15

Getting a Grip on Disinformation

From Distrust to Trust within Learning Communities

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This chapter examines how citizens – individually and as part of their community – can be empowered to fight disinformation from the ground up. An experimental pilot project was carried out with three separate regional learning communities in the northern part of the Netherlands (hereafter the Frisian Area) between September 2022 and September 2023 and comprised citizens from different backgrounds and age groups who jointly engaged in investigating and exposing disinformation. These three communities operated as independent entities, with the participants developing their own rules and roles of investigation and information sharing.

The goal of the project, called "De Pit," was to experiment with methodology to empower communities to recognize and fight disinformation. Our main hypothesis for this experiment was that there is no "silver bullet" or panacea (a common lament from Elinor Ostrom). By comparing the three communities we have learned that citizens will develop their own and different kinds of solutions. Following this approach, the central question of our research was how participants of learning communities develop their own ground rules, roles, and agreements to critically collect, analyze, understand, and report on the information surrounding them in online and offline spaces.

To answer this question, we present a multiple (experimental) case study to discuss and compare the aforementioned aspects of the three different learning communities. Our aim was to provide as much autonomy as possible to these communities so that they could create their own solutions. Considering the different backgrounds, level of education, ages, and geographical locations enabled us to learn if people create similar or different solutions to fight disinformation.

Additionally, Ostrom's Institutional Analysis and Development (IAD) framework (2005) has supported us in understanding these learning communities and how the participants have developed a research approach enabling them to interpret the facts behind information circulating in the public sphere. More importantly, key aspects

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are identified and discussed on the basis of monitoring and mutual comparison of how the three learning communities develop, interact, and collaborate.

Finally, as part of this chapter, we present a "roadmap" with conditions and recommendations to implement a successful learning community to inspire and support others in setting up similar initiatives.

The chapter is structured as follows. First, we briefly introduce the project context in connection with recent theoretical developments in disinformation and citizen science studies. Second, we present Ostrom's IAD framework that supported us as a lens to investigate the three learning communities. Third, we present our methodological approach. A multiple (experimental) case study supported us in collecting and analyzing data from (participants of) the three learning communities. Fourth, we discuss the results of our multiple case study through the lens of Ostrom's IAD framework to identify and compare key aspects of the three learning communities. Finally, and based on the identified key aspects, we present a "roadmap" with conditions and recommendations to build a successful community to support future citizen-driven initiatives in unmasking disinformation on their own level.

DISINFORMATION AS A DRIVER FOR LEARNING COMMUNITIES AND DIGITAL CITIZENSHIP

Digitization gives us easy access to an (over)abundance of information that we increasingly seem to distrust. In the social-political discourse on the role of information in society, concerns about the negative effects of fake news, filter bubbles, and troll armies would appear to predominate. Information (sharing) plays a crucial role in our society. However, information is not something that "just" happens to us: The role and responsibility of citizens who send and receive information through various media channels is pivotal. Citizens, for example, can unintentionally spread disinformation which in turn can become misinformation.

Based on Benkler, Faris, and Roberts (2018, p. 6), we define disinformation as "'the intentional manipulation of beliefs' and misinformation as 'the unintentional spread of false beliefs.'" According to the Dutch National Coordinator for Counterterrorism and Security (NCTV) (2023), disinformation can be used to disrupt democratic processes such as elections or to question the political and administrative integrity of parliament and the judiciary. In addition, disinformation can be used to pursue an economic agenda and to spread messages that can lead to unrest. In general, literature on disinformation mainly focuses on the analysis of the threat (e.g., Bastos, Mercea, & Goveia, 2021; Benkler, Faris, & Roberts, 2018) or response to the threat (e.g., Chan et al., 2017; Stieglitz et al., 2022) of dis- and misinformation. Very few academics (Hassain, 2022; Heinrich, 2019) focus on how to empower citizens through communities to become more resilient to disinformation. In our project we have focused on disinformation, keeping in mind that misinformation of citizens may develop through false information circulated online

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and offline. Our intent is therefore to support citizens in learning how to identify and investigate disinformation and become more resilient to its threat. As a result, the aim of the Pit project is also to "equip" participants to prevent misinformation. With these developments in mind, we set up three learning communities aiming to encourage and equip citizens to investigate the facts behind (local, regional, or international) news and information circulation in the public, online, and offline domains. Participants in these learning communities work together as citizen journalists to strengthen digital citizenship as part of an applied research community. In that sense, digital citizenship relates to a person who uses the internet regularly and effectively (Mossberger, Tolbert, & McNeal, 2007). However, looking at recent developments such as online polarization and the massive growth either in the spread of dis- and misinformation in online (e.g., online communities on Facebook or Reddit) or offline spaces (e.g., through face-to-face conversations), this definition seems inadequate to cover the whole spectrum of the problem. Hintz, Dencik, and Wahl-Jorgensen (2017, p. 731) discuss digital citizenship as something that is "... *typically defined through people's actions, rather than by their formal status of belonging to a nation-state and the rights and responsibilities that come with it. It denotes citizens creating and performing their role in society.*" Citizen journalism, according to Bowman and Willis (2003), is based on citizens taking an active role in the process of collecting, reporting, analyzing, and disseminating news and information. According to Papacharissi (2015), citizen journalism can be seen as an alternative to news organizations that dominate the circulation of information. This means that citizen journalism can be a powerful approach to enhance digital citizenship and critical thinking of citizens in an innovative way. According to Koulolias et al. (2018, p. 22), "... governments need to take collaborative action with stakeholders and invest in innovative ways to deal with misinformation." The authors suggest that citizens should be empowered to fight misinformation by "... creating a trusted environment for citizens with the adequate educational instruments." The main aim of our experimental project was to enable participants to navigate and understand "complex information landscapes" based on problem-solving approaches as part of a central community (Glassman & Kang, 2012). Moreover, they act as qualitative researchers of their personal experiences, analyzing identities, events, and cultural phenomena (Markham, 2019). Based on these insights, we decided to work in three learning communities, based on trustful relationships and with the possibility of using tools that empower participants to unmask or fight disinformation.

OSTROM'S IAD FRAMEWORK AS A LENS TO IDENTIFY KEY ASPECTS OF LEARNING COMMUNITIES

Through our experimental research, we aim to disseminate firsthand experiences from three projects to inspire others to establish similar initiatives within the

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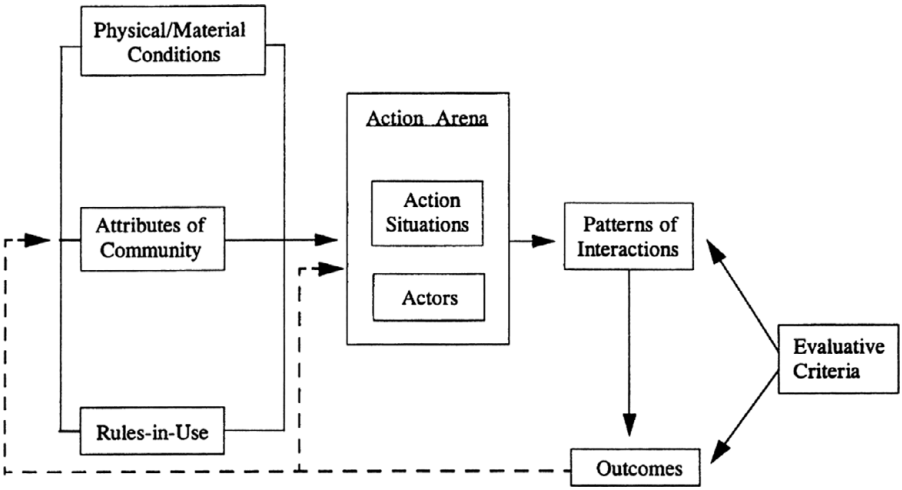


FIGURE 15.1 A framework for institutional analysis. *Source*: Adapted from E. Ostrom, Gardner, and Walker (1994, p. 37).

