

Students' Innovative Education Practices

supported by Facebook

Synnøve Thomassen Andersen
PhD
The Arctic University of Norway, Alta, Norway
synnove.thomassen.andersen@uit.no

Abstract. *This article describes a case study on how Facebook can be used in different ways to create new innovative learning strategies and opportunities for practicing social work related to children and adolescents. The study concerns information and communication in groups and networks on Facebook as a communication channel. Using qualitative methods, the students' use of this digital network was observed to identify the opportunities and challenges that arose in connection with innovation. Diffusion theory was used as a frame of reference for the study. The findings show that social network communities for social work education should be included as a more defined topic in research on social work. This study helps to accentuate the importance of additional research on the topic.*

Keywords: *social media, social work, innovation, diffusion, learning processes, communication*

1 Introduction

This article describes how Facebook can be used in different ways to create new innovative learning strategies and opportunities for practising social work related to children and adolescents. The investigation is based on a case study on the use of social media in the education of child welfare officers. The term 'innovation' has been conceptualised at the level of the individual or organisation [1, 2, 3, 4, 5, 6]. It is a key term in numerous strategies, reports, research projects, etc., but it is defined in different ways. In general innovation is more or less understood to mean: the introduction of something new, a new idea, method or unit,¹ or a similar definition²: a new method, idea, product, etc. One of the main driving forces for innovative development and social change is the rapid development of technology. The Internet is a major resource with its massive knowledge base. Social media platforms³ are part of this technological development, as these web-based services facilitate communication, where many people communicate with each other, and the users largely decide on the content and usage themselves. The use of information and communication technology (ICT) has led to substantial changes in the organisation of work, work practices and the way people communicate via social media. Users play a key role in the shaping of innovation processes, because they influence the social aspect of innovations, modify and improve the products, and contribute to shaping the technology in all phases [7, 8, 9, 10, 11]. The technological development impacts the lives of children and adolescents through play, interaction, learning and communication [12]. This implies that those who work with children and adolescents must have the competence to support innovation in their work [13, 14] including social media management [1]. Utilisation of and competence in social media management may contribute to obtaining an understanding of what children and adolescents are concerned with, and ensure a broad understanding of various circumstances that impact the lives of children and adolescents. This provides opportunities to safeguard the participation of children and adults, whilst at the same time allowing social workers to actively use social media during communication [1]. Despite increased focus in research on how social media can impact children and adolescents, less research has been conducted on students' different use of Facebook and how this can create new innovative learning strategies and opportunities for exercising social work amongst children and adolescents. This research is based on a case study done in Norway, and contributes to more knowledge about innovation within this discipline. The following research question was investigated:

How can social work students' usage of and participation on Facebook create new innovative opportunities for practising social work?

¹ Merriam-Webster Dictionary

² Oxford English Dictionary

³ Facebook, Wikipedia, YouTube, blogger, Twitter, Instagram, Snapchat

2 Theoretical frame

For decades the Internet, and use of computers and mobile phones, have been available to a large number of users paving the way for the possibility to experiment with different types of innovations. This includes both the creation and participation in innovation activities. Researchers claims that such development opens the door for new types and forms of innovation [7, 8, 9]. The scope of innovations has contributed to knowledge pertaining to why some organisations are innovative and others are not, or why certain innovations can be adopted and others cannot [5, 15]. An innovation has specific characteristics: its usability is acceptably precise, it can be distinguished from other innovations, it is spread 'as is' and individual decisions are made about its application [15]. An innovation can be broadly defined as a process, knowledge or technology that offers something new, 'new to the world' products, but also what a person perceives as newness or 'other unit of adoption' [16:12). The diffusion theory concerns how and why innovations spread, and how and why more people continuously adopt something [17, 18]. This study applies the diffusion theory as a theoretical framework in the way Rogers [15, 16] describes to understand the possibility of expanding the students' innovative knowledge related to children and adolescents through using Facebook. This is a fundamental process that starts out fragile, but is then followed by strong growth, stagnation and the demise of innovation. Diffusion is the process where innovation in the form of an idea, product, application or similar is spread through communication, e.g. on social media platforms, such as Facebook, YouTube, etc., to members of a social system (e.g. students) over a particular length of time. Consequently, diffusion can be defined more generally and theoretically as a phenomenon and also describe other commercial innovations. Three key terms are central to the theoretical definition: a) channels, b) members and c) a social system.

