectiveness building commitment through member-created logos, names and other identifiers further support this paper’s assumption that participatory design is the correct approach.

In the context of encouraging collectivism and reciprocity and bottom-up emergence, it may increase success through the application design practices of Participatory Design (PD) which would involve the participation of members with the design of the online portal and function at every step of the design process. Participatory design (PD) would also allow for efficient identification of mechanisms such as commonplace-based information exchanges which are in turn straightforward to implement. PD also includes investigation to determine desires and needs of the community members and efficient feedback on which mechanisms fulfill expectations and are beneficial and which can be

pruned from the organization. Further PD and information exchanges can foster and increase Tie Strength leading to knowledge sharing behaviors as described by Tseng & Kuo or to collectivism and reciprocity as described by Hafeez et al.

All authors point to the importance of face-to-face meetings as an important socialization function for the group. These are “built-in” already in that The Soup meets regularly face-to-face for its soup and selection dinners. It may be advantageous to look for other potential forums for such socialization.

Design Theory and The Design Process

Some data collection methods early in the design process were conducted online due to the current situation regarding covid. These include methods which were conducted when meeting restrictions were still in place during March and April. Although not all methods were conducted in a physical space the gathering of data online still has value to the research due to capabilities of technology. These methods were supported by online tools which facilitate research. Those tools being Online Research Methods are ways in which a researcher can conduct research online. (Reips, 2012, pp.291-310)

Research Design

This thesis investigated a phenomenon of CoP formation among a small population. This being CoP and facets of motivation and commitment of project makers in Aarhus regarding Aarhus Soup's online community. Gathering insights into and understanding this phenomenon among the population is vital in order to create a successful OC. The thesis is defined as a case study as the research and analysis for this study focuses on a small population sample in detail. Defined by Bryman case studies are typically carried out using qualitative methods due to the detail in which the case is studied. (Bryman, 2012, p.66-72).

Research methodology

Participatory design

Participatory design (PD) is a way in which a designer can design alongside the users. If a CoP is going to be established for the OC of Aarhus Soup, it is imperative we work closely with the users to do so. As of right now the CoP for Aarhus Soup is non-existent. Through PD, we can build an understanding of the users and potential practices which will make up the CoP.

PD is the involvement of users within the design process of solution development. In PD users participate alongside designers in the design process. PD is diverse in its application, and can be found in many disciplines, such as user-centered design, architecture, psychology, etc. (Muller, 2011, p. 1). Due to this diversity PD is not limited in its application to one theory or practice. Instead, there is a collection of approaches to practice and theory which fall under PD. For this thesis we will go into the facets of PD which are useful to build up insights on users, and work alongside them to define the elements of the online CoP.

One of the largest problems in design work for the designer as Muller points out is defining what the actual problem is. As both the designer and the user have their own understandings of the problem field, it is the responsibility of the designer to uncover a mutual definition of the problem. (Muller 2011, p. 5) Where the designer and user come to a mutual understanding of the problem field is what Muller (2011) calls the hybrid space. Muller (2011) talks about PD falling into this hybrid space. Each group has their own understanding of the world, and more specifically the problems the solution faces. Each comes with their own language to approach the problem. It's proven difficult for each side to form an understanding of the other's world perspectives. PD and its hybrid space can bridge this gap of understanding. Muller claims that PD's hybrid space is where the designer can communicate with the end-user in a neutral sense and vice versa. (Muller, 2011, p. 2,6) In this hybrid space mutual learning between both parties can live. (Muller, 2011, p. 5)

Elizebeth (2008) states co-creation has become a growing trend within PD. She goes on to explain that like PD, co-creation has a variety of applications. Choosing an application for co-creation is beneficial for the design process, therefore User Innovation Management (UIM) is selected as the structure for co-creation. (Elizabeth B., 2008, p. 6) This thesis looks at co-creation through the lens of UIM.

Through UIM processes the designer aims to facilitate this hybrid space with the users and thus create a template for practice for the CoP of the OC.

UIM methodology was developed from 10 years of research on user and designer co-operation during the design process. (Kastrup et al., 2011, p. 11) This method is used during the beginning stages of the design process, in order to gain meaningful insights from the users. (Kastrup et al. 2011, p. 13) Here the designer works as a facilitator to "create space for user innovation, facilitate users innovation, and design from users innovations." (Kastrup et al., 2011, p. 14)

Through the UIM the designer is faced with wicked problems. Meaning there is no one right solution, instead the process helps the designer facilitate meaningful insights from the users to create solutions that work. (Kastrup et al., 2011, p. 15) UIM is about facilitating users' innovations based on methods focused on contexts and concepts. (Kastrup, et al., 2011, p. 37) Use of this methodology is how the designer can put participatory design and co-creation into action. As this thesis is exploratory, UIM is fitting.

UIM process is structured into the following steps:

1. *Co-operation*: This entails selection of users for participation in the design process, and planning for innovation;
2. *Context*: Defining the context of the design process by gathering insights and turning insights into visions for future designs; and
3. *Concept*: This is where concepts are sketched and final ideas are presented.

The overall framework for the design process of this thesis follows User Innovation Management (UIM). The data collection and analysis follow the following steps: Select, Plan, Insights, Vision, Sketch, and Present.

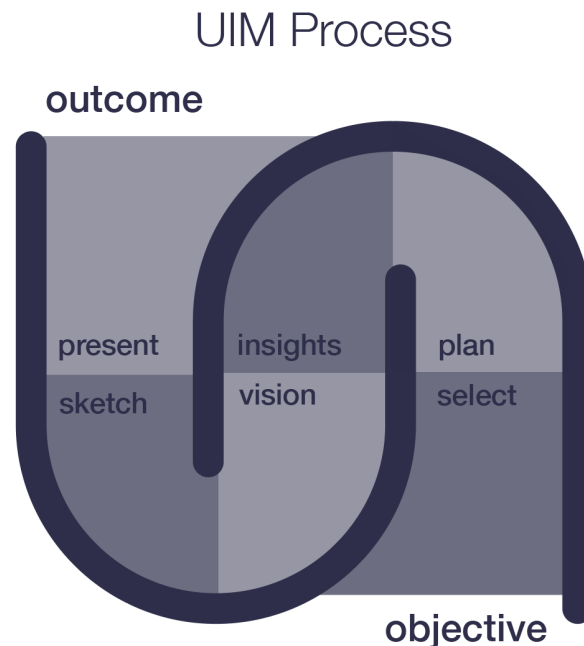


Figure (4) (Kastrup, et al., 2011, p.23)

User Innovation Management and Design Thinking

UIM however is but a structure to the design process. Theory on design must be included in conjunction with this structure. Design Thinking (DT) and its concepts were chosen for the its clarifying properties.

Design thinking (DT) and its concepts can help the designer clarify problems and direction in the fuzzy front end of a project. (Griffin et al., 2015, p. xxii). As the study is just in the beginning stages of developing an online community, DT was chosen to support the UIM process. Through DT the thesis can be given a toolkit, mindsets to withhold and actions that can be taken throughout the design process. Theory on design aids the designer in structuring the design process, specifically when defining the problem and finding ways to solve it. (Löwgren & Stolterman, 2007, pp.8-16).

The UIM's process (Co-operation, Context, Concept) is used in conjunction with concepts from DT's - **discover, define, create, evaluate**.

This thesis lives in the fuzzy front end of the design process, and as such structure, and useful methodology is pivotal in navigating the uncertainties which come along with this stage in solution development. (Griffin et al., 2015, p. xxii). As established in the above section the creation of an OC can be quite a feat.

Due to time constraints a solution will not be created, nor will the iterative nature of DT be utilized. It will take more time, and resources to finish designing and implementing Aarhus Soup's online CoP.

In recent years DT has been used throughout academic institutions and design firms. This has led to a large library of methodologies and frameworks which can be used by the designer. (Griffin et al., 2015, p. xxi) DT with its diverse methodologies and tools has been defined by Brenner et al. (2016) which through a specific mindset, toolbox and process designers can create solutions according to user needs. (Brenner et al., 2016, p. 6) Through the mindsets, toolbox and process of DT this study can create an online community which brings value for the users.

As this study is dealing with the quite broad task of building a successful online community for Aarhus Soup, it's imperative that in the beginning we build an understanding of the user. Without fully diving into the needs, desires and concerns of

the user we risk designing a solution which is undesirable or unneeded. Through DT we can navigate the messy unknowns of the beginning of the design process solution development, where the problems of the user have not been well defined. (Griffin et al., 2015, p. xxii) Through Design thinking we can grasp the unknowns of building this OC to slowly build structure around the problem at hand, and a direction for design. Through what Griffin et al (2015) calls “little bets” the designer does not waste their time building one solution that is unwanted. By not committing to one idea, and continuously checking in with the users, designers can build a solution which the users actually want. (Griffin et al., 2015, p. xxii)

This emphasis on working with the user throughout the design process blends nicely with this thesis’s use of PD and the UIM process. Due to the premise of the thesis to build a successful OC for project makers in Aarhus, it’s vital to work alongside the users to create with them a direction for design, and define what it is the users would need or want from an OC. With this the designer can build a solution worth using for the user. By not involving the user in the design process the design would risk not forming a deep understanding of the user and their needs for the OC, thus making the solution irrelevant.