Netherlands and beyond. Additionally, we will provide a comprehensive roadmap of necessary conditions and recommendations to facilitate the establishment of successful learning communities. These communities will serve to empower citizens in their efforts to combat disinformation while enabling them to develop the necessary skills to investigate and effectively interpret information. The results of our research can serve as a valuable guideline or implementation plan, offering easily achievable requirements and conditions for citizens to collaboratively address disinformation within their local communities.

To achieve this goal, we use the IAD framework to identify how the participants in the three learning communities work together, communicate, carry out research, and jointly come up with community rules and roles. In line with Ostrom et al. (2014, p. 68), we research how "... individuals may legally self-organize in voluntary associations and craft their own rules of interaction." Figure 15.1 presents the IAD framework as presented by Ostrom, Gardner, and Walker (1994).

This research looked into "face-to-face discussions" related to the "rules-in-use" area of the IAD framework, as well as the "Action Arena" of each project investigating the various "Action Situations" in order to explain "regularities in human actions and results" by applying a common set of seven variables of Action Situations to understand of each of the learning communities: (1) the set of participants; (2) the specific positions to be filled by participants; (3) the set of allowable actions and their linkage to outcomes; (4) the potential outcomes that are linked to individual sequences of actions; (5) the level of control each

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TABLE 15.1 *Additional conceptual questions for analyzing the Action Arenas of the three communities*

Action Situations	Conceptual question(s) based on Ostrom (2007, pp. 29–30)
1. The set of participants	Who are the participants (e.g., demographics, background, motivation to participate)?
2. The positions	What positions (or roles) exist or how are these appointed as part of the group process (e.g., which roles are developed and how are these roles appointed by the participants)?
3. The set of allowable actions and their linkage to outcomes	Which types of research technologies and tools are used? What topics are important for the participants (e.g., are they using online research tools, or offline approaches; what kind of training is used or needed; how do participants make sure that they are safe while researching online or offline information; and what topics are chosen by the participants)?
4. The potential outcomes	How do participants collect and share the outcomes of their research? What is the important learning for sharing outcomes?
5. The level of control over choice	Do participants share their outcomes, how and with whom? What agreements are made within and outside of the community (e.g., before starting research, choosing a topic, conducting research, are there internal or external threads in choosing a topic)?
6. The information available	How do participants use, engage with, and collect informational resources (e.g., how a research topic is chosen by the group, how data is collected, how do participants bring their results together)?
7. The costs and benefits of actions and outcomes	What are important elements for participants to participate? (e.g., what is the added value for the participants to join, be part of the community, how often do the participants meet, what are concerns in researching online and offline information, what did the participants learn)?

participant has over choice; (6) the information available to participants about the structure of the action situation; and (7) the costs and benefits – which serve as incentives and deterrents – assigned to actions and outcomes (Ostrom, 2007, pp. 29–30).

Based on our specific "Pit Action Situations," we added additional conceptual questions (see Table 15.1) to support us in analyzing and understanding each community, inspired by those of Ostrom (2007, pp. 29–30) in the context of over-harvesting from a common-pool resource situation.

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METHODOLOGY

The Digital Citizenship Lab at NHL Stenden University of Applied Sciences is conducting research by monitoring this project. This Digital Citizenship Lab is the fruitful result of a crossover partnership between two professorships at NHL Stenden University of Applied Sciences: Organisations and Social Media and Cybersafety.

Following replication logic, we based our research design on multiple cases (Yin, 2009), allowing us to observe different approaches in the development of the three research communities in order to understand "... *values, norms, rules and structures that constrain and enable behavior of human actors*" (Groenewegen, 2011, p. 16). For this multiple (experimental) case study, we have chosen to conduct research in different areas (local library, higher and vocational education) and with participants from different backgrounds and age groups. Three projects were set up to gain insights into the development of each community based on different rules, roles, and actions. These three learning communities were situated in different parts of the Frisian Area: The Library of Drachten (located in the city of Drachten in the Smallingerland region); Firda School for Vocational Education (located in the city of Drachten); and NHL Stenden University of Applied Sciences (located in the city of Leeuwarden). More detailed information about the three organizations and an additional supporting organization can be found in Appendix 1.

Figure 15.2 illustrates the start of each community, the number of participants, their ages and backgrounds, who supported them during the project, and who was part of the research project group.

Our data collection was based on various data sources such as information shared by and between participants (e.g., emails, announcements, meeting minutes, and presentation sheets). Additionally, we conducted individual semi-structured interviews in May 2023 with five lecturers/experts (these are marked as *C1–C5*) who coordinated or supported the communities of the project and three separate focus group sessions in June and July 2023 with participants ($n = 14$, these are marked as *P1–P14*) and three coordinators (*C1*, *C2*, *C4*) of each community to gain insight into how they developed, implemented, and evaluated each project. Although two research communities were organized at NHL Stenden, the decision was made to organize one combined focus group with students who had previously participated in the first and/or second semester due to participant dropout.

Throughout the project, at least one coordinator (lecturer/or expert on digital citizenship) from each community joined the research project group meetings to exchange thoughts on the progress of each community and also to ensure clear communication concerning the project aim or practical issues, such as data collection. Two researchers from NHL Stenden coordinated the project, supported by student assistants. Additionally, the coordinators and researchers received support