- a) Channels describe how an innovation can be conveyed. For example, through marketing, user groups, media and other information channels.
- b) Members are generally described as adopters. That is, the people who use, convey or relate to the innovation in any other way.
- c) A social system is the network of individuals through whom the innovation is spread. In a commercial context, this often means the business concerned and its own network or the social context in which customers and users revolve.

Five factors are critical to the diffusion process [16]. These distinguish an innovation and are critical to the speed of adoption:

1. Observability: The degree to which a result of an innovation is visible to oneself and others. Visible innovations will spread more rapidly than innovations that are difficult to observe. Diffusion relies on how clear a product can be seen and understood. Information about mobile phones with a good camera or other similar newness spreads quicker because they get the attention of the media more than, for example, a new medicine of great importance to society.
2. Relative advantage: The degree to which an innovation is felt to be better than the idea it will replace. Innovations that have more and better qualities will spread faster than innovations that do not have any beneficial attributes. Diffusion relies on the advantages of the product or process in relation to other products/processes. Mobile phones with features that give access to different types of social media, more cameras, mp3, etc., spread in a different way than products without such features.
3. Complexity: Innovations that are perceived as difficult to understand and hard to use will spread at a slower rate than innovations that are user-friendly and simple. Diffusion depends on how difficult it is to spread the product or service. It has been harder to sell phablets to older users (pensioners) than anticipated.
4. Compatibility: If an innovation is perceived to be compatible with existing values, earlier experiences and the needs of potential adopters, it will probably spread faster than if it is more difficult to associate the innovation with earlier experiences and existing attitudes. Norms, ability and skills - diffusion relies on customers having the norms, skills and ability to accept the innovative products. Large headsets have not spread particularly fast because more mobile phone users have used phone earplugs.
5. Trialability: The degree to which an innovation can be tested to try it out on a small scale or within a limited scope to determine whether the innovation is purely a short-term experiment or whether it is here to stay. Diffusion relies on how easy it is to test the new products/processes. It has been easy to sell new models of mobile phones than landline phones because mobile devices are easier to use.

The establishment of new innovative digital networks on Facebook comprised of social work students is an example of a diffusion process. The network can share information about the challenges and opportunities attached to the field of children and adolescents, and involve all students (members), regardless of sex, age and geographical distance. There are many good examples of online learning activities and assessments methods⁴. The use of ICT and digital learning in higher education is a tool for raising the quality of education, focusing especially on the students' learning outcomes. Learning is central, and thoughts and behaviors aimed at obtaining, processing and

⁴ <https://utdanningsforskning.no/>

organizing new material are defined as good learning strategies. Teachers have to include these factors systematically within their own planning of teaching. However, principles of collaborative learning are important for establishing good learning strategies [2], which include acquiring learning strategies and interest in learning, participating in a committed community, getting to work, enabling opportunities in a constructive manner. Collaborating, coordinating and trusting each other is important to include in studies as factors for teachers, in order for the students to learn something for themselves. Such socio-cultural learning is based on theories by emphasizing that learning takes place in a social context and not in a vacuum [3]. Teachers have to be aware that students can have more control over how they learn, and centered on what they should learn when using technology [4]. However, students need to prepare for online learning to get a better learning effect [1]. Research [2] highlights that students need to develop their own approaches and ways to solve problems demanding the learning environment where they have time and space to reflect on their own learning process. Further, students must have access to several ways to interact with content outside the classroom. Then they can choose the learning strategy that best suits them and thus increase learning outcomes [2]. Social work students' usage of and participation on Facebook created new innovative opportunities for practising social work based on three important factors in organizing these online studies:

- Give the students the chance to use the most appropriate learning strategy.
- When introducing new subject matter, progression should be carefully structured and efforts must be made to make sense.
- Allow students to reflect on their own learning processes together with other students through a review of each other.

Teachers must offer a broad teaching repertoire where their own digital skills often become critical related to the students' learning outcomes in the digital learning processes, which are used⁵.