Design thinking as a mindset, process and tool box

Design thinking Mindset

Design Thinking as a mindset as defined by Brenner et al. (2016) the designer’s mindset encompasses these important principles;

- Innovation is made by people for people, (Brenner et al., 2016 p. 8)
- in the design process the designer combines divergent and convergent thinking-- “fail often and early,” build prototypes early and, (Brenner et al., 2016 p. 8)
- test with users, the design process never ends. (Brenner et al., 2016 p. 8)

Another important mindset for the designer to encompass is empathy for the people they are designing for. According to Koppen et al. (2015) through empathy for the user important insights are discovered. Empathy is a great tool for the designer to understand the users’ perspective. With empathy designers can create a richer picture of the users’ circumstances and needs. (Koppen et al., 2015, p. 16)

Through this mindset the designer can work with the users to define a direction for design. Coupled with PD the designer can fully immerse themselves into the world of

the user to create design directions which align with the users' needs, and wants. Through the user interviews and design thinking workshop with the users the designer can develop empathy for the user. With this, time can be saved on ideas which do not serve the user or their needs, as the designer is not making assumptions on the behalf of the user but rather working closely with the users to build the design directions.

Design Thinking Tool Box

Due to the vast use of DT an array of tools and methods have been created in association with the design process. (Brenner et al., 2016, p. 3). This means the designer can choose an arrangement of tools and methods to best suit their project's needs. This makes DT versatile in project work. Methods and tools in relation to this thesis will be found within the discipline of design and informatics, and will also align with the UIM process. This way the designer is able to have a specific domain in methodology choice as DT has a vast array of methodology.

Summary

DT in combination with the participatory UIM approach the designer with the users can gather user insights, analyze, and create design directions for the Aarhus Soup online CoP. DT prevalently used throughout academia and design firms gives the designer a plethora of methods and tools to choose from. With this library of options, the designer is able to select the appropriate methods which fit into the UIM process. Through DT's mindset the designer is able to gain empathy for the users, and immerse themselves into their world. With this the designer is able create valuable design directions with the users, for the users.

The role of the designer in this process is to facilitate users in the creation of insights and design ideas. This is done by the designer holding interviews and planning workshop(s), which support in the creation of insights, and transforming said insights into design directions. (Kastrup et al., 2011, p. 13) As the facilitator the designer does not act as an expert but rather the person setting the problem field. (Kastrup et al., 2011, p. 15) During the process there is an emphasis put onto the needs, wants, and values of the users. (Kastrup et al., 2011, p. 31)

Through UIM the designer can select appropriate methods for PD and co-creation. UIM provides the structure, and DT and its concepts will be used alongside of UIM to enrich the design process.

DT concepts with the UIM's (co-operation, context, concept) creates a design process which highlights user insights and an innovative approach to problem solving. With this framework giving structure to the process of the thesis the designer can select appropriate methods which are useful to completing each phase.

Methodology

Creation of the design brief

As suggested by UIM the design process starts with the creation of a design brief (UIM. P. 27) The design brief was created in collaboration with the Aarhus Soup core team, so that all stakeholders were in agreement on the goals of the investigation and creation of the online CoP.

The design brief comes from design management. In Rachel Cooper's book she states that design management is the way in which the design team can manage the process of innovation and design (Cooper, R. 1994, p. 3). According to Cooper (1994) successful design management starts with a design brief. (Cooper, R. 1994, p. 3) The British Standards Association state a project brief is "[a] document that outlines the strategic direction for creative development, covering the specific task at hand, the communication objectives and strategy, and any elements that the executions must contain." (Parkman, I. 2019, p. 38) When creating the design brief all relevant parties should be present. (Phillips, L. 2004)

A design brief related to DT is, like the name suggests, a brief document which goes over the "who, what, when, how, and why" of a project. (Petersen & Phillips, 2011) Through the creation of the design brief the aims and goals of the project are documented. (Griffen, A. 2015, p. xxxiii)

The design brief for this thesis was created together with the designer and the Aarhus Soup core team. The brief was written during a three hour meeting where all relevant areas and objectives of the thesis were defined and documented. This brief was then used as a basis for the start of the UIM process. The design brief acted as a starting point and the foundation of the thesis goals.

Purpose: The Project	Scope of the project
<p>Client: Aarhus Soup</p> <p>Project: Build an online community which can run simultaneously with Aarhus Soup events, adding value to the Aarhus Soup concept.</p> <p>Aarhus Soup is:</p> <ul style="list-style-type: none"> ○ Events, online community, community ● Opportunity to connect/collaborate with the local community. Supports small ideas that could turn into large projects ● Grassroots > Mediaplatform to gather local projects. ● Entry level is low > Participants of Aarhus Soup don't need a fully developed project, or want to donate money to the project pitchers. They just need an idea or motivation to volunteer 	<p>The online community needs to be created within the framework of the Aarhus Soup concept.</p> <ul style="list-style-type: none"> ○ How can the online community support Aarhus Soup events? <p>Basic functionalities:</p> <ul style="list-style-type: none"> ● Elaborate on projects ● Information on the past events for people who missed out on attending <ul style="list-style-type: none"> ○ Who were the project makers, and what were the projects ● Funding information for project makers. <p>To keep in mind: Which actions/activities on the online community will be mandatory for the users?</p>
What problem is it solving?	Who is your audience?
<ul style="list-style-type: none"> ● Loneliness, isolation > support (project support and networking) ● Redistribution of resources and wealth ● Connecting project makers and entrepreneurs to resources (money, network, volunteers, information of funding, ect.) ● Online community <ul style="list-style-type: none"> ○ Additional resources, the next step on what Aarhus Soup can provide ○ More connection after the event(s) (on a daily basis) ● Integration into aarhus project making scene (or in general meeting like minded people - people with similar interests) 	<p>Based in Aarhus</p> <p>Tech project makers: Tech-savy Proactive to sharing on social media Self-promoting</p> <p>Tech community supporters: Looks online to find different events to join Uses social media Wants to broaden their network in Aarhus</p>
Who is your competition?	How do you measure success?
<p>Facebook groups offering networking Linkedin Locals Headstart DK</p> <p>Although they are not very focused on competition</p>	<p>By connections happening</p> <ul style="list-style-type: none"> ● Projects starting up or growing because of Aarhus Soup ● Bringing project makers and community supporters resources <p>Building it up and making it tangible, grow and maintain user engagement, etc.</p>

Figure (5) Design brief

Co-operation

Co-operation is the first phase of the design process. There are two objectives of this phase;

Select users for the innovation process

Make a **plan** for the innovation process

(Kastrup et al., 2011, p. 24)

Co-operation can relate to DT concepts attached to the discovery phase of the design process. Here an investigation into user insights is conducted. These insights are in the vein of thoughts, experiences, emotions, pains, and needs related to the topic of interest. (Griffin et al., 2015, p. xxv) The goal is to collect enough insights to start to form an understanding of the user.

To kick start this phase of the design process this was done with interviews. Through the interviews the designer is able to lay the groundwork for understanding the user, and in particular when it comes to their usage of online communities, and what motivations do they have to join the Aarhus Soup online community. The areas of interest for these interviews were: users' OC habits, their needs and wants from an OC, motivations for use, and information on who they are and what they can provide in regard to project work.

Select

Before users are selected for the UIM process a design brief and solution space are defined. (Kastrup et al., 2011, p. 38) Based on the created design brief and the solution space qualities of the users were defined and users who would be innovators for the thesis were chosen. This was done in collaboration with the Aarhus Soup core team. (Kastrup et al., 2011, p. 37)

Defined solution space

This thesis is working within a large solution space as defined in the design brief: the OC will be created within the framework of the Aarhus Soup concept, however there are no strict parameters on functionality. Meaning the users are working in a large solution space because of the freedoms they have in defining the practices of the OC. The OC should be flexible and resilient to change. The UIM process will be conducted accordingly. The Aarhus Soup Core team wishes the online community to be heavily influenced by those taking part in it, therefore the choice of a large solution space was

appropriate for this thesis. Selection of a large solution space influences the users you invite to participate in the process and the plan for innovation. (Kastrup et al., 2011, p. 38)

As the thesis is working in a broad spectrum the researcher should plan to narrow down concepts and find direction (Kastrup et al., 2011, p. 38) For the selection of users, people who are “newcomers” or people who are “frontrunners” in the user of technology will be included. (Kastrup et al., 2011, p. 39)

User profile - who was selected

User selection was done through those connected to the Aarhus Soup events. Before people were asked to participate, user qualities were established. (Kastrup et al., 2011, p. 76) The criteria was influenced by the solution space, and the design brief. One groups of users was identified; Project makers, and community supporters.

User qualities
Based in Aarhus Tech project makers: Tech-savy Proactive to sharing on social media Self-promoting Tech community supporters: Looks online to find different events to join Uses social media Wants to broaden their network in Aarhus

Table (6) Criteria for participant inclusion.

When reaching out to participants these qualities were used as criteria for whether or not a person would be asked. People who had already attended an event or were connected to someone who had attended an event were asked to participate in the UIM process. They were written directly via email.

When not enough users responded to the email, snowballing sampling was used to recruit more.