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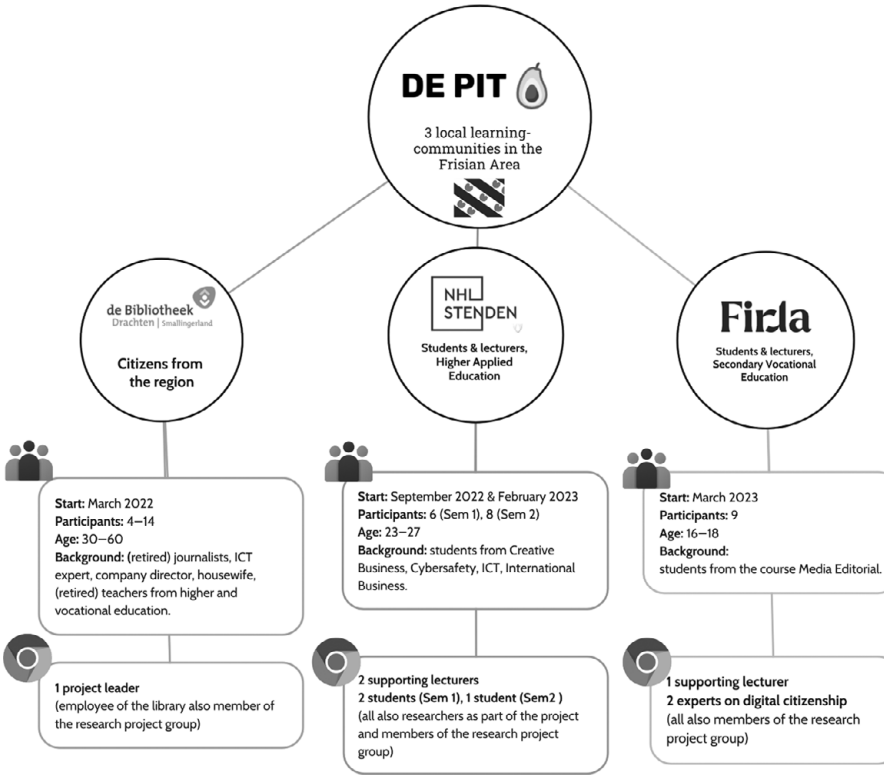


FIGURE 15.2 Overview of the three learning communities

and advice from local experts in the area of digital citizenship (from "Fers," see Appendix 1).

Participants from each learning community carried out research by collecting information through surveys, interviews, and evaluations with internal and external stakeholders. Because of the experimental nature of this project, we used the focus group meetings and individual interviews with coordinators to identify how research was carried out in practice and how the participants experienced the process of community building, data collection, analysis, and sharing.

In July 2023, we also organized a mini-conference, inviting participants from the three communities to exchange thoughts and experiences. As a part of the program, the participants briefly presented their Pit project and shared the essential learning gained.

All participants received research consent forms via the group coordinators related to data collection and assurance of anonymity. Finally, all collected data were stored in a central and secured digital research environment at NHL Stenden University of Applied Sciences, accessible only by the authors.

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FINDINGS

We will present our findings regarding the three Pit learning communities, beginning with a general introduction to this experimental project and the three separate learning community cases. Next, we will present the three cases by describing their Action Arena, research topics, working approach, communication, research approach, and experiences along with a set of learning outcomes of the participants of each community. To illustrate the three cases, we utilize the IAD framework. Specifically, we delve into the participants' "Action Arena" and examine the "patterns of interaction," such as the roles and agreements that evolved over time. Lastly, we will provide a concise summary of the collective key insights shared by attendees at the mini-conference held in July 2023.

Introduction to 'De Pit'

In March 2022, a local library in the Frisian Area started a pilot project to help citizens find their way in a society where dis- and misinformation circulates. Following a limited recruitment campaign, a learning community was formed, comprising fourteen participants from the same regional area, but with different backgrounds and educational levels. Essentially, during this pilot, participants were free to decide on which subject they wanted to investigate, be it gossip in a neighborhood watch WhatsApp group, conspiracy theories, or (regional) news. This first learning community was called the "Pit," a local information evaluation initiative; in Dutch, "*Plaatselijke Informatie Toetsing*."

Following this pilot project, two additional Pit projects were set up in September 2022 by engaging with students, lecturers, and researchers from secondary vocational education and higher professional education. Each group was able to investigate one or more self-chosen research topic(s), based on different research approaches. For example, students from NHL Stenden University of Applied Sciences applied hands-on tools (such as reverse image search) within various online channels and platforms to analyze and validate online information, additionally building a Discord community to evaluate their findings. The participants of the secondary vocational Pit at the Firda School chose applied field research, such as interviews with internal and external stakeholders, to gain an understanding of topics closely related to their daily life.

Case 1: *The Pit at the Local Library in Drachten*

The Action Arena of the Library Drachten Pit

The Pit in the Library of Drachten was set up in March 2022 as a pilot initiative with the aim of developing a larger project with different communities in the Frisian

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FIGURE 15.3 Announcement for the first meeting of the Pit in March 2022 (translated from Dutch).

Area. This citizen initiative was started by C1, an expert in innovation in information science at this very library. Participants were recruited by placing an announcement in the local newspaper inviting interested parties to the very first Pit meeting on March 16, 2022 (see Figure 15.3).

Fourteen citizens (seven women and seven men) from various backgrounds (e.g., a retired journalist, teachers with various expertise, a housewife, a company director,

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and an ICT specialist), aged between thirty and sixty, responded to this call. All participants live in the city of Drachten and exhibit a deep sense of engagement with their immediate living environment. The number of individuals involved varied between four and twelve, with a core group of four participants maintaining regular contact.

The Drachten Pit can be characterized as a local research community with a focus not only on gaining insights into digital disinformation but also in promoting more social cohesion in the neighborhood by discussing quality of life, social well-being, and social and physical safety with local residents. The working language is Dutch.

Participants Roles

Participants find it difficult to define their role within the group. *"There is no clear division of roles."* Participants see themselves primarily as (field) "researchers," while *C1* is mainly the driving force and project leader (see Figure 15.2). According to the focus group participants, one member has the role of a digital researcher specifically to double-check information or cross-reference information gathered from the neighborhood and share these insights with the group.

Research Topics

According to *C1*, the first project was based on a local rumor about young men causing problems by recklessly driving motorboats on a village canal system. Participants had heard different versions of the story and decided to investigate by gathering information through online research, interviews, and by visiting the neighborhood. They discovered that there had only been one incident involving two young men, whereas the rumors circulating in the neighborhood and media had blown it out of proportion. They decided to inform the people in the direct neighborhood and not the press to eliminate polarization and rumors.

The choice of research topics is primarily based on the interests of the participants, often around a specific topic or situation in their direct environment with the aim of discovering what is precisely going on and to what extent the resident(s) in question are causing a nuisance. One example related to a local resident's messy front garden full of clutter and waste in the neighborhood where *P2* lives. *P2* decided to conduct a small neighborhood survey. This resulted in determining that clutter is a subjective concept and that those living in the direct vicinity do not experience any nuisance. Although a man with mental health issues lives in the house in question, residents accept him as he is. *P2* indicated that her research was "not unbiased." However, by testing her own ideas and thoughts, she adjusted her initial impression of a resident who she thought had been intentionally causing problems in her neighborhood.

Another approach in choosing research themes is by going into the neighborhood and asking passersby what they think of their living environment, what they are concerned about, and what they would like to change. One topic that

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recently emerged is loneliness among residents of a recently renovated apartment building. In this complex, the communal meeting space has been removed to make way for new residential units. This means there is no longer an opportunity for apartment residents to meet each other easily and undertake activities together. The Pit staff are now investigating how an alternative communal meeting space can be created. They have also decided to keep in touch with residents on a regular basis.

Interaction Approach

The Pit meets approximately once every four weeks in the Drachten library. Participation is on a voluntary basis. Although participants repeatedly indicate that their working method is "still work in progress," it usually goes as follows:

1. Go into the neighborhood to collect data and make a report – in writing or not.
2. Discuss feedback of findings during Pit meetings.
3. Discuss with other Pit participants whether and how the findings can be followed up. Can we do anything with this? Is further (online) research necessary? Has adversarial hearing been applied?
4. In-depth/nuance of the current research or start of new research.