3 Methodology in the Research

The question was investigated through a qualitative case study on 16 Bachelor's Degree students practising social work in Norway for a period of one year. The qualitative method is characterised by direct contact between the researcher and the study participants [19, 20, 21]. The role of the researcher was an observer in the classroom and among the students. By investigating the qualities linked to groups and networks on Facebook as a communication channel, and how rapidly ICT happens when students interact and communicate with each other, the students' innovative usage was analysed and connected to social work. Implementation of the survey is mainly based on observation of the students' use of Facebook in learning situations and furthermore, it has been examined how quickly this took place through collaboration between students. Based on this, the interpretations are highly significant [20]. The respondents vary in age and originate from different parts of the country. Factors, such as family, finances, earlier education, work experience, etc., were not taken into consideration during the study. The study is limited in the sense that it only provides an indication of how the respondents use Facebook, the learning outcome, whilst uncovering the innovation that consequently resulted. At the same time, factors related to how this innovation then paves the way for new social work solutions are uncovered. The students were specifically observed when using social media to uncover the types of opportunities and challenges that may arise through the innovation. The study relates to information and communication in groups and networks on Facebook in the form of a communication channel, thereafter the rapidity of this via inter-student interaction was examined. The findings were analysed related to diffusion theory [16]. Prior to the start of the study, the interviewees were informed that participation in the study was voluntary, and as such they could withdraw from observations and interviews at any given time without giving a reason. Implementation of the survey follows national guidelines for research and ethics. Observations were conducted for a period of 22 hours prior to and during classes in the study programme. Both open and participating observations were selected to observe the students' situation. To validate the observations, notes about the lesson were presented to five interviewees during one of the breaks. This allowed them to read and to distinguish between what they had heard and seen, regardless of the interpretation, because they had participated in the lesson themselves. This type of review can support the interpretation and acknowledgement of the interviewee [20]. The following is an example of the reproduced notes that were shown to two out of five students:

⁵ <https://utdanningsforskning.no/artikler/utdanningsledelse-og-digitale-laringsformer-i-hoyere-utdanning/>

“NN (female) connects to Facebook and immediately goes to the shared group that has been created for the class. Adds information about today’s syllabus and topic for the lesson. Checks the students’ shared group and then continues to the last events on her profile.”

“NN (female) asks the lecturer the following: “Is there a code of conduct for social media?” She Googles ‘code of conduct for social media’ on the computer and several hits come up. She quickly checks various links before searching for Facebook and then goes immediately to the students’ shared group. Here she puts the same question to the rest of the group and thereafter goes to the last events on her own profile before returning to the discussion in the class.”

Facebook is a factor that can be connected to diffusion and the communication channel component. Also, social work students in the form of a group is a factor that can be connected to diffusion and the social system component. Observation shows how they handled the opportunity social media offers for innovation. An interview user guide containing different types of keywords to obtain information about various circumstances surrounding the use of social media and the innovation such usage presented. The interview guide was given to the students upon commencement of the observation. Nominal data were collected pertaining to sex, age and the number of hours spent using social media. The study’s research question, quality, relevance of the empirical data and the researcher’s ambitions in terms of transferability or external validity determine how large the sample should be [22:38]. The transferability threshold for the results of this study is, among others, aimed at the relationship between sex, as there was only one male in the group. Nevertheless, it is important to note that this data material cannot be used to suggest anything about how the same circumstances apply in general to all social work students at universities and university colleges in Norway. It is possible that the phenomenon investigated here varies geographically or from college to college.