Users who had said yes to participating in the UIM process were asked to name other users who fit the criteria for selection. (Kastrup et al., 2011, p. 76) Through snowballing we collected enough relevant users for the study.

Plan

The planning of the UIM process is dependent on the team's resources. (Kastrup et al., 2011, p. 41) Through the planning of the UIM process the users time and abilities were taken into consideration. The plan was designed not to be too cumbersome on the participants, and during the organization of when each activity should take place the participants were asked when it would best suit their schedules to meet.

Phase	Description of activities and objectives
Insight phase	<p>30 minutes to 1 hour individual user interviews. 7 users participated in the interviews.</p> <p>Objective: collect user insights to create visions</p> <p>Who is involved: Users and designer</p>
Vision phase	<p>Based on the insights the designer can build visions. from the insights the designer will create visions and themes.</p> <p>Who is involved: designer</p>
Sketch phase	<p>2 hour workshop</p> <p>Starts out by presenting visions and themes. Brainstorm and get feedback from users on these visions and themes. Then sketch out ideas with users.</p> <p>Who is involved: Users, designer, and one from Aarhus Core Team</p>
Present (Conclusion)	<p>Suggestions on the application on Aarhus Soup online CoP.</p> <p>Objective: communicate findings to Aarhus Soup Core Team</p> <p>Who is involved: Designer</p>

Figure (7)

Context

Generate **insights** into current problems and needs.

Generate **visions** for possible futures.

(Kastrup et al., 2011, p. 24)

Here data collected from the co-operation phase is refined. Context is related to concepts from DT's discover. Themes emerge, problems are defined and a direction is chosen. Through this stage of the design process the designer is able to analyze the data and find areas of importance in the data to further develop upon during the next stage. (Griffin et al., 2015, p. xxv) Methods which aid the designer in theme development and analysis of data should be chosen during this stage.

After insights are gathered, they are then coded. Griffin et al. (2015) mentions in their text that methodology for this phase should aid the designer in data analysis and coding. For this thesis Contextual Design methodology; interpretation of data and the affinity diagram were chosen for these qualities.

Insights

Interviews

Interviews are held with users to gather data on the user needs, values, attitudes, and behavior. (Bryman, 2012, p. 209) The interview's purpose was to find out the target users' motivations for joining the Soup Events, and what elements are vital to persuading them to participate in an online community, and insights into possible user practices. Interviewing as a methodology choice was chosen because of its qualitative properties. Through interviews the designer can gain a more in-depth understanding of the users. This is a starting point of investigation. These answers lead to insights which were then turned into visions by the researcher.

These interviews are conducted online over discord, facebook messenger, or Butter depending on the user's access to the channels. Although online interviews allow for the researcher to speak with "otherwise inaccessible participants" (Deakin and Wakefield, 2013, p.5) one must be aware of online interview shortcomings. Cater (2011) argues that the online sphere creates a lack of intimacy or richness to the interview. (Cater,

2011, p.3) This however can be combated, as Singleton and Straits (2012) suggests, by developing a clear plan for the interviews. This includes; developing a sampling plan, preparing appropriate questions for the interview and choosing the right survey mode. (Singleton and Straits, 2012, pp.77-98)

Questions were written with the design brief and UIM purpose in mind. After the research had written out the script the script was checked by the Aarhus core team for comments. Once the script was approved invitations to partake in the interview were sent out to the user group.

Seven users were interviewed. Each interview took approximately 30 minutes. The user was introduced to the purpose of the interview and asked for permission for the interviewer to audio record the interview so that it could be transcribed afterwards. (Appendix 3, pp. 20-35) The transcriptions were used later in creating **visions**.

Interview guide for gaining insights into Aarhus Soup user group

Introduction

I am writing my master thesis on helping Aarhus Soup build their online community up through participatory design. Participatory design is in a nutshell building solutions with the participants of the solution. - that being you. To do this we will do two things: 1) We will start today with an interview to get some basic insights into who you are, your motivations, needs, desires for this online community. 2) Hold a workshop later where we will go over what I've done with the insights, to check in and see if you agree. And then start sketching out what the online community could look like.

Questions

What is your name, age?

How long have you been in Aarhus?

What are you doing in Aarhus?

How did you first hear about Aarhus Soup?

Do you identify more with what statement, and why? Do you identify as both?

- I am a project maker
- I am a community supporter (cultural consumer)

What kinds of projects are you involved in?

How do you like to support the community?

What was your motivation to join an Aarhus Soup event?

What does community mean to you?

Introduction to online community: In short - Aarhus Soup's online community is there to support Aarhus Soup events and bring value to the aarhus community. Here project makers and community supporters can collaborate. Through these interviews and the workshop the purpose(s) of the community will be defined with your input.

If you think about Aarhus Soup, it's concept -

- How do you think that would transform into an online community?
- What purposes would it fulfill?
- What would it need to include to get you interested in being a part of it?

Have you heard of this kind of concept before?

What type of skills (if any) are you working on?

What kind of skills would you be interested in developing?

What kinds of skills are you interested in sharing?

What social media are you using?

- Why are you using them?
- What keeps you using them?
- What do you dislike about them?
- What do you like about them?

Figure (8) Interview guide and questions.

Vision

During the creation of visions insights from the interviews were coded and analyzed. This was done with the contextual design methods; interpretation session and affinity diagramming. With this methodology the designer is able to gain an insight and understanding into the users' world from the inside. (Holtzblatt, K., 2016, p. 82) As the users were not able to join in on all aspects of the design process the choice in methodology which is user-centric was important not to lose touch with users' perspectives. Through these methods the researcher is able to paint a rich picture of who the user is. Which complements the UIM's process of participatory design and user innovation as it focuses on the user's understanding of the world and not the expertise of the designer. Contextual design in the context of this thesis is used to analyze and present user data to the users to drive ideation with the users during the UIM process. (Holtzblatt, K., 2016 p. 3)

The interpretation session

The interpretation session was held shortly after the interviews were completed. The interviews provided the interviewer data into the user's world. This data then needed to be transformed into insights in a way which would allow all team members to gain knowledge and understanding of the user group. (Holtzblatt, K., 2016, p. 81) Here conceptual design methodology comes into play. The interpretation session was conducted in order for the researcher to immerse themselves into the data of the interviews to create an understanding of it. While going through each interview the designer captured insights and learned from the data. (contextual design p. 82)

Typically the interpretation session is done with an interviewer and two to five more team members. (Holtzblatt, K., 2016, p. 82) Due to the interpretation session being conducted by only the designer the format of the session needed to be changed to fit the workload of one individual. Instead of the researcher creating several models, the data from the interviews were gone through, notes were created and prepped for the affinity diagram. As the interviews were recorded and transcribed it was possible for the designer to incorporate even the smallest details of the interviews into the notes. Because of these detailed transcriptions, there was no data lost, and it was possible to complete this process as one person. (Holtzblatt, K., 2016, p. 92).

The criteria for note creation is as follows: Notes must fall into the domain of "key observations, issues, and quotes the team deems important for moving the design forward. Notes record key practice issues, identity and cultural observations, tool and activity successes and breakdowns, task patterns, the use of time, place and different devices, design ideas, and any other issues that have relevance to the project." (Holtzblatt, K., 2016, p. 88).

While creating notes each participant was given a code name, and each note was labeled with the corresponding participant code. Here the designer when looking back at the affinity diagram can pinpoint which note belonged to which participant story. Each note represents a captured insight. (Holtzblatt, K., 2016, p. 92) These captured insights are then organized during the affinity diagram.

Affinity diagram

"By taking the data out of the cognitive realm (the head) and removing it from the digital realm (the computer), and making it tangible in the physical realm (the wall) in one cohesive visual structure, you are freed of the natural memory limitations of the brain

and the artificial organizational limitations of technology.” Now the data can be moved and manipulated, and themes can emerge from groupings. (Kolko, J., 2011, p. 64)

Through a few days of work the designer alongside two members of the Aarhus Soup core team discussed captured insights and organized them into themes. Visions which would heavily influence the core functionality of the future OC were selected to be presented and discussed at the workshop with the users. This way they could be checked by the users, if they believe the statements were correct, and then built upon to relieve more concrete ideas around the themes.

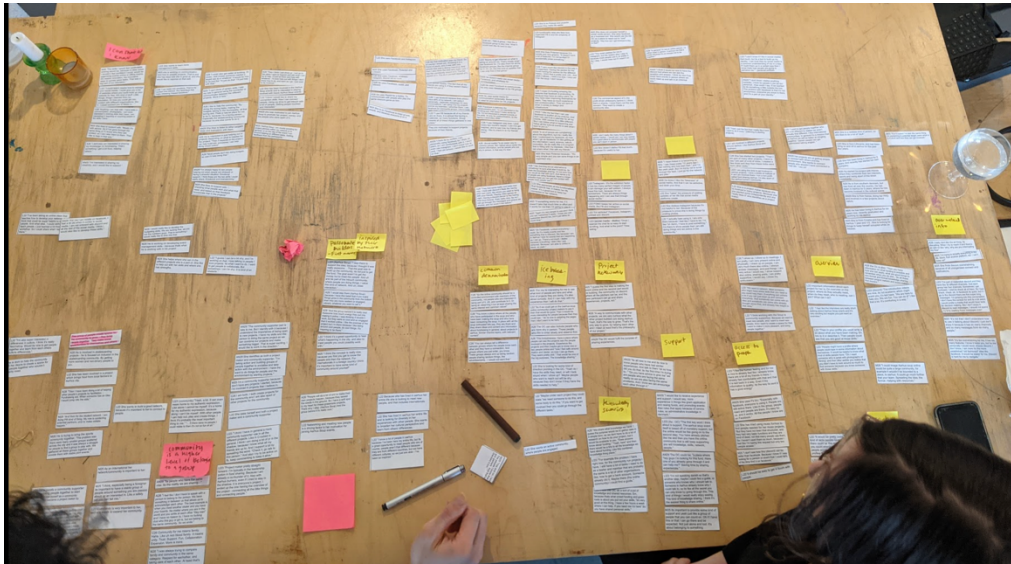


Figure (9) the creation of the affinity diagram.