Communication

Communication is mainly analogue among the participants. During the physical meetings, the participants discuss their current and future investigations. A recurring point of discussion is whether to publish research findings. Publishing could be a way to bring certain neighborhood problems to the attention of a broader audience. Publishing could also ensure that the problems are placed on the agenda of policymakers or other relevant actors. Nonetheless, the decision not to publish is made again and again. The reason given is that it could potentially damage the bond of trust with residents who have acted as a source of information. However, there is an explicit desire to share the results of the neighborhood research and additional fact-checking through online research with local residents, particularly those who raised the questions. According to the focus group, residents who have participated can then decide for themselves what they wish to do with the findings. More importantly, this allows them to control the way in which the problems they experience are tackled. Finally, the decision not to publish did lead to the departure of two participants: They did not agree with this decision and considered participation in the Pit no longer relevant.

Outside the meetings, there is incidental contact between participants (telephone, email). This usually concerns contact between an individual participant and the coordinator of the community (*CI*). During the Pit meetings, *CI* clearly has a leading role. He also has the final say when it comes to decisions, such as removing

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a participant from the group (should a participant push topics that would only be for personal benefit and not for the local community). He also decides on the themes being investigated or whether to participate or to publish. From the focus group meeting, we therefore learned that participants rely strongly on *CI* to make final decisions.

Research Approach

Almost all research activities are analogue. Participants go out alone or sometimes in couples. There is no clear research strategy: "*we go into the neighborhood looking for information*." The motto is an open, listening attitude to "*find out the truth*." A training course on effective interview skills was initially planned; however, participants feel that this is no longer necessary. They have noticed – sometimes to their own surprise – that people respond openly to their questions. They had also expected to encounter opposition or aggression, but so far this has not happened. The explanation they give for this is that they may not be seen as "officials" (pastor, social worker, or local police officer); they are "just" involved fellow citizens who are genuinely interested in people's stories. *P1* pointed out: "*We don't have a cap (in Dutch 'pet'), we have the Pit.*"

Little to no information is recorded (and certainly not systematically) about findings gained from street interviews and door-to-door investigations. However, participants point out that their experience and impressions are always discussed during a following Pit meeting.

The idea of enriching the street interviews with other research, for example, by also asking questions to people from the municipality, police or welfare work, has not really gotten off the ground yet. The idea of feeding a "completed" study back to the stakeholders, in this case the problem holder(s), has yet to be implemented.

Participants' Experiences

Participants find it fun and educational to be part of the Pit. They feel they are contributing to enhancing connections between people in the neighborhood. People's openness is mentioned as a positive experience. The participants pointed out that residents like to be able to tell their story, and they enjoy being able to offer a listening ear and thus get a more nuanced picture of what is going on and what people are concerned about.

Participants' Learnings

- The PIT community is local, open, independent, and socially relevant.
- Equality among participants is crucial; everyone must contribute and engage critically.
- Exploration beyond the secure environment of the Pit is encouraged.
- The common goal is fostering connectivity within the neighborhood.

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Case 2: *The Pit at NHL Stenden*

The Action Arena of the NHL Stenden Pit

At NHL Stenden, the Pit project was organized twice. Students were recruited via an online intranet announcement and through short guest lectures at various courses to promote the project. The first community was carried out between September 2022 and December 2022 with six students. The second learning community was organized between February 2023 and July 2023 with eight students. On both occasions, the students were supported by student assistants. Both groups were provided with hands-on training sessions in different areas, such as the use of Open Source Intelligence Tools (OSINT). Students also received an OSINT toolbox (developed by the student assistants), with links and examples. According to *C2*, participants got to know each other via an initial online research exercise by "looking up" one of the team members on the internet and finding as much information about that person as possible. Later, based on the collected information, they introduced the chosen participant to the group without mentioning a name. Besides being an informal introduction, the exercise served as an eye-opener to show participants what kind of information is circulating about them in the public domain. The participants of the first group decided to investigate disinformation in the Russian–Ukrainian war and anti-Western propaganda. Additionally, they developed ground rules for the group based on a group discussion that was held at the beginning of the project (Vissia, 2022):

- The group's cooperation is key. The results of the research and working with OSINT come second.
- To maintain momentum, a fixed pattern in meetings is important. We meet once a week for 1.5 to 2 hours.
- Respecting each other's opinions is important in good collaboration.
- A negative atmosphere and undesirable behavior are the two most important indicators of an unsuccessful research group.
- Designating roles is not desirable but will be gradual within the collaboration. There is a democratic system in decision-making.
- The group is autonomous and makes decisions together, but there is an umbrella organization that they can fall back on if necessary.
- Contact with each other is via Microsoft Teams and WhatsApp.

Based on these ground rules and the observations of the participants during the first semester, six important outcomes were brought forward by one of our student assistants (van der Hooft, 2022):

1. **Working together:** Create a pleasant ambience between participants. Openness and respect for each other's opinions and ideas is key.
2. **Leadership:** There is an overarching organization that the group can fall back on. The group is autonomous and makes mutual decisions.

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3. **(How to) research:** Directly address issues brought up by the group members. Choose subjects that can be researched with OSINT tools.
4. **Motivation:** Be aware of the influence of intrinsic versus extrinsic motivation to join the project because some students get credits, others do not but join voluntarily.
5. **Apply a structured approach:** A permanent structure is important for motivation and continuity. Divide research into phases to keep it structured.
6. **Knowledge:** Sufficient knowledge about the research methods and the dynamics of the group is a must. Every group is different! Therefore, ask for feedback per meeting.

Based on these outcomes, we set up another learning community in the second semester. The Pit in the second semester started in February 2023 and closed at the end of the study year in July 2023. Since this Pit community mainly consisted of students who had volunteered, this community has unfortunately not continued into the new study year 2023/2024 due to study-related time constraints, in spite of the enthusiasm felt by the students.

All participants were bachelor students and between twenty-three and twenty-seven years old. During the project they focused on the war in Ukraine and aimed to investigate how and by whom war information (or war propaganda) is shared and to what extent this information is reliable.

From the focus group meeting, we learned that participants had a shared interest that gave direction to their research. In addition, participants pointed to the "diversity" of their community, as it consisted of students from different higher education courses (see Figure 15.1) and with different cultural backgrounds (Indo-Chinese, German, Costa Rican, Dutch, Surinamese Javanese). The working language was English.

Roles of Participants

During the focus group meeting, participants reflected on their role during the project. One participant (*P5*) called himself an "investigator" but noted his experience acting as a project manager – a role he had never held up to that point, but one which he would like to adopt later. Other participants (*P6* and *P4*) characterized their role as "participant." Both felt they had done little research up to that point as "the Pit is still in its early stages." This is also due to other activities at the university. However, the participants indicated a desire to continue with the Pit in the future. One participant (*P4*) believed that the allocation of roles should be determined democratically if a new setup was to come in September 2023. A student assistant (C2) took on the role of "supervisor" and "expert" to coach and support the community.