3.1 Using Facebook in Connection with the Diffusion Process

All the social work students actively used shared groups on Facebook during all types of instruction. The students used a shared group for their class, which was established by a student at the start of studies, but it could be shut down upon completion of their course. The group’s topic was the course subjects and the students gave feedback on various parts of the content. This was done in the form of written feedback consisting of ‘like/don’t like’ buttons, but also new links to similar content about the topic. Information was published about pages on the syllabus applicable to the supervised professional training part of the course that the students would be completing later in the semester. All the students had the ‘same’ information and some had linked URL addresses to relevant information online. A total of 14 students published information in the shared group, which discussed several topics multiple times. One topic was financial frameworks in the social services. All the students believed that cost-cutting measures were a contributory factor to social workers falling ill because of pressure at work. The final conclusion of the discussion was that social work management teams needed to be clearer when justifying why resources are actually needed and in return hopefully receive what is needed. In relation to Rogers’ [16] factor of observability being essential to the diffusion process, the network, in the sense of innovation, is visible to all the members as well as others. Even though this was a small network, it was visible and included all the students. The diffusion theory shows how the network clearly sparks interest and is understood owing to its visibility on social media. This also applies to other similar networks. All information rapidly spreads because the members contribute towards doing this themselves. The factor of trialability also shows that network innovation can be tested to try it out on a small scale or within a limited scope. In this case, network innovation is only a short-term experiment. The diffusion clearly verifies that testing relies on how easy it is to test new digital solutions. A strong contributory factor for ease of use is the utilisation of different types of technological tools, such as computers, mobile phones and tablets. This can also be linked to the factor of relative advantage, as the network innovation has better qualities that enable it to spread more rapidly than innovations with no attributive advantages. Mobile phones with features that give access to different types of social media may contribute to spreading the network in a different way than physical networks without such features. Nevertheless, it is important to note the complexity of innovations, as the solutions or products can be perceived as difficult to understand and to use. Such innovations will spread slower than innovations that are simple and user-friendly. The diffusion depends on how difficult it is to spread the product or service [16]. Privacy and ethics on social media was another topic that was highly discussed. Four students particularly discussed the use of mobile phones and other technology. They were concerned with the fact that as professionals they were responsible for what was written in reports and other documents, and that they needed to be more self-aware when using technology. Everyone was concerned with the fact that they should ask people for their permission to take and share pictures on social media (or use them in any other way) more often than what they do. One female student wrote:

“So many people take pictures in all types of situations without considering who they are actually publishing a picture of!”

Another student wrote:

“It’s filled with selfies - people don’t always think about what’s in the background and whether anyone’s standing there.”

Those who responded to these posts agreed that it is essential to obtain informed consent in order to safeguard justified representation of other people on social media. The students were particularly concerned with being consciously aware of sharing pictures of children, including their own. The discussion also addressed the matter of talking to other parents or guardians, and the importance of listening to what children want and respecting their own opinions. One student wrote the following:

“Everyone has a huge responsibility when it comes to talking about ethics on social media. This applies to students, schools and workplaces, especially in terms of using media to publish accurate information. Perhaps it could contribute towards quality assuring social work? We must think about the way we talk and share information - everywhere on Facebook.”

In addition, another student wrote:

“One-year-olds understand that it’s possible to talk on a mobile phone, therefore it’s obvious that ethical questions surrounding the use of mobile phones, etc., must be discussed.”

Another student in the Facebook group wrote:

“The technology isn’t exactly going to disappear, but that’s not the problem. In my view, there’s a lack of understanding surrounding the implementation of changes, or more precisely, talk about how the use of social media changes things in a workplace - where ethical guidelines should be a topic. I found, after my supervised professional training, that it is not a topic at all. In my opinion, this shows that managers don’t have the competence to use social media and accept changes at several levels. Furthermore, no managers seek this type of competence to organise it well enough. Social media has at least changed the way I communicate.”

A third student responded quickly to this post:

“Of course! I completely agree!! I use fb everyday to communicate and get information. I sell and buy things on fb. I’m a member of parent groups for my children, and training groups where we arrange the time and place for various training activities. As a student, I’m also active in several groups related to becoming a child welfare officer. I’m a member of our first-year class group, and member of groups for the child’s best interests and user impact, etc. Through these fb groups, I’ve received a lot of information about child welfare that I haven’t yet learnt on the course or through supervised professional training. It isn’t the case that social media will disappear from child welfare education just by shutting your eyes and ignoring.”

The discussion on ethical challenges continued everyday throughout the week. The most active students then decided to create a Facebook group to share their conclusions with all other social workers interested in the same topic. Only one week after the creation of the group, it almost had 100 members. The students responsible for the group chose to shut it down after a period of six months, just before the end of the semester. The reason being that it demanded too much work to quality assure all comments and opinions that were published and posted. At the same time as this decision was made, there was tremendous focus in the media about various sides of social work in Norway’s largest newspapers, both online and in the paper versions.