In the following table is the affinity diagram, and the themes which emerged during the data analysis:

Affinity diagram
<p>I am a person who creates space for the community to grow</p> <ul style="list-style-type: none"> Community means to belong to a group of people where I have a strong connection to them, like family. - A28 “I feel like I don’t have to speak to a person to feel life I belong.” With my projects I create spaces where people are brought together, I enjoy that. I am both a community supporter and a project maker. I take action by starting projects, and I also get involved in others projects. I want to feel connected to like minded community building people. (Diverse group of people - Danes and internationals) <p>I give support to other projects in a way that I feel comfortable with. (Via my own skills, or whatever the project needs) I enjoy helping out</p> <ul style="list-style-type: none"> I like to support others. Like with emotional support

- I like to help out where help is needed. I just want to be involved.
- I feel comfortable supporting with the skills that I have
- I support the community in any way I can. Sometimes that means by just showing up.

I like to feel like I belong to a group. To feel like I belong I like to get involved.

- I am initiated to support projects because of my friends/network.
- I enjoy the feeling of being needed in a project or a group, this feeling of belonging motivates me.

I want the online community to activate me and the other members to interact with one another.

- I can be shy. I should feel comfortable reaching out to one another in the online community.
- The online community should be active and its members engaged with content with relevant content to us and our project work. @workshop
- In the Online community I want an overview of the different projects. @workshop
- I want in person events to be a part of the online community.

I would want the online community to be a place where I can develop my project skills with other like-minded project makers/community supporters.

- I see the online community as a place to receive experience and support for my projects.
- I see the online community as a place to share knowledge about project work.
- I want to develop skills related to my project work
- The online community would be a place where I can network with other projects. @workshop

Active participation in online communities and access to my network motivate me to use it.

- I will use social media sites that have active users and people I know.
- I use the social media that my network is on. It's useful for me because it's important for me to be connected to my network.
- I use the major social media platforms, because that's where my network is.

I will continue to involve myself with aarhus soup because I want to be connected to like-minded community building people.

- I want to stay involved in the Aarhus Soup because it's a great place to network, and see what other projects people are doing.
- I value Aarhus Soup because the people involved are active and involved in project work, I want to network with these kinds of people.
- I get inspired and motivated by other people and their projects. These people get me motivated to join in.
- A motivation for my joining projects are my friends or the possibility of expanding my network. My network means a lot to me.

Organized, simple to use social media that supports my online activities is a must, otherwise I am uninterested in using it.

- I feel overwhelmed by my different discord groups. There are too many channels and too many messages in each channel, some of which that aren't even relevant to me.
- The structures of the online community should help me get an overview, and the information I am looking for.
- I use Facebook because of its functionality. I can customize my experience, chat with friends, and organize my life with the calendar. These functions make my life easier.
- I like my different social media tools because they are simple and easy to use.

I dislike the addictiveness and fakeness of social media, but that does not stop me from using it, because it's a useful tool.

- I do not like the fakeness of social media but that does not stop me from using it or sharing my life on it.
- I dislike the addictiveness of social media. I want to get what I need and get out.

Figure (10) The affinity diagram.

The following are the themes which were selected to be presented to the users during the workshop. The themes were written out of first person. Each theme was presented to the users, and subsequent sub questions were asked to clarify which directions the brainstorm should go in.

1) *Sees the OC as a place to share knowledge about project work*

- *What kind of information are you interested in seeing on the OC?*

The first theme which was chosen to dive deeper into during the workshop pertained to knowledge sharing. Here the designer wanted to explore with the users what specific information they wanted to be shared with them in the OC and what information they wanted to share. As knowledge sharing will become a big part of the OC, it's important to know what kinds of knowledge sharing the users are interested in.

2) *Sees the OC as a place to receive experience and support from other community members*

- *What kind of support do you want? How do you see this support being given to you? Who is supporting you? Would you support people in return?*

The second theme came from many of the comments made by the users during the interviews, which became an important re-emerging theme in the affinity diagram. This

was the idea of support. Here the designer wanted to dive deeper into what support meant to the users, and how they wished to be supported or support others in the OC.

3) *A major motivation for them to join in on different projects or events is their friends, or the possibility of expanding their network. This is because their network means a lot to them.*

- *Do you agree? Are there any other motivations for you joining in?*

4) *They are motivated to use social media mainly due to it being a useful tool where they can connect to their network.*

- *What kinds of attributes does the OC need to have to get you to stay?*

The last two themes pertain to motivations. Number three is about motivations in regard to events, the fourth being about online community use. Here, as mentioned in theory, the themes touched upon motivations. The users have discussed friends or networking as motivators for them to join in on different opportunities, and stay. But what other motivations might the users have? The hope for discussing motivations with the users is to shed some light onto what motivations could the OC use to get the users to join, stay and contribute to it.

OCs are made up by people and the content they create. These themes pertain to the content which the users wish the OC to have. That is why they were chosen, so that the designer with the help of the users could flesh out the themes into something more concrete.

Concept

You **sketch** ideas, and

You **present** the final concept to decision makers

(Kastrup et al., 2011, p. 24)

Concept, as related to DT's create phase, is where the problems and themes developed in the previous phase are used to ideate on possible design solutions. As this thesis is following participatory design, the designer will facilitate the creation of artifacts with the user through low fidelity prototyping sketches. Here the designer along with the users will brainstorm and sketch possible design directions and solutions. The artifacts

created are used to explore ideas and illuminate the direction prototyping later on should follow.

These ideas can then be turned into prototypes later on which will give the users a sense of the user experience of the solution. Prototypes according to Griffin are the most effective in getting feedback from the users. (Griffin et al., 2015, p. xxvi,xxvii)

Sketch

Workshop

The picking of a physical site to conduct the design process as seen by hybridity can have effects on the participant's experience. Whether the process is held in the designer's space or the user's space, one will gain a new perspective to the problem at hand by being immersed into the other's space. (Muller, J. 2011, p. 8) This is all very well pre-covid, but presently this is not necessarily a viable option.

Workshops opposed to sittings can be the alternative when the users' space and the designers' space is not viable for use. Workshops are held on neutral grounds that neither party occupies. (Muller, J. 2011, p. 9) Workshops are a hybrid space because people are taken out of a familiar context and have to communicate with others in a neutral setting. In a workshop setting they are on an even playing field, and the participants have to develop a way of communication and create shared understanding in this unfamiliar ground. (Muller, J. 2011, p.9) Not only are workshops good in a physical space capacity but they are good for developing new concepts, getting all participants invested in the end product, and joining together different perspectives on the problem field. (Muller, J. 2011, pp. 9,10) During the different activities of the workshop (brainstorming and sketching out design ideas) all participants work together to build, negotiate, and develop upon the problem field.

A participatory workshop was chosen for its neutral grounds, and hybrid qualities. Here the participants are on equal footing with the designer and can create shared knowledge on the problem field. (Muller, J. 2011, p.9) The designer's network was used to find a space which neither users or designer was familiar with. The workshop was held in the basement of a neutral party's home, to follow with the corona retraction measures in place at the time of the workshop.

The aim of this workshop, much like future workshops, is to create a vision about the future of the OC with the users, and how we can make that future a reality – through the activities set up in the workshop. (Löwgren, J. 2007, p. 70)

In the following table you can see the schedule and script the workshop followed. The workshop started with a brainstorm of three concepts found during the affinity diagram and ended with concept sketching of themes discussed during the brainstorm.



Figure (11) The set up of the workshop is shown in the photo. The participants are separated into groups during the brainstorming exercise. A piece of paper is always on display to present to the participants rules, and guides on how to complete the different activities.

UIM Workshop Plan and schedule

The workshop attendees were 5 participants, 1 facilitator, and 1 who aided the facilitator by documenting the workshop.

The duration of the workshop was 2 hours.

Introduction:

Thank you for joining today! Because the project is focused on participatory design your opinions are key to further developing the online community. We really appreciate you guys being here today.

I have gone over all the interviews, and have built up themes according to what you all said. Today we want to check with you these themes and then build upon them today - creating some ideas and sketching out how the online community could look like.

Our plan for today is to:

1. Go over important themes created from all the interviews - check and see if you agree.
 - a. Brainstorm on the different themes to elaborate on questions (Here we will mind map on large pieces of paper, in teams. We will discuss as a group afterwards.)
2. Sketch solution ideas from the themes
 - a. Modified 10 plus 10 - here we will design the solutions to those problems. 10 plus 10 is a rapid sketching exercise where we will sketch out solutions to the problems. And present our ideas to the group afterwards.