Research Topics

To share initial ideas and democratically choose a research topic, the participants used the interactive online tool Mural, a digital whiteboard for brainstorming.

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Participants were unanimous in their preference for a research topic: the Russian–Ukrainian war. Subsequently, subthemes were introduced: (1) *Force on Force* – military activities and developments at the front and (2) *Humanitarian Impact* – consequences of the war for the civilian population. One participant preferred to work individually and focused on disinformation and war propaganda.

Another participant (*P5*) said he followed international news closely. The invasion of Russia and the subsequent developments had his full attention. He stated the war was a major problem: "*this is a mess and this is going to last a long time*." According to this participant, the Pit's role was to maintain attention on the war and its impact on civilians. "*I see that the news about the war is disappearing from the front page and shifting to pages 2, 3, 4 . . ., but I want to continue following it even if it gets obscured*."

Participant *P4* was particularly interested in the Russians' use of Western technology, such as, the participation of Dutch companies in the construction of the controversial Russian bridge between Russia and Crimea. *P5* indicated his personal interest in "*modern warfare*": "It raises a lot of questions – and for unanswered questions there is a *deep dive* needed."

Finally, *P4* recognized the war as a significant conflict. He saw the advantage of this current topic and the many sources available. According to him, this made it relatively easy to conduct research. *P5* agreed: "*it is world news!*"

Interaction Approach

The NHL Stenden Pit met approximately every week. Apart from some physical meetings, the meetings were online. Discord, an online community platform, was chosen as a meeting space to communicate and share information with each other. Given the activities (study, work) of the participants, two meetings took place every Friday. Participants were able to decide which timeslot they would like to join to discuss their research, questions, and findings.

Our student assistant and supervisor (*C2*) started each meeting with a workshop or mini-lecture on, among other things, conducting safe online research, the use of OSINT and legal and ethical frameworks. *P5* indicated that he appreciated this very much: "*I am not an IVK student (= safety science student) nor IT professional. So, I needed extra help. For example, when installing and working with a TOR browser. I have also learned to handle it carefully: don't do it alone*." Through the workshops, *P4* learned more about security, the use of Proton Mail, VPN, TOR, and virtual machines. He said: "*there are enough hackers*." Furthermore, the participants indicated that they also needed help using OSINT. There was therefore a clear need for guidance and explanation in doing online research and *C2* provided this with lectures and an OSINT toolbox.

Communication

Initially, Microsoft Teams was chosen to communicate with each other as well as Discord among participants. Occasionally, email was used, for example, to share

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central announcements or reminders about upcoming meetings. Informal contact took place via the app Signal. One *participant also* indicated that physical meetings were essential for the community – "*that works better*" (*P4*).

Research Approach

Participants indicated that little research had been conducted. Except for C2, participants had little to no experience of doing online research. They indicated that it was important to first have a basis: about dos and don'ts, OSINT usages, and safety issues regarding online investigations. This learning process progressed over several months, with participants noting during the focus group meeting that: "*They now feel they know more and want to get started*."

P5 indicated that he saw many parallels between the current war and the situation in 1917. According to him, Russia is unstable. He therefore aimed to find out how citizens talk about the war and what sentiments are at play to get a better picture of the (in)stability in Russia. *P5* started studying online comments on VKontakte (VK), the largest Russian social media platform – comparable to Twitter (now X). He used a translation tool to analyze the comments on VK.

No agreements were made about when a study was completed or when certain findings would be suitable for publication. One participant explicitly indicated that he wanted to publish.

Participants Experiences

Participants explained they are intrinsically motivated. This ensures involvement and bonding. The participants also wanted to continue with the Pit. *P4* indicated that they learned to work together in a group – not because they happened to be in the same class, but on a voluntary basis. *P4* went on to mention that "*working with others and making new contacts*" was an important experience. Because the Pit is not part of the curriculum, collaboration was more difficult to organize as everyone had their own agenda, which meant that not everyone could always be there at the same time.

Everyone indicated that it was fun to work together on a subject that really interested them. In addition, learning to work with OSINT was a plus for everyone. Participants indicated that a lot of information about the war could be found online, but that it was not always clear what had been posted by whom and to what extent so-called *troll farms* were active. A Pit experience was to learn to look more critically at a "news fact" by consulting multiple sources (Dutch News NOS, Al Jazeera, etc.) and to search more actively for different perspectives on news. Finally, C2 – a student himself – mentioned supervising a group of students as a learning experience.

Participants' Learnings

- Facilitate strong foundation with comprehensive knowledge and advanced skills in online research, security, ethics, and OSINT.
- Exhibit decisive leadership, provide clear guidance to the group.

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- Establish focused research themes early.
- Foster genuine interest and motivation.
- Promote collegiality and familiarity.
- Maintain consistent communication through scheduled meetings.
- Encourage collaboration and proactive initiative.
- Optimal participant number.
- Set goals and interim deadlines.

Case 3: *The Pit at Firda School*

The Action Arena of the Firda School Pit

All participants were vocational education students aged between sixteen and eighteen years old who were very interested in what was going on at their school and motivated to investigate which topics were important to fellow students and teachers.

The Firda Pit was started with twelve participants consisting of first-year editorial media students and a coordinator/teacher. Ultimately there were nine active participants, four boys and five girls. The working language was Dutch. Due to time constraints, the Pit was integrated into the regular curriculum with limited contact hours.

The project began in March 2023 with an interactive session in the social sciences program for Firda students hosted by a youth organization. During this session, the topics the students would choose for their Pit project were determined through interaction. Additionally, according to C5, an expert on digital citizenship and project leader on the topic at Firda School and Fers, the students also took part in an awareness workshop about "online filter bubbles" and "online group polarization" provided by an external expert.

Participants' Roles

A characteristic of the Firda Pit was that participants had a clear shared interest in which they adopted multiple roles and had "*respect for each other*."

P9 called herself a "*researcher*" and conducted research on the theme of poverty. To this end, she created questions for interviews and a podcast. *P10* indicated that she had taken on a creative role, for example, creating posters for the podcast. *P7* chose an editorial function, for example, contacting guests for the podcast, but also working creatively, recording an intro for the podcast. *P9 and P12* both indicated contributing to the theme "*discrimination and prejudice*" and worked together on the podcast. Regarding the topic, *P13* specifically studied a case on a Dutch food brand that developed an anti-poverty campaign by examining various websites and blogs on this case. *P11* also chose a dual role as a researcher and creative participant. *P14* took on the role of project leader because her fellow students elected her and she was also motivated to take on this job.

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Research Topics

To choose a research topic, the aforementioned session was held with an external agency that has experience in brainstorming with young people. Step-by-step and through a joint voting process, the students ultimately chose a main topic, namely, inequality of opportunity. There were three subthemes linked to this: poverty, social prejudice, and discrimination. Poverty was ultimately the most important topic for the students. This was partly because students in the group had personal experience of poverty. *P12*: "*. . . because I was talking about the influences of what poverty does to children and then you know what. Yes, it wasn't really poverty for us, but we were tight on cash.*" This topic was then divided into specific subthemes: menstrual poverty, money, and life. The students eventually conducted interviews with experts and professionals at school and processed these topics into a podcast with the aim of putting these issues on the school's policy agenda.