This also verifies the critical factors in the diffusion process. This example shows that even though the network is not a product with revolutionary knowledge about children and adolescents, it is a digital solution that solves the challenge of obtaining updated information about existing ethical challenges and problems. The network and digital solution on social media contributes to innovative opportunities, because the users are relatively young. With the aid of social media, they addressed ethics and had a remarkable ability to convey and distribute their message in a network, which is critical to the rapidity of adoption. The students perceived the network as compatible with their existing values, earlier experiences and the needs of potential new members; as a result it spread quickly. The diffusion verifies that the innovation relies on the students having norms, skills and the ability to accept the network as a digital solution. The observation demonstrated that all students actively used mobile phones during a class and at break times. Facebook was also used many times during classes. Several of the social media platforms also offer the option of live conversation (two-way communication), but such usage was not observed. During the interviews, I wanted the students to give feedback on what they found challenging when using social media, and whether the challenges could have an impact on their learning processes. All the students pointed out that the media, with the largest national newspapers in the forefront, adversely emphasise the negative sides of the child welfare service and child welfare cases in many ways. Furthermore, they indicated that they would use social media platforms, such as Facebook and various Facebook groups, to seek help and support. All the students stressed that it is crucial to feel safe and confident in these groups. When interviewed, one of the students said the following:

“I have become more aware of ethical challenges related to the job I will be doing. It’s great that the group addresses ethical challenges in social work. I often discuss what I read with co-students and feel that I become more aware of how to act as a professional.”

The relative advantage factor is also critical to the diffusion process. Students perceive network innovation as a solution with better qualities than, for example, joint physical meetings about the topic. Thus, the innovation spreads more rapidly than innovations with no attributive advantages. This also applies to the complexity factor. The students find Facebook easy to use, simple and user-friendly. Therefore, the service is easy to handle. Awareness when using technology will be a key factor in shaping strategies that can safeguard the participation of both children and adults. In this regard, social services can actively contribute towards facilitation, so that children and adolescents can use social media to communicate with social workers. Here it is important to create good cooperation with parents and other guardians. The students pointed out that this type of cooperation relies on having the skills to use social media. Arrangements could particularly be made in the social services to handle parental contact when children find it stressful and difficult to deal with. Another student described it this way:

“This group has meant so much to me...For me, this group has been crucial, as I can ask for advice about things I’m wondering about. Those who have responded have been very professional and connect most of their answers to child welfare legislation. At the same time, it’s been great having a group to discuss child welfare with. Obviously, it’s good to have someone to ask when you don’t have much experience with various things.”

Several of the students said that much of the collaboration connected to their studies was conducted on Facebook. This form of collaboration was natural for the students and they used their network actively. In the interviews, the students said they were conscious of who they contact in relation to the purpose of the contact. When interviewed, one student said:

“I’m very conscious of sending private messages, if I don’t want everyone to see what I’m writing. Unfortunately, not everyone understands this well enough. It isn’t always possible to understand how technology works, for example, how everyone can see what is written or a child showing sexual images of him/herself. That is, the consequences of it - the negative being that it is easier to sexually abuse children and adolescents. However, it can also be used to ‘get’ the people behind it.”

Members of the Facebook group discussed the challenges connected to social media, the publishing of images of children, social workers, etc. The students highlighted privacy and regulation of the duty of confidentiality when using social media, for example, when children in foster homes find their parents on Facebook and establish contact. What do you do when you discover this as an ordinary user of Facebook, but work as a social worker the next day? What do you do when you find extremely negative comments on Facebook from parents of children under the supervision of the child welfare service? One student wrote the following in the group:

“It’s incredibly easy to find people at fb. One search and you have found the one you are looking for. You realize that it’s hard to hide if you’re on fb.”

Another student wrote:

“Dependency on being ‘active’ on social media platforms is sick. The pressure it creates amongst all groups can be very destructive. However, there are also a lot of benefits in the form of sharing and maintaining contact with friends and family who live far away from home. In relation to work, the media contributes to exacerbating the negative sides of the child welfare service. Nevertheless, it’s also possible to use the Internet for reading and searching without having to physically ask. In terms of working with child welfare, guidelines should be created to distinguish between one’s private and professional life. It’s also important to use the professional groups to share and receive information. This could be a good ‘support’ when confronted with challenging situations.”

The shared group was created for this class only, as such the members were only students and teachers. Everyone could create and give feedback on the content. All the students were also members of different open social work group: ‘Professional Group for Child Welfare’ or ‘Child Welfare Officer’ etc. Such openness made it possible to publish posts or give feedback. Often the students posted links to other content, which resulted in something similar to bonding.