First we start with the brainstorm of the themes. Here we have the themes written out on large pieces of paper. In two groups you will brainstorm on the themes, with the different questions as guides. This is a brainstorm and the most important part of a brainstorm is there are NO wrong ideas. Feel free to discuss whatever comes to mind and write it down.

Rules: No wrong ideas. The more the better.

Themes:

Sees the OC as a place to share knowledge about project work

- What kind of information are you interested in seeing on the OC?

Sees the OC as a place to receive experience and support from other community members

- What kind of support do you want? How do you see this support being given to you? Who is supporting you? Would you support people in return?

A major motivation for them to join in on different projects or events is their friends, or the possibility of expanding their network. This is because their network means a lot to them.

- do you agree? Are there any other motivations for you joining in?

They are motivated to use social media mainly due to it being a useful tool where they can connect to their network.

- What kinds of attributes does the OC need to have to get you to stay?

The themes above represent the core information for the OC

Now for the sketching exercise we will start to sketch out how the OC could look, expanding on the themes we just brainstormed. Taking these concepts into sketches.

How do we structure this information? What will the OC look like? What problems will it solve?

We will follow this prompt:

Everyone gets a few pieces of paper. We will fold the papers into fours. It doesn't matter if you don't know how to draw. (I'll show them examples of what it could look like) - you can draw boxes, write down little notes. Just get your ideas down on paper. Afterwards you can explain your drawings.

Hint: Take inspiration from the different online tools you find helpful when communicating with your network.

- Now take your papers which are folded into fours. Each box is a different sketch. You will sketch a different idea into each box. I'll set a timer you have 3 minutes for each box to get your ideas down.
- Now that everyone is done sketching, we will go around the table and present our ideas.

Done. Thank you for your time!

Figure (12) The workshop plan and script.

Activity 1) Brainstorming

First part of the workshop was a brainstorm on three themes which were taken from the affinity diagram, which have been written out and explained above in the affinity diagram section. These themes pertain to the core elements of the OC. The participants were separated into two groups. One group of two and one group of three, to brainstorm together on the themes.

Brainstorming is effective when generating ideas in a group setting pertaining to a specific problem. Brainstorming is a non-judgmental divergent thinking exercise. (Martin, B. 2012, p. 22) Here during the workshop the group opens up and puts down on large pieces of paper many ideas. They are encouraged to put down anything and everything they can think of. As Martin (2012) says it's about doing for "quantity over quality," and for the groups to build upon their ideas. (Martin, B. 2012, p. 22)

The participants are introduced to the themes one at a time. After each theme is presented to them, they will have 10 minutes to brainstorm. Each group then has 5 minutes to present and discuss their brainstorm maps to the other group.



Figure (13) Showing the participants during brainstorming in groups.

Activity 2) Sketching via Crazy 8s / 10 x10

Through the creation of descriptive artifacts with the users the designer can get them to reflect and share their experiences and needs for the end solution. (Muller, J. 2011 p. 20) Through a variety of creative ways the user can work with artifacts to create visual representations of their view points, needs and desires.

Low-tech prototypes are a type of artifact one can use in a workshop setting. By the user creating low-tech prototypes they are able to express and interpret how they would understand a solution they have not used before. This gives a way for the user and designer to communicate and build an understanding of the problem at hand. This also leads to new ideas and improving working relationships between end-user and designer. (Muller, J. 2011, p. 21)

As stated above, making descriptive artifacts with users is a way in which the workshop can bridge over to the hybrid space. The 10 plus 10 method was chosen for the visual way in which it helps users express needs and experiences.

Typically, the designer will draw 10 concept ideas in a short period of time. (Greenberg et al. 2011, p. 17) Due to the participants' lack of design knowledge, the number of sketches was reduced to four and the time allowance was 3 minutes for each idea. The participants were given sheets of A4 paper folded into four squares, markers, color pencils, glue and they were also provided with artifacts to help with idea generation. These artifacts included cut out pieces of paper with an assortment of UI elements

related to online communities.

The exercise started with a presentation of the design challenge to set the stage for the sketching activity. The participants were told to draw, write, sketch ideas related to the topics they had just built upon during the brainstorming session. Here they were to design what the Online Community should look like

Design challenge: What should the Aarhus Soup online community look like?
In what novel ways could the online community be set up to fulfill the core ideas we brainstormed?

Once all four squares were filled up the participants took turns presenting their ideas. This led to a discussion on the ideas presented.

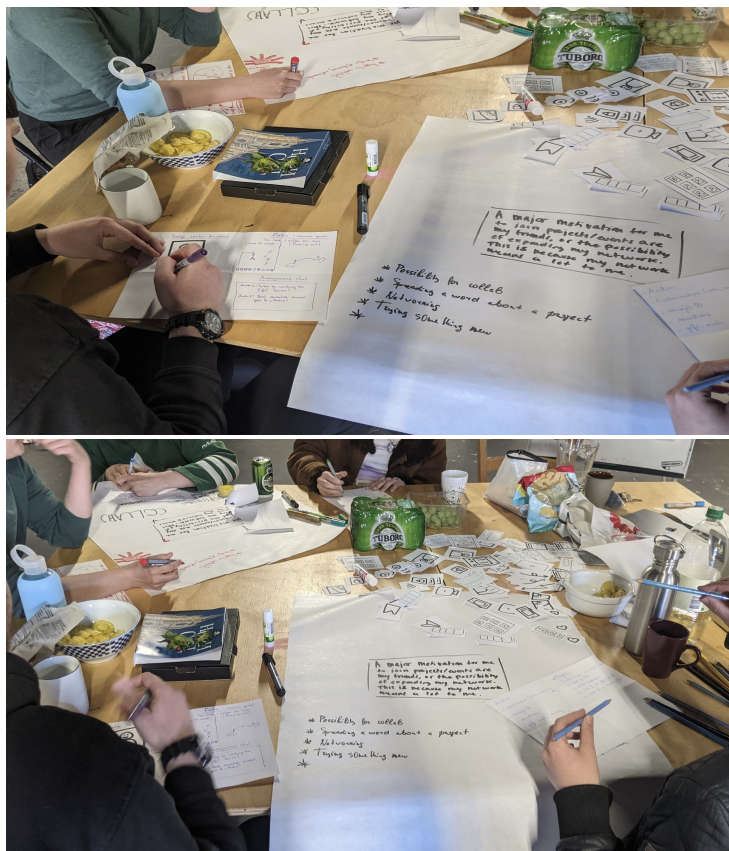


Figure (14 + 15) Participants during sketching activity.

Data collection from the workshop

During the workshop, discussions during the brainstorm activity and the sketching activity were recorded and then transcribed. (Appendix 2) These transcriptions along with the created artifacts (Appendix 2, pp. 14-19) will be used in the analysis.

Analysis

Introduction

The data collected from the workshop's brainstorming sessions and sketching activity is analyzed from the perspective of CoP in order to determine which elements would best serve the formation and sustainability of the proposed Aarhus Soup online CoP. By looking through a practice lens the designer is aiming to identify important elements the OC should facilitate.

We are not putting novices into an already established community with practices in place. Instead, we are gathering novices to build the practices of the community from the ground up via Participatory Design. Through the interviews and workshops data, thought, opinions, wishes, needs, and desires for this community was gathered. Through the analysis the designer will go over what has been found and relate it to Mutual Engagement, Joint Enterprise, Shared Repertoire, Shared Histories of Learning, LPP (Legitimate Participation Peripheral) and theory of what creates a successful community. By the end we will have organized thought on Aarhus Soup OC potential practices, activities, goals, and functionalities of its CoP.

Mutual Engagement

“Practicing together” -- The first characteristic defining CoP to be looked at is mutual engagement. Through looking at the data with a mutual engagement lens the designer is able to pinpoint how members will interact with each other in practice. This depends upon what practices the members wish for the OC, and what activities will make up those practices and what activities will they do together.

Practice 1: Sharing information about project work

One of the main practices the participants expressed a need for was the sharing of individual information about project work. This information sharing would be a group responsibility. Not that a small group of people should share information but that

everyone would participate in growing the OC's collective knowledge on project work (Appendix 2, p. 3,4,5,12). It is the ambition of The Soup that this shared information would eventually rise to the level of shared knowledge (see Zhang & Watts knowledge hierarchy chart). The initial information exchange platform would be divided into three categories:

- 1) Information on Fundraising
- 2) Information on logistics of running project work
- 3) Skill sharing

Fundraising– Getting help from other community members on what funding opportunities are available, and how to apply became an important discussion point for a practice within the OC. It was discussed that it should be possible for members to reach out to other members to ask for help on funding. Or that there could be a dedicated discussion page for information on and help for funding. This information would be member generated, where less experienced members could seek the advice of more experienced members on funding. (Appendix 2, p. 3,4,5,6,9,12) The activities which would support this practice would then be individual messaging between members, and a topic discussion board.

Logistics of running project work–

A28 “Logistics, especially because of corona. If someone made an event similar, how did you do it? What kind of barriers did you face? Who did you contact, how did you pull it off?”