Interaction Approach

The participants worked on the project in close consultation with each other. There were four to five physical meetings during the project.

The coordinator/teacher (*C4*) supported the students where necessary and, as a coach, also offered space to work on the project. He also helped the group make decisions at crucial moments, for example, creating the podcasts to bring attention to the issues. During the interview, *C4* claimed that working together intensively for a short period and keeping the flow going had several advantages over working over a longer period irregularly with occasional contact. The Pit at Firda was partially integrated into regular education and therefore the participants could work on Pit activities without distractions. This resulted in high productivity with concrete output, that is, a podcast and special cabinets for sanitary towels at school. Furthermore, there was an intensive collaboration that fostered effective communication among the participants. Every participant was actively engaged and dedicated to completing their mission within the limited time frame.

Communication

The students communicated via WhatsApp, Microsoft Teams, and Snapchat. The students had different types of app-groups, study-oriented, project related, or more fun and leisure related. They also met during class and individually contacted *C4* for advice. In the context of communication, the students also indicated how important it was to create ground rules with each other and to stick to these.

Research Approach

The students opted for interviews with experts and professionals. They had prior knowledge of research skills, and specifically interviewing, due to previously completed assignments in this area with provided literature. In addition, the students also engaged in desk research using search engines such as Google. Examples of

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keywords they used related to the research themes were "poverty," as well as the name of the retail brand linked to promoting school breakfasts for underprivileged children to fight hunger. Websites and blogs were also consulted. All students claimed to have "double-checked" information during the research. *P13*: "Check if something is reported differently somewhere else. Double check. Just look it up separately and then see where the source comes from and whether it is reliable." The students indicated they are taught this at school and are also reminded by teachers to check their sources. The students also took notes of their collected sources, for example, website URLs.

The information collected by the students was shared directly during the podcast conversations. The students had agreed on this. The aim was that sharing the information would have a surprising effect as *P9* states: "*. . . we did it this way, because we had all agreed not to share information for the podcast, because then it would be a surprise and then you can really see the reactions to it*."

Agreements were made to complete the research before the end of the academic year and to share the results via the podcast in the autumn of 2023. It is not yet clear who the podcasts were shared with internally/externally. The students themselves felt that the results/podcast should be made public.

Experiences

Participants were intrinsically motivated, which ensured involvement and bonding. Some of the participants were also experts through their personal experience with poverty and indicated that the research had not specifically generated new knowledge but had helped to make the topic of poverty more visible at their school.

They indicated that it was fun to work together on a subject that really interested everyone. Another advantage was that as first-year editorial media students, they could learn and apply skills related to their studies, such as making a podcast and developing other creative media products such as posters. Besides this, they were also trained in fact-checking.

The participants were less satisfied with the communication at the beginning of the project and would have liked more clarity about the goals of the project. Ultimately, a topic was chosen that was not directly related to disinformation. This was partly due to the lack of clear communication about the project at the outset and about the expectations toward the students.

The students were very proud that their research, particularly the conversations with experts, such as the location manager of Firda, ensured that the topic of menstrual poverty was put on the map and that menstrual products are now available free of charge on every floor of their school building. *P13* says about this result: "*But I actually think that is the best result. It really had a purpose, so I think that's what we achieved with it*." They were also proud of the way they worked together and how, as first-year students, they supported each other to just try things out, even though it seemed difficult to them at first, for example, organizing and conducting

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interviews and making podcasts. The coordinator/teacher C2 also emphasized the importance of a close-knit team, in which members trust each other and work toward a common goal. In this case, although the participants had known each other for quite some time, additional investments in team building were made at the start of the project.

Finally, the students were happy to have worked on a project related to their future work with room for everyone's opinion and open discussions, as P12 states: "*It is also part of our profession, what we will do later, if we join this profession, we also have to experience it. So, I just thought it was nice to see as a class that we quickly agree with each other. And if we didn't, that we could tell both sides, well different sides, stories and then make a choice.*"

Participants' Learnings

- Start sessions with comprehensive information about online research and disinformation.
- Foster a professional atmosphere for meetings. Establish communication agreements.
- Encourage mutual respect and diverse perspectives.
- Foster an inclusive environment.
- Encourage teamwork and problem-solving.
- Define shared objectives.
- Promote willingness to explore new approaches.
- Prioritize thorough research and seek assistance when needed.

Joint Learning from the Three Learning Communities

As described earlier, in July 2023 we organized a mini-conference inviting the coordinators and participants from all three learning communities to get to know each other and share their experiences. During interdisciplinary sessions, we asked the participants to share important joint learning gained for future Pit projects. Figure 15.4 provides an overview of these essential learnings of the participants.

Identifying the Similarities and Differences in the Three Learning Communities

Following the presentation of the three experimental cases and essential outcomes from the coordinators and participants, we present the similarities and differences in the three learning communities based on our additional conceptual questions (see Table 15.1). Figure 15.5 provides a visual overview of the key aspects we have identified in each case. These key aspects and the joint essential outcomes from participants (see Figure 15.4) will also provide the basis for our "roadmap" for future community projects and initiatives to fight disinformation.

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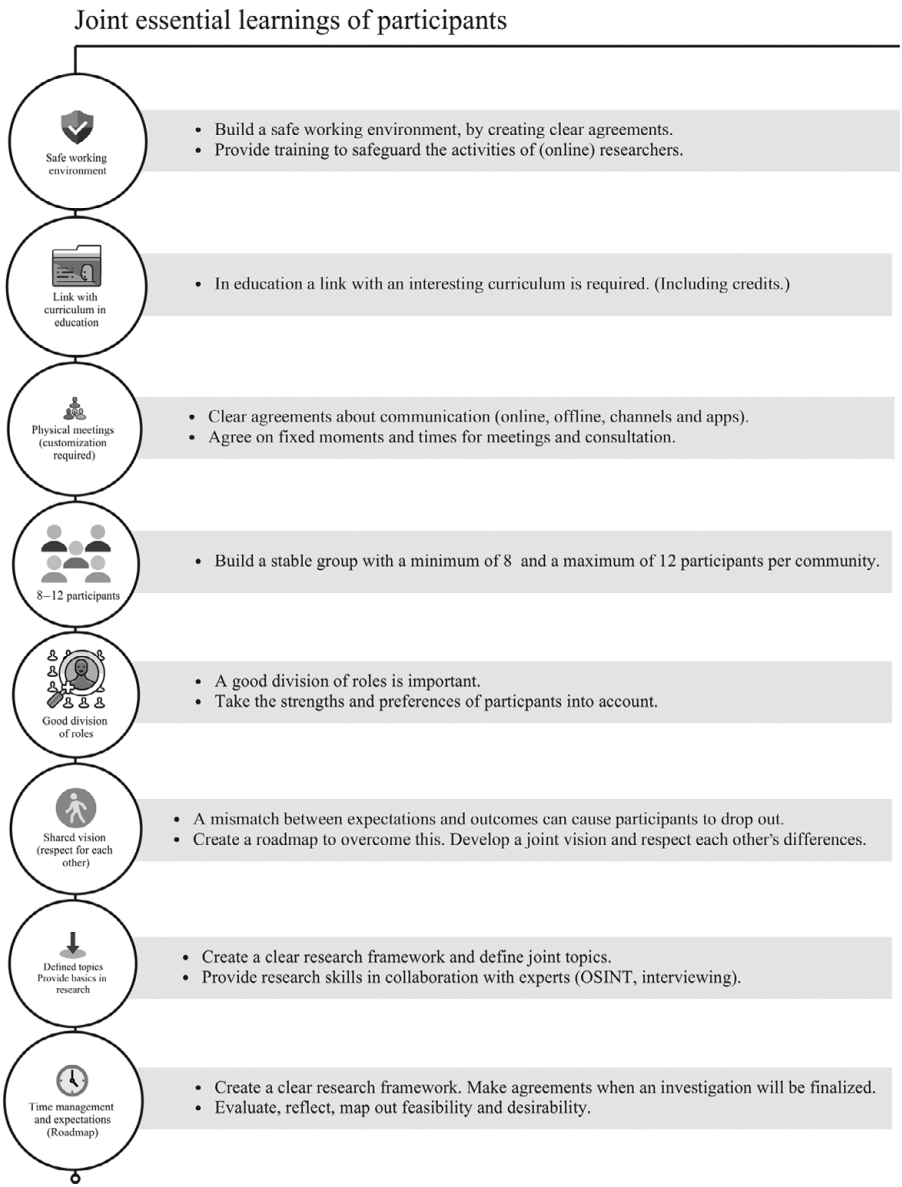