4 Analyzing

The analysis of the diffusion process is based on five factors [16] that will result in adoption of an innovation. The diffusion describes the characteristics of the actual innovation; the newness the students created. In this respect, the innovation could be various factors: an idea, a practice, an approach or object. Some of the students had an idea about establishing a shared digital network for the discipline of social work. This changed the practice for how information and communication were both exchanged. The receiver, the other students, perceived these factors as new both individually and as a group/students. These factors are different and therefore have different features as well. The features or uniqueness of the innovation determines how rapid the innovation will be adopted. The diffusion process largely concerns communication. For the students, the communication was about transferring a message from a student (sender) to another person (receiver), and that this form of communication and information exchange resulted in the adoption of the innovation. The study shows how social work students’

usage of and participation in social media can create new innovations through the establishment and utilisation of new networks on Facebook. The topic of the networks was social work. More awareness of this could provide better opportunities for practising social work and contribute towards building a knowledge base that also gives access to competence within the field. The social services must be challenged to be more open to innovation and new initiatives from employees, both within and outside the core areas of social work. This would contribute towards more rapid and better results than in services where changes are less common. Mass media is an important communication channel for creating awareness and knowledge about the innovation [16]. Despite this, the analysis shows that interpersonal communication is the most important communication type for changing attitudes and behaviour. This will determine whether the student (receiver) will reject or adopt the innovation. The reason for this is that most people do not base their choices on research or expert statements, but on the subjective evaluations of close friends, co-students, colleagues, etc., who have adopted the innovation. Communication channels enable information and knowledge about the innovation to be distributed to the public. During this process, people create and share their knowledge with each other. By communication channel it is meant the way information is transferred from one person to another to create a shared perception. Social media is an important communication channel for creating knowledge about new innovations [16]. Even communication in the form of online chats about goods, products, methods, etc., on social media influences the attitudes and behaviour of the participants.

The participants will not base their acceptance of new innovations on expert statements and research, but on subjective opinions from the participants' networks, for example, family, friends and colleagues [16]. Social media platforms, for example, Facebook are therefore important communication channels where the participants can express their opinions and views publicly or in closed groups. Communication is the constant factor. The development of social media creates more room for interaction and collaboration. More citizens now take part in political debates online. That is, social media influences social engagement, democratic participation and freedom of information [23]. The time aspect and speed during the communication process related to newness and diffusion theory is about the decision-making process to adopt or reject the innovation. If a social work student, for example, wants to become a member of an open Facebook group, the student must obtain information about the group (the innovation) several times before deciding whether to become a member of the group. An example is when some of the students I observed created a group for the class about the Norwegian Child Welfare Act. The objective was to discuss law amendments connected to the implementation of a new child welfare services act. If the other students show little or no interest in discussing this, the group will not be very active when it comes to sharing information and it will probably be shut down after a while. Sometimes groups are created for a particular purpose, for example, in connection with academic conferences, seminars, meetings. When the activity is over, the group may be deleted. The decision-making process is about how early new innovations can be adopted in relation to other individuals or groups/organisations [16]. For example, information via social media will immediately reach a tremendous amount of people in contrast to newspapers, journals, flyers and other publications. The decision to adopt or reject an innovation takes time, because potential users gather information several times to make sure they are making the right decision about the innovation. Based on this, Rogers [16] divides the population into five different categories according to how rapidly they adopt the innovation in relation to others.

1. Innovators: characterised as bold, curious, risk takers with a low threshold for testing and adopting innovations.
2. Early adopters: also characterised as interested in new innovations, but do not take as many risks as the innovators.
3. Critical mass: the early majority who make up the critical mass. If the innovation is successfully adopted here, spreading to the rest of the population is unlikely. This category is characterised as cautious. In general they are not leaders and are slower at adopting innovations. Critical mass is understood to be the point in a spreading process when enough individuals have adopted an innovation
4. Sceptics: the late majority accepts and adopts new innovations later than the most people in a system. These are characterised as sceptics and approach the adoption of innovations with high scepticism (especially a financial risk).
5. Laggards appear to be very traditional. These have a limited image and interest in the world, newness and the unfamiliar. Their point of reference lies in the past and local community. By the time laggards adopt new innovations, developments have probably gone a step further with new innovations.