**Everyone “yeah.” “That’s a good point.” (Appendix 2, p. 4)*

Participants expressed the desire to share information on the logistics of pulling off events and the like. L22 made the point of having an overview of the events each project had been hosting. By being able to browse through the different events she could find those which are similar to the event she planned on hosting, she could then contact the project makers and ask for advice. (Appendix 2, p. 4)

Skill sharing– When it came to the topic of sharing skills participants were adamant that people should be able to share the skills they wanted to. It was suggested that skills would be presented on member profiles. Skill sharing would come in the form of aiding in other project maker's events/projects, or teaching others a skill which that member possesses and others would like to learn. This could be done in the creation of workshops, or members reaching out to others offering their help. (Appendix 2, p. 5,10,11,12) The activities which support this practice could be project makers could put

on their profile what skills they need for a specific project so members could reach out to them. Or through a discussion board members could post a call to action. “We are looking for someone who can...” (Appendix 2, p. 5, 10, 12)

Thus an essential element of the CoP, namely information sharing as a first step on the road to producing a Knowledge-Sharing CoP, would be provided.

Practice 2: Members supporting members

The second practice encompasses the ways in which members will support other members. Support became an important theme during discussion. Themes which emerged in the discussion of support and how support would be shown through practices were:

- 1) Support through skill sharing (information sharing platform);
- 2) Providing emotional support (messaging platform(s), face-to-face);
- 3) Sparring (messaging platform(s), face-to-face); and
- 4) Feedback (messaging platform(s), face-to-face).

Supporting through skill sharing– Skill sharing as mentioned in the above section was also discussed in relation to members supporting other members by way of their personal skills. For example, one member who is good at fundraising could help another who doesn’t know much about the topic. (Appendix 2, p. 5) Again this could be supported via chat messages between members, or via a discussion board related to the specific need.

Emotional Support–

C26 “And emotional support, when you listen you give someone emotional support. When you listen you are there for that person. Not to give advice but to just be there, sharing the experience.” “It’s like a family, its a community - safe space.” *everyone agrees. “Showing care and just like attention.” (Appendix 2, p. 6)

The need for emotional support was brought up by the members. Participants are looking to connect within this community and build a family-esque network of like-minded grassroots project makers. In general, they want there to be a feeling of support for one another. They describe this support by different means. One, like mentioned in the quote above, is the willingness to listen to one another, and another way is to express grievances of project work openly with one another. (Appendix 2, p. 6,8)

"..So I really like a more closely knit, or small informal community where you can say 'yeah I have a lot of success but this one point . . . kills me.'" (Appendix 2, p. 8)

The last, comes about as the participants want to avoid the OC becoming a "perfectly curated" OC. Instead, there should be room for sharing and expressing their frustrations when it comes to project work. (Appendix 2, p. 8)

Sparring and feedback–

"General sparring between groups, to collect information on pulling off events. How did you contact who did you contact in the municipality?" (Appendix 2, p. 4)

The participants want the OC to facilitate sparring, and feedback between members. Feedback on project work from other members is seen as beneficial to the participants. Feedback would be a way for members to give and receive input on how a project looks from another perspective. This feedback could also be in the form of other members who have done similar things and then sharing their experiences. (Appendix 2, p. 5) We can look at these feedback sessions as possible extrinsic motivators, as a reward for contributing to the OC they are given sparring partners and group or individual feedback. Feedback could be seen as a reward.

Thus a second essential element of the CoP, in this case mutual support of members, might be encouraged through messaging and face-to-face platforms The Soup could provide.

Practice 3: Collaborations

A28 "Then collaborations popped in my head. My brain is very focused on skateboarding community right now, because that's what I'm doing. But if you (from Seamo street) are doing an event by the harbor, but then you need more things to happen to get a deal with the municipality to get it to happen, then you can write me and ask if I can contribute with some skating activities. We need two hours filled, can you pull out some ramps. So yeah collabs between different groups would be very sexy." (Appendix 2, p. 6)

*C26 "Maybe we could make an exchange. I could draw something for her and she could take photos for me. Maybe sometimes it's nice to do something for each other because we don't have a full life where we can learn all the skills. And that's ok." *people agree* (Appendix 2, p. 6)*

Collaboration was discussed in two ways; one being projects joining together to collaborate like described in the first quote, or two individuals collaborating with other individuals, events or projects. (Appendix 2, p. 6) How this could be facilitated in the OC as suggested by A28 is through a page where people can post 'open calls' for collaboration. (Appendix 2, p. 12)

This third element might be provided by collaborative exchanges of skills rather than simple skill sharing that members would link to through message boards and member profiles.

Practice 4: Member online and face-to-face socialization and bonding

M26 "Common games. So, for all the members can play together on some kind of common game. Like hangman . . . or whatever. It's a way to do something together." (Appendix 2, p. 10)

M26 "then we have the anonymous chat. Where there can be put a funny question." (Appendix 2, p. 11)

A28 "And then kinda like your event thing – In the community it would be common dinners. Events where you pull up and invite people. Like my community is like we know how to include girls in sports we will do a talk about it, and you can come to that. Combine it with a common dinner, whatever, I don't care. I just that you have this, go from the online community to the offline. Because that's where I prefer to be I guess." (Appendix 2, p. 12)

Member socialization and bonding is important to bringing the community together via for instance an informal playground. Users want the OC to facilitate communication between community members. This could be in the form of an informal chat group, online games, or the possibility of in-person events. (Appendix 2, p. 10,11, 12) The OC does not necessarily need to incorporate games, but should facilitate common communication, or team building elements – from the desire of the participants.

The socialization element would be provided by The Soup's "built-in" face-to-face soup dinners, through other face-to-face activities as well as through online forums that promote communication and collaboration, games or other activities being examples that participants have expressed.

Ways in which to facilitate Mutual Engagement in the OC

In a brief summary, in order to facilitate mutual engagement, the OC should seek to establish the following practices: **Sharing information about project work** through direct communication between members and message boards, **members supporting members** through message boards, online/in-person workshops and direct communication, **collaboration** through message boards, events, and collaboration, and **member socialization and bonding (Tie Strength)** through an informal playground, which could be OC games or informal chat groups/channels, and through in-person events.

The sections above mentioned ways which the OC could facilitate the different practices. In this short section the designer will briefly discuss ways in which the OC can facilitate these mutual engagement practices jointly. It is proposed that these actions will facilitate a combination of practices.

The exchange of information and members supporting members could be done through different discussion boards, or channels in the OC, as sketched by the participants. C26 “like you guys said I think it would be nice to have specific topic conversations. That you can subscribe to.” (Appendix 2. p. 10) The participants had sketched ideas around the creation of channels with different subjects: Fundraising, logistics, opportunities, grievances related to project work, open calls. (Appendix 2, p. 6,10,11,12) They discussed the possibility of subscribing to the channels which were interesting to them, so as not to be overwhelmed with too much information. AN28 “If I can choose my topical interests, so I don’t get overwhelmed by all the information.” (Appendix 2, p. 11)

The users also discussed the possibility of direct messaging, or holding workshops to exchange support and/or information. (Appendix 2, p. 6) This could also be a way the OC could foster member socialization and bonding (Tie Strength).

Joint enterprise

Joint enterprise is the representation of what a community means. What are the goals, the shared interest of community members, and what is the community about as a whole? The community manifesto, if you will. Through this section we will look at what the participants say when it comes to the OC meaning, or purpose. Through looking at the data with this practice theory lens we can define the Aarhus Soup OC purpose.

Aarhus Soup Online Community

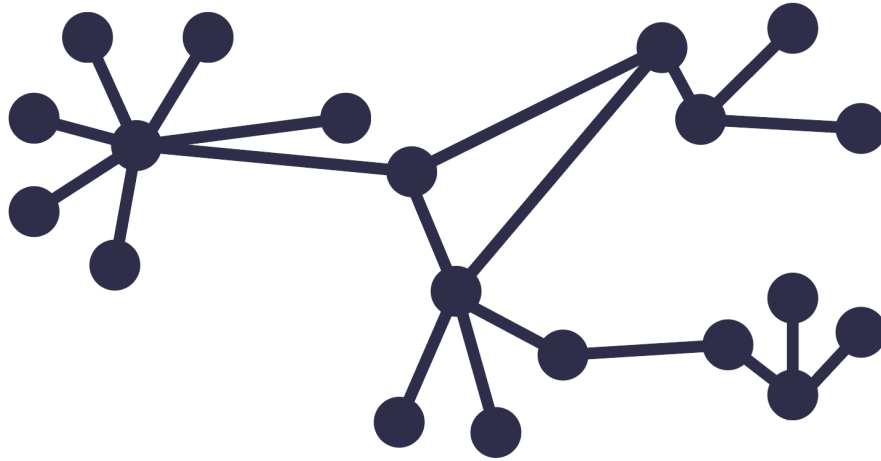


Figure (16) A28's sketch of the Aarhus Soup's Online Community, and the network projects which make it up.