FIGURE 15.4 Important joint learnings for future Pit projects.

The participants in this study represented diverse age groups. Participants primarily identified themselves as researchers. However, they were also capable of assuming multiple roles and responsibilities within the community. The participants were free to select their preferred role, while a project leader was appointed to provide guidance and direction. The techniques utilized for investigation may vary, with

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	Case 1 (de Bibliotheek Drachten | Smallingerland)	Case 2 (NHL Stenden)	Case 3 (Firda)
1 The set of participants	Age 30–60, various educational levels, different professions, retired and working, investigated local neighborhood topics.	Age 23–27, BA students, investigating international topics.	Age 16–18, media editorial students,vocational level, are investigating school topics.
2 The positions	(Digital) researcher, participant, driving force, (project leader) Self-choice (except for project leader).	Investigator, participant, supervisor, moderator, expert (project leader) Self-choice, switching roles is possible.	Researcher, creative, project leader, coach Self-choice, combining roles is possible.
3 The set of actions	Neighborhood survey and street-door-to-door interviews. Open, listening attitude to "find out the truth". Interview skills. No training provided. Meso theme: Addressing local themes and promoting cohesion among residents. Themes include impoverishment, street lighting, unsafe traffic, and lonely elderly people.	Online research workshops on conducting secure research, using Open Source Intelligence Tools (OSINT), and understanding legal and ethical frameworks. Support from teachers and researchers. Training on research safety using safe browsers. Macro theme: Research on the Russian-Ukrainian war, with sub-themes on military activities, humanitarian impact, and war propaganda.	Experts interviews and desk research. Learn to double-check information from online sources. Support from an external expert and teacher. Research skills in curriculum. Workshop on filter bubbles and group polarization. Microtheme: What's going on at our school? Translate results into media products (podcasts) and solutions. Main theme: social inequality. Subthemes: poverty, prejudice, and discrimination. Solution for period poverty at school.
4 The potential outcomes	Data is collected offline from the direct neighborhood. Findings are reported and discussed in group sessions. Outcomes are shared among participants during meetings.	Data is collected via various online channels, communities, and platforms. Findings are reported and discussed in group sessions. Outcomes are shared among participants during meetings.	Data is collected via interviews with stakeholders and via online desk research. Findings are reported and discussed during podcasts (surprise effect). Outcomes are shared among participants and translated into media products (podcasts) to share with fellow students and stakeholders at school.
5 The level of control over choice	Options closed to share findings with media. Open to share with citizens who were interviewed or brought up investigation topics. Different opinions in the group, project leader decides.	Option open how to share findings. Different opinions, sharing or not sharing have to be discussed.	Option open how to share findings. Different opinions, sharing or not sharing have to be discussed.
6 The information available	Topic choice via investigating sentiment and questions in the neighborhood, discussing the topics, or by testing own viewpoints. Participants are free to choose a topic individually or as teams. Stepwise process.	Topic choice via a collaborative interactive process using Mural. Stepwise process. Funneling ideas and voting for final topics.	Topic choice via co-session with professional youth communication organization and with the support of the coach of the the group. Stepwise process. Funneling ideas and voting for final topics.
7 The costs and benefits of actions and outcomes.	Monthly library meetings in the evening + email. Voluntary participation. Choose a role that matches interests and skills. Time constraints for researching topics. (Start/end) Learn how to engage with local residents and collect or solve problems. or revisit standpoints. Try new research approaches with group support.	Weekly school meetings on Discord, with two time slots. Voluntary participation for credit. Choose a role based on interests and skills. Limited time due to course obligations. Students like meeting others from different courses/faculties. Learn OSINT tools safely.	Flexible meetings based on planned lessons with the coach at school and contact via WhatsApp and email. Mandatory participation. Choosing and combining a role that matches interests and skills. Learning to work closely in a group with respect. Trying new approaches supported by the group in a safe environment.

FIGURE 15.5 Comparing the three learning communities; visual overview of the key aspects identified in each case.

global subjects being addressed through online data investigation and local subjects through direct inquiry of stakeholders. Nevertheless, an array of interview techniques was utilized throughout the research process by all groups. Extensive discussions were held on research topics and dissemination of findings. Furthermore, the selection of research topics was a collaborative process, with both online and offline approaches being employed to facilitate the decision-making process. Meetings were scheduled regularly, either on a weekly or monthly basis, or in a flexible manner to accommodate the availability of all participants.

Participation was voluntary but could be connected to earning credits or fulfilling course requirements. The participants enjoyed working as a research and learning community, as it allowed for the exchange of ideas and sharing of findings. Acquiring new skills through experts or learning by doing is experienced positively. Mutual encouragement is fostered among the participants, inspiring them to explore novel avenues, while also promoting respectful engagement with all members involved in the community.

A Roadmap for (Future) Learning Communities

After conducting a comprehensive analysis of the three learning communities, we have developed a roadmap (see Figure 15.6) encompassing multiple factors and providing recommendations to establish a highly effective learning community. This roadmap will serve as a valuable resource, for both new and existing projects that seek to empower individuals within their respective (local) communities to fight disinformation at their own level.

CONCLUSION AND DISCUSSION

In this case study, we have analyzed three experimental learning communities each of which has a central purpose: to become more resilient to the threat of disinformation by jointly exploring information within an offline citizen-driven learning community.