This categorisation can also be applied to the student group and each student's use of the innovative digital network. All the students are part of a social system where they interact and communicate with each other. A social system can be described as interconnected members/entities engaged in solving a shared problem with a common goal in mind. Members or entities can be people, informal groups, organisations or sub-groups/systems. There are various roles in the social systems and these either push forward, control/manage, delay or stop the diffusion process. The role of innovator is critical in order for an innovation to be created, but it is not essential for the actual diffusion process. Social systems create boundaries [24]. The role of opinion leader is vital to the diffusion process [16]. An opinion leader holds high status in his/her social system and must comply with the norms in the system.

Norms are the established behavioural patterns in these social systems, and are significant to diffusion. Opinion leaders are described as more extroverted than their followers and are likely to express themselves on social media and have a stronghold in the communication network. Agents of change tend to have higher education and a professional background for the ideas they are trying to spread on behalf of an organisation. This group normally has to go through opinion leaders in order to be successful, but they can also use helpers who are familiar with the social worker's (target group's) environment, language and culture. The students were online most of the time over a 24-hour period mostly on social media communicating with family, friends and network building. Groups and networks on social media change quickly. The students' establishment of new network groups on Facebook correspond with the description of an innovation [15,16]. The digital network is a solution with a clearly defined target group. Since the target group is quite small, it will be easy for all potential users to adopt and use. The critical factor is that those who first adopt new technology have high social status and a strong influence. Innovators, the initial adopters, talk about the new innovation to friends and acquaintances who in turn become adopters and talk about it to their friends. A social system is defined as an ordered, demarcated pattern of human beings interacting with each other [25: 287]. When groups are analysed as social systems it means that the role of the participants are mutually defined in relation to each other [16, 24]. Consequently, the roles towards each other change, and are formed and developed during dynamic interaction, whereby the role of one participant impacts the outcome of the role of other participant.

The study showed that several of the social work students gathered information about the different professional groups before deciding whether to join. Awareness surrounding when and how the use of social media is valuable to social work is important in this process to enable social work students to exploit the potential that lies within these resources. In addition to being able to describe Facebook groups as innovations, the members of the groups also correspond to the description of a social system where social work students interact and communicate with each other [16].

5 Discussion

The establishment of new networks for social work students on Facebook concerns a new generation of Internet users and a new user pattern where students share academic-specific content, opinions, information, experiences and knowledge, etc. The network and group are therefore user-controlled. During the study several of the social work students expressed that they felt incapable of building networks. More focus must therefore be placed on the acquisition of such competence in the education programme. At the same time, competence enhancement is also necessary in the programme, as well as the discipline under which the use of social media falls. The study showed that the students want to use social media more, especially Facebook, in education programmes, as well as social work. The students said they believe they have something to contribute with in terms of exploiting the manoeuvrability these resources offer. Facebook as a communication channel enables information and knowledge about the innovation to be distributed to the public [16]. Even communication in the form of, for example, online chats about social services influences the attitudes and behaviour of the participants. During the study, the students talked about situations connected to communication between children and parents that children could perceive as difficult. Adolescents experience pressure from their parents through social media. The students believed it was crucial to develop good parental cooperation. However, the challenge was to organise the type of contact that would protect and shield the child when necessary. When meeting children and adolescents in crisis situations, the critical factors include how you behave as an adult, and what you can and want to contribute with. For this type of work, use of social media may also be an important factor in understanding what children and adolescents are concerned with. In addition, social workers may obtain more knowledge about what influences the lives of children and adolescents. Several students in the social work students' Facebook group led the various discussions. These innovators informally influenced the others in the group to change their attitudes towards the team that was being discussed. In the long-term, such situations could change social work. This type of activity is compatible with communication in diffusion theory [16].

Communication can fundamentally be described as social, whereby intellectual development, thinking and learning occurs during social activity with others. Good communication is a prerequisite for outstanding social work and the ability to communicate can be trained and developed [26]. By exploiting the habits of students and their use of social media, it is possible to facilitate new methods of communication and learning that could lead to changes in social services. An example is new opportunities for safeguarding the participation of children and adults. The use of social media paves the way for innovation where new networks and groups can be established with emphasis on facilitation, to allow the user experience and training to take place in safe and more organised forms than traditional social media. Nevertheless, important user competence must be easy to transfer between the various types of media. This is challenging, as contact through social media cannot be regulated. Accessibility and information related to social work are factors that several students described as future challenges they expected to be able to handle. Social media enables one to be creative and innovative in order to find new ways of getting the