This section starts off with the visualization that participant AN28 drew during the sketching exercise of the workshop. (Appendix 2, p. 14) This drawing represents the different projects and project makers in a network. Each circle represents a project, you can see some projects are clustered together closer than others, however all projects are interconnected under the Aarhus Soup's Online Community. This figure is a way of visualizing the OC. This drawing, done by the participant, is a symbol of what the OC does for project makers in Aarhus. It connects them within a network. Giving them access to others, and their resources. The Aarhus Soup OC is about connection, support, learning, and sharing resources.

Joint enterprise is the combination of the participant's thoughts, feelings and definitions of what they want OC to represent. Throughout this section I will be going over the various ideas the users had on this subject of the shared interest of community members and the goal(s) of the community as a whole.

A28 "We talked about a colorful LinkedIn... you don't hire people to do shit. But you learn from them." (Appendix 2, p. 6)'

C26 "The feeling of belonging. That I feel like I belong to something bigger than me." (Appendix 2, p. 7)

These quotes put it nicely. The participants want to build an OC which facilitates group learning, through sharing their own resources with one another. An OC which provides a 'family' of sorts to grow their knowledge around project work and not least enjoy the process together. (Appendix 2, p. 4, 6) They go on to say that major intrinsic motivators for them to join in on different communities, and ergo this OC are: Inspirational people, collaborations, network of like-minded individuals, celebration, information, connection, growth, and learning. (Appendix 2, p. 7) They want the OC to facilitate fulfillment through the organization and collaboration with others. There should be an emphasis on building the OC up in a way which will facilitate these intrinsic motivations, to increase chances of member contribution and commitment.

*A28 "Feel free to f**k up... And it's so simple, but it works. That kind of language allows people to talk about their struggles." (Appendix 2, p. 8)*

As mentioned under **Mutual Engagement Activity 2: Members supporting members**, the OC shouldn't be a place of perfectly curated content. Instead, the participants stress for their idea of a successful OC where they can share their successes but also share their struggles. (Appendix 2, p. 8)

M28 "No judgment. Respecting others, no harassing, no passive aggressive behaviors – its obvious, but maybe good to mention." (Appendix 2, p. 5)

M28 "Activities descriptions. What is the community doing? Describe what activities the online community is doing. Clearly show what activities can be done in the community." (Appendix 2, p. 5)

The participants want the general rules of the OC, and rules of expected behavior to be mentioned in the OC. This is probably best mentioned when new members are getting socialized into the practice, on the front page. (Appendix 2, p. 5) Rules should also be enforced throughout the OC with both positive and where appropriate negative reinforcements; this could be in the form of OC moderators as Hefeez, et al. (storytelling/positive feedback) and Zang & Watts (policing deleting "inappropriate" messages) mentioned in their studies. Transparency is also mentioned by A28. This participant believes the OC should act with transparency, this could be shown through the OC showcasing the work it took to make it happen and evolve. (Appendix 2, p. 12)

Communication between members:

M28 "...Everyone is on the same level. You are eye to eye." L22 "It's a good point to remember throughout the platform." (Appendix 2, p. 4)

L22 "you can contact anyone; this is really about helping each other out. If you can get that message across." (Appendix 2, p. 4)

A28 "You need inspiring people, that's what we are talking about, and you know that this inspiring person is available to you." (Appendix 2, p. 7)

This relates to what the users want for a community that has open dialogue with one another. The participants talk about this openness in the community, that no one person is above the other. That they have access to other members through direct communication and there is this openness which allows anyone to contact anyone. A reason why they want this openness in the community is that they find contacting 'strangers' to be difficult, but if the OC has a stated openness or 'family feel' then the participants would be confident in reaching out to others in the community.

*C26 "It's like a family, it's a community - safe space." *everyone agrees. "Showing care and just like attention." (Appendix 2, p. 6)*

'Family', this word was used as a metaphor for what the OC could mean to them. A sort of grassroots project family, so to speak. A place where they could come to receive support and support in return. (Appendix 2, p. 4, 6) By having this family feeling within the OC this would allow them to reach out to anyone in the group. Being able to reach out to anyone, or having a feel that no one is better than the other was said to be an important aspect of the OC. (Appendix 2, p. 3, 4) If users feel they are able to contact anyone then this would help facilitate the Mutual Engagement activities.

Shared repertoire of resources

As a shared repertoire of resources is one of the obvious outcomes of a CoP, and Aarhus Soup's OC does not yet exist, we can only make the hopeful assumption that the practices listed above will lead to such a development. Based upon the research done and work made through Participatory Design to organize the OC, it is hoped to put it in the best position possible to become a CoP. Therefore, it is anticipated that the

initial constituent elements are sufficient once appropriately deployed to lead to creation of a shared repertoire of resources (through mechanisms described above) and therefore lead to The Soup's emergence as a CoP. In this regard the data collected during the workshop taking into account the desires for certain functionalities which the participants identified would lead to a reasonable estimate of shared repertoire of resources.

Profiles–

The need for user profiles is mentioned by all participants. Profiles were discussed in regard to a page which was dedicated to a member and their project. The projects however can potentially have multiple member profiles attached. How the OC facilitates multiple members attached to a single project will have to be looked into later in the design process. For right now we will look at what the participants stated as their desires for the profile page.

The participants mentioned they wanted a mix of practical information about what the project was, and how someone could get involved, (purpose of the project, what tasks do you have, what skills, who are you collaborating with, sponsors) and then more 'fun' information where the users could get to know the person or persons behind the project. (Dreams, visions, your favorite color, some pictures you like, ect) (Appendix 2, p. 11,12,13) The use of a profile image was also discussed, one user wanted an avatar because "it's more fun." (Appendix 2, p. 10,11) [This is reminiscent of Zhang & Watts' observation of how shared identity was encouraged through joint effort of members to design a site logo, products based on the logo later shared with members and the creation of a site mascot and nickname for members.]

Profiles were seen by the participant as a way to get to know the other project makers, their background, experience and skills, and as a point of entry. In the profile contact information should be provided and also the members should come off as friendly and approachable.

It was also mentioned they wanted to get an overview of the different projects and profiles – so they can easily access and read about all the projects and people involved in the community. (Appendix 2, p. 12)

Customization and visual elements–

C26 "I think customization for me is really cool. Like in facebook you can change the colors of your chat groups, and emojis. I love it! I do this all the time. Like seriously, that I can choose which color I want to which

person or which chat, choose the emoji. It's an important feature for me. I love it. Also nicknames! That's really nice. Emojis, a lot of emojis! ... Also the reactions." "And then gifs, and stickers. All this cheesy stuff!"
(Appendix 2, p. 10)

Visual elements like emojis, gifs, pictures and stickers were mentioned as exciting elements of online communities by the users. Customisation was asked in regards to profile images, and nicknames. (Appendix 2, p. 10,11) They wanted these to also be a part of the OC, because it adds to the joy of their experience. Joy of the experience can be related to another motivation the participants have for staying active and contributing to the OC. Customization [Zhang & Watts again, see above] was also mentioned by several users as an important element of the OC. They were adamantly in favor of these kinds of functionalities. (Appendix 2, p. 10,11,12,14,16)

L22 "I think my focus was on making it simple, so you don't get in there and it looks like discord. 'oh no, there are so many things underneath other things, underneath other things.' So make it minimalistic and simple and nice to look at. With a lot of colors. Then maybe a nice front page. Have these like blocks. It would be nice that it's organized. So you don't go in there and 'oh this is weird to navigate around.'"
(Appendix 2, p. 12)

Simplicity, and a well-designed platform is wanted to facilitate the activities of the OC was mentioned by L22 during the workshop. This was also a major point during the interviews, the majority of the participants said that an OC which was disorganized, or which overwhelmed them with information they would not use. (Appendix 1, p. 2)

Legitimate Participation Peripheral

We will look at LPP (Legitimate Participation Peripheral) as the socialization of new members into the Aarhus Soup online CoP in this analysis. As the OC is yet to be established the socialization of new members (or in this case members) is paramount to the success of the community. How to do this must be looked at in order to increase the chances of member retention. Through this section data from the workshop which relates to the socialization of new members will be discussed.

As all members will be new members, the socialization of members could be pivotal. Through the data we can find information on how the users wish to be introduced to the OC. How is it we can socialize new members into the community?

M28 “First when you enter the community you start out with a description of the community; what is it about, what is the purpose. It’s important for people to see clearly the purpose of the online community. Like if I’m from the outside I won’t know what it is about, and I would like to see; What are the main things they are doing, who are these people, what are they doing, briefly explaining the purpose of the community, and how can I get involved?” (Appendix 2, p. 4)

A28 “The first we talked about was an overview of the community, what’s going on. What’s possible in the city, and who to contact. Who’s somebody involved in the community that you can contact, because it’s nice to have...”