Through this experimental approach, we learned that not every group focused directly on the analysis of disinformation in online environments but also on offline field research and topics close to their hearts. The decision-making process was open for each group, with no interference from the authors on the choice of topic. This made it very interesting to observe how the group process influenced the way participants decided to collect, analyze, and discuss their findings in each of the learning communities.

Throughout, all community participants were engaged in informed discussions on whether they should share their findings internally and/or externally, and what risk this could entail in creating online and offline polarization, endangering participants, or leading to a loss of trust in their community as they collected and

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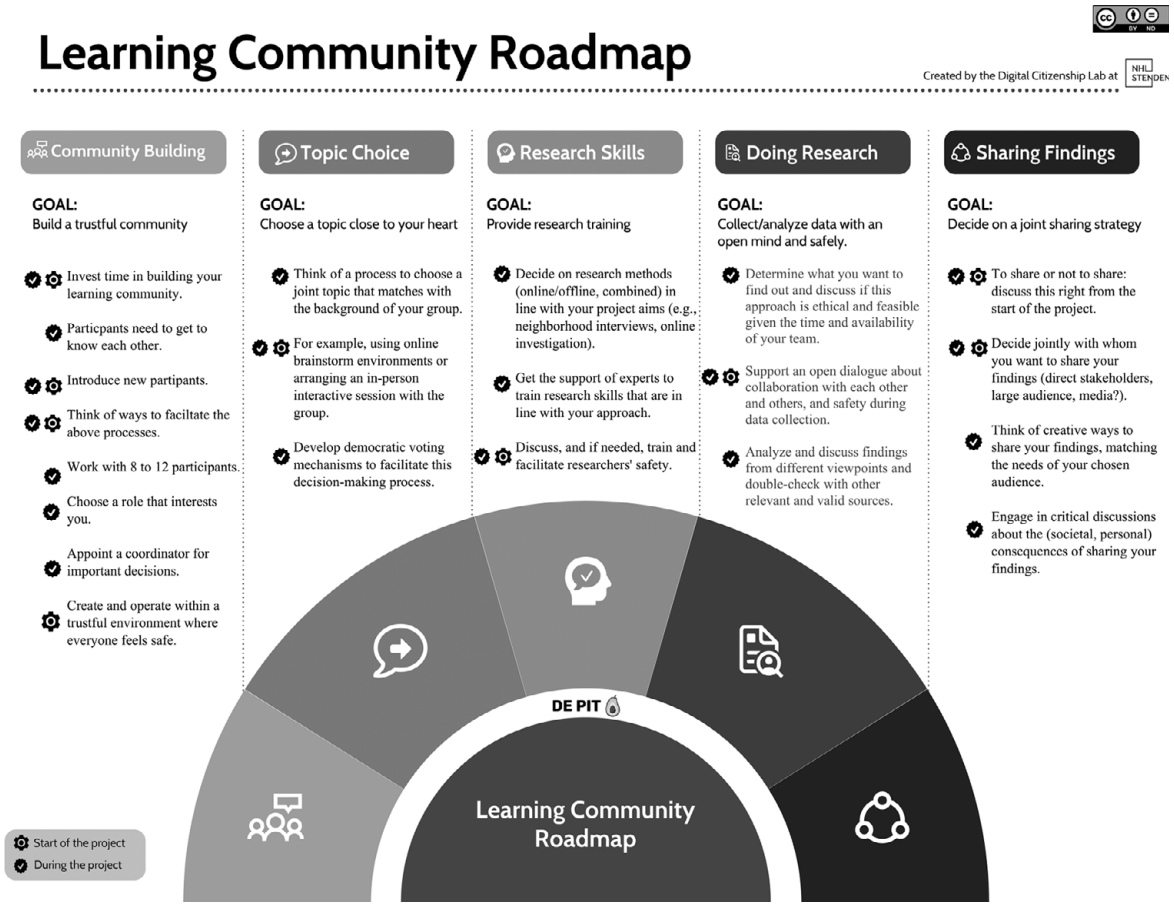


FIGURE 15.6 A roadmap for (future) learning communities to fight disinformation at their own level.

analyzed information circulating in the public sphere. Additionally, participants from one learning community were also trained in using OSINT tools, and another was trained in fact-checking all information collected via desk research. One community succeeded in connecting with local citizens by openly communicating as "fellow citizens" with their neighbors despite no prior interview training. A central motivation for each community was their choice in shared subjects of concern under the guidance of a project leader or teacher.

Interestingly, each group chose to share their findings differently with others, either by sharing results internally with other students and teachers or with citizens whom they had previously interviewed during the research. Additionally, students from Firda School shared their findings with internal stakeholders by developing a podcast on the topic of inclusivity. Negative friction in group dynamics was noticeable in all communities in the later stages of their investigation, caused by considerations of whether or not to share findings. A conclusion that can be drawn from this is that future communities should discuss and decide on these issues at the outset of a project.

Even if the three communities had different backgrounds, topics, and approaches, we identified key aspects important to empower citizens to engage in learning communities to fight disinformation on various levels, for example, at a local level supporting their direct neighborhood, at school to improve their direct surroundings, or to understand the larger coherence in a global setting. In these learning communities, critical thinking, learning skills, and tools are essential. However, we noticed that it is even more important that the participants develop a deeper understanding of the impact of information sharing on online and offline spaces. By investigating topics that are close to their heart, they also learn to reflect on their viewpoints and behavior. This supports them to engage with ethical considerations, promoting more conscious and mindful participation in a world where online and offline communication are closely intertwined. It also helps them to become more resilient to disinformation, stops them from drawing premature conclusions, and motivates them to respectfully challenge and question perspectives, identifying biases and assumptions.

We also learned the importance of building communities in an open setting with clear agreements on the organization of space and time and supported by a coordinator (preferably chosen by the participants). For digital investigation team participants, it is of utmost importance to provide a joint training module on online investigation and safety.

Finally, most of the participants indicated that building and becoming a community is not something that comes naturally. Participants should take time to get to know each other, set clear goals for research (under the guidance of a coordinator), democratically decide on the choice of topic, and if and how their findings will be shared. Creating a trusted environment is key for each learning community as with trust comes resilience and empowerment to engage in meaningful online and offline investigations benefiting both individuals and society.

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Current policy developments by the European Commission have established ambitious goals for ensuring that 80 percent of the population acquires fundamental digital competencies by the year 2030 (European Commission, 2023). This means more innovative approaches are needed to support local governments and citizens to develop the ability to form and articulate well-informed opinions and actively participate in societal discourse through open dialogue. Our research demonstrates that learning communities, supported by local public institutions such as libraries, (vocational) schools, and universities, can serve as a reliable and safe space for acquiring and practicing these skills in a real-life setting. Ultimately, this can contribute to both online and offline depolarization efforts, effectively engaging individuals from diverse backgrounds and educational levels. Our findings also show that learning communities are not about "sending information" or teaching about disinformation in front of a class or group of citizens. Its success is rooted in providing a secure environment, where individuals can govern themselves with experts' guidance. In closing, as our experimental research shows, defending democracy may start at the heart of offline communities contributing to an open debate about local as well as global issues we are facing right now.

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