attention of users. In addition, social media facilitates dialogue between the users and user groups. At the same time, social media is oral and informal so some users may perceive it as a barrier when conveying a message. There are also restrictions on access to information and communication if the user does not already have a relationship with relevant people 'inside' the group. The decision-making process attached to diffusion theory concerns the decision-making processing in terms of whether to adopt or reject the innovation. If the members of the group are followers of the activity in the group, more people will use the group. Social media makes it is easy to observe activity, what is published, which posts create engagement and which do not. Information is the key in education and learning. It is important to give teachers room to explore digitalisation, contribute to education and facilitate new research results. By using social media, students, teachers, researchers and employees during supervised professional training (if applicable) can obtain innovative advantages. It is important that education institutions exploit the manoeuvrability that develops when taking social media into use. They can organise and apply knowledge through new social media network groups. This complies with the description of the decision-making process pertaining to how early new innovations can be adopted in relation to other individuals or groups/organisations [16].

The study shows that students believe they will probably use social media in their professional lives as social workers in the future. Nevertheless, the challenges associated with using social media paves the way for better cooperation in general. Cooperation could also facilitate collaboration with children, adolescents and/or parents about other matters. Through more training on social media for professional use, the students will to be able to further exploit the manoeuvrability that arises from using the social media platforms they already use. One of the challenges of social media in general is the huge amount of information available. It is necessary to be aware of who is conveying what and where, and the type of information that is presented within various social fields. This also corresponds with earlier research [23]. The digital networks and cooperation resulted in innovation, creativity and competence enhancement. This is extremely important for the further development of the students in their training as social workers, so they can cooperate with other professions and put innovation back into the field again. The introduction of digital solutions into the study programme contributed towards spreading knowledge about the use of technology in social work. In this way, the innovation contributes to cultivation of the competence social workers will need in years to come. Social work is a female-dominated occupation. The development of digital networks will contribute towards forums for women in occupations involving children and adolescents. This will help reinforce unity and network building for women in the occupation and provide inspiration for more women to be employed in leading positions in both private and state-owned companies, and organisations.

The study shows how the social work students' use of and participation on Facebook created something new, an innovative network. This contributes towards showing that knowledge about the use of social media can help develop more awareness about communication, information, cooperation and new working methods. In turn, this can develop better understanding of the interests and influence of children, adolescents, parents and foster parents, and more active participation and cooperation at different levels in social work. The social work students became more engaged in topics about the field they would be working in. Through joint assignments, the learning process became more student-centred and they were more their own teacher in that they acquired knowledge by drawing on other students through virtual collaboration. Educational institutions must create work methods built on collaboration and collective action. Teachers and researchers could be in networks with other teachers and researchers, share ideas, experiences and best practices, research results, be open to new technology, new teaching methods and research areas. To make the learning process more interesting, it is necessary to use social media platforms that contribute to the creation of social interaction, and which make sharing easier and pave the way for new manoeuvrability and innovations. Universities and university colleges play a vital role in society through training highly qualified candidates. Pedagogical digitalisation must especially be enhanced to a strategic level to make it possible to implement unified measures for digitalisation of the learning processes. This must be facilitated for flexible and efficient study programmes and for collaborative learning in close interaction with co-students and teachers. It is important for social work students to have access to a modern and personal learning environment with possibilities for individual learning plans. However, subjects such as technology and social media usage should be included in the studies.

6 Conclusion

Social media in the way it organised today challenges the social services. The social services must gain better insight into the expectations of the educational field. Through closer cooperation between the field and social work education, both will obtain more insight into the challenges and opportunities in each field. This could contribute to more cooperation. Open social media platforms will create new opportunities for initiating participation in social work. Relationships between future social workers are influenced through communication on social media. The same applies to relationships between social workers and their users. Awareness when using technology will be a key factor in shaping strategies that can safeguard the participation of both children and adults. In this respect,

social services can actively contribute towards facilitation, so that children and adolescents can use social media to communicate with social workers. Here it is important to create good cooperation with parents and other guardians. Innovation that provides opportunities for new activities clarifies ethical issues, such as privacy and management of the duty of confidentiality in communication between social workers and children, adolescents and families. The use of social network communities related to social work education should be included as a more defined topic in research on social work. This type of social change contributes towards innovation in social work and may result in better solutions for communication and