“Some sort of task the the community needs. Because one of the barriers of entrance is that I don’t know how I can contribute...Contribute points, or however you want to call it. It could be very tasks specific, like I need a food guy for the 12th of september. Or general, I need a manager. ” (Appendix 2, p. 3)

The users want an introduction to the OC which is informative on what the OC is about, how to get involved, even pointing out people within the community which can be contacted. They are adamant that the OC facilitates and helps them overcome barriers of entrance, and kickstart their participation into the community. For the users to become socialized into the OC the participants expressed a desire for an overview of the different activities the OC offers its members. (Appendix 2, p. 5) Within the description of the community and its purpose participants also expressed a wish for the OC’s guidelines and rules of practice. (Appendix 2, p. 5)

M28 “I really like the point about inclusion. As a newcomer its always, sometimes a struggle, if you are not very social to get integrated. I can image its a stress. So, somehow giving this feeling of welcoming and respect between the community member. Doesn’t mater if they are an old member or new. It’s important to establish this feeling that everyone is welcome. That people can feel good about writing anyone. If it’s possible to get people to feel comfortable reaching out to others, or writing others in the group.” (Appendix 2, p. 4)

The participants throughout the workshop are empathetic about drawing attention of the designer to the difficulties of being new in a group, and often refer to the struggles of

being a newcomer. They stress that the OC should give new members a feeling of inclusion, that no one is more important than the other (which presents challenges), and that anyone is available to be contacted by members of the group. This for example, should be stated, or made known to all new members of the OC. Possibly this could be stated in an introduction message to the OC, or in a place where members can continuously refer back to.

L22 "Maybe even put it in the description box that's it's not so much about hiring people, but emphasizing it's about sharing knowledge. So that also that helps a little bit with people thinking they aren't good enough to help out. But really this is just about sharing what we know so we all can get better at what we like doing. - in the description box below" (Appendix 2, p. 6)

With regard to the activities the users will be partaking in, L22 made this point. New members should be given the impression to not be afraid to reach out and share what they know. Or to ask for help. The OC should let them know they can just jump into the community's activities, and that their skills and knowledge are wanted.

Affective Commitment

Committed users of an OC are pivotal to the survival of the community according to Kraut et al. For this thesis we look into Affective Commitment and how to ensure its application within the Aarhus Soup OC. Affective Commitment is generated from a subjective perception of closeness and attachment by a member with the group or members of the group. (Kraut et al. 2012, p. 78)

Identity based (identity as referred to Kraut et al. 's definition) commitment will relate to geography and that members identify with being project makers. As for bond-based commitment this can be done via criteria for who is invited. The OC could invite those who are connected to the Aarhus soup network. By these individuals having an already established connection with other members (through the network) this can increase the chance of member Affective Commitment. Lastly by incorporating future users in the design of the OC, this will hopefully increase their buy-in of the OC and therefore increase chances of their commitment.

Summary

The OC through mutual engagement should look into facilitating the following practices; Sharing knowledge about project work, members supporting members, collaboration, and member bonding. In regards to joint enterprise the OC should facilitate connection, support, learning, and sharing between community members. The OC's mindset should reflect a colorful LinkedIn, fulfillment through collaboration with other members, and a grassroots family of project makers. The shared repertoire could include member profiles, customization and visual elements, along with a well-designed platform to facilitate the online CoP activities.

The themes discussed under mutual engagement, joint enterprise, and LPP should be implemented or facilitated throughout the OC. These elements however should be refined throughout the designing and implementation of the OC. This is a starting point for design.

Conclusion

Through this thesis, Participatory Design has been utilised in gathering novice participants of Aarhus Soup online community in order to build up and define what elements should be included in the creation of its online Community of Practice. The thesis research was conducted, data collected, a workshop held and its findings analysed through a bottom-up-emergence approach. From the findings in the analysis recommendations are presented for building the Aarhus Soup's online community of practice.

The following practices were brought up by participants of the study and highlighted through analysis as important. These practices mentioned below should be implemented and facilitated by the Aarhus Soup online community.

The first recommended practice is: **Sharing information about project work**. This practice is separated into three sections; *Fundraising*, *Logistics on running projects* and *Skill sharing*. The online CoP can facilitate these practices through individual messaging, discussion boards/channels. Discussion boards and channels might provide space for storytelling to reside.

The second practice which should be implemented and facilitated is: **Members Supporting Members**, and its four components-- *Support through skill sharing*, *Providing emotional support*, *Sparring*, and *Feedback*. Members supporting members can be achieved through message boards, online/in-person workshops and direct communication.

The third practice is: **Collaborations**, which is done through message boards, events and collaboration.

Lastly the fourth recommended step, is the practice of **Member Socialization and Bonding**. Member Socialization and Bonding can be achieved through an informal playground and face-to-face meetings, which could be OC games or informal chat groups/channels, or through in-person events.

Other facets of the online CoP are as follows:

Other **Face-to-face** events built-in to the Soup which enhance connection and commitment of the online CoP such as the regular soup dinner where four participants compete for seed money for their projects, voted on by all members present. The

Aarhus Soup events will provide this to the members. Of course further development of Face-to-face interactions can come about later in the Aarhus Soup online community.

Identity within Aarhus OC CoP, can emerge through mutual member support, the learning or exchange of skills, information exchange that develops into shared histories of learning. The roles which members will fulfill are: supporter, skill sharer, and learner. Bottom-up customization could further develop identity through added functionality of the OC, for instance by providing member profiles and skill sets, self descriptions, nicknames, avatars, and the use of emojis, gifts and stickers.

Aarhus Soup's online community of practice meaning and goals:

The Aarhus Soup OC is a CoP is about connection, support, learning and sharing resources. The OC will seek to represent a 'family' of project makers who grow their knowledge around project work. Important intrinsic motivations of those who will join are: Inspirational people, collaborations, network of like-minded individuals, celebration, information, connection, growth, and learning. The OC will provide users fulfillment through information and skill exchange and eventually through knowledge building within the organization and collaboration with others. This is also a place which allows members to not just share successes but also failures. These goals and rules of expected behaviour should be clearly stated in the OC for new and established members.

The socialization of new members

The users want an introduction to the OC which is informative on what the OC is about, how to get involved, even pointing out people within the community which can be contacted. They are adamant that the OC facilitates and helps them overcome barriers of entrance, and kickstart their participation into the community. Therefore any barriers to participation (paywalls, exclusivity, etc) will be kept on only as needed basis.

The goal is starting the online Community of Practice with facilitating information sharing (refer to Zang & Watts pyramid). From there through the members' use of the OC this information sharing can become knowledge, and over time the OC can then support knowledge creation. Of course implementation has to come first to see if this structure supports the later objectives.

As Aarhus Soup's online community does not yet exist the hope is that the above listed elements will build an online Community of Practice which will lead to the development of a successful online community.

Discussion

The discussion will include the designers recommendation to Aarhus Soup with regard to what should be implemented within the Aarhus Soup Online Community. This will include the processes that need to be woven into the online community to ensure that it becomes a successful online community of practice.

These processes are as follows: facilitation of found practices, the adoption and application of OC's meaning and goals, and ways that new members will become socialised into the OC's practices.

Facilitates these practices:

1. Sharing individual information about project work
 - a. Fundraising
 - b. Logistics
 - c. Skill sharing

This is done through direct communication between members and message boards.

2. Members supporting members
 - a. Support through skill sharing
 - b. Providing emotional support
 - c. Sparring
 - d. Feedback

Member supporting members can be done through message boards, online/in-person workshops and direct communication.

3. Collaborations

This is done through message boards, events, and collaboration.

4. Member Socialization and Bonding

This can be done through an informal playground, which could be OC games or informal chat groups/channels, or through in-person events.

To expand on the facilitation of practice here is a list of functionalities the OC should incorporate:

1. Profiles
 - a. Profiles will showcase information on the individual(s) and their project. Information presented should be a mix of practical and informal information.

- i. Practical information includes; purpose of the project, what tasks do you have, what skills, who are you collaborating with, sponsors
 - ii. Contact information
 - iii. Informal information includes; Information to help members get to know each other. E.g. dreams, visions, your favorite color, some pictures, ect.
 - b. Profiles were seen by the participant as a way to get to know the other project makers, their background, experience and skills, and as a point of entry.
2. Customization and visual elements
- a. The OC should provide the users use of visual elements and customization. This includes; Emojis, gifs, pictures, stickers, nicknames and profile images.
 - b. Simplicity, and a well-designed platform is wanted to facilitate the activities of the OC.

Community meaning and its goals: Here is a brief list to highlight the meaning and goals of Aarhus Soup's online Community of Practice. The online Community of Practice for Aarhus Soup means:

- Connection,
- Support,
- Learning and
- Sharing resources.

The OC will represent a 'family' of project makers who grow their knowledge around project work. The OC will provide users fulfillment through the organization and collaboration with others. This is also a place which allows members to not just share successes but also failures. These goals and rules of expected behaviour should be clearly stated in the OC for new and established members.

Socialization of new members:

The users want an introduction to the OC which is informative on what the OC is about, how to get involved, even pointing out people within the community which can be contacted. They are adamant that the OC facilitates and helps them overcome barriers of entrance, and kickstart their participation into the community. This should be presented during the onboarding of new members, and should be found within the community, possibly an information box of the rules and goals of the OC.

Reflection

What happens next?

The design of the OC is not over. In fact this is just the beginning. What happens next is a continuation of the design process. We could think of this thesis as the first iteration or the fuzzy front end of the design process. What happens next is taking these concepts found and beginning the process of designing. These concepts found can work as a guideline for the functionalities for design.

Firstly a platform (or platforms) should be selected which can support the functionalities needed for an online CoP for Aarhus Soup. From there the designer can begin to prototype using the platforms and test with the users. Through this process of prototyping and testing a more well defined structure of the OC and it's CoP can be implemented.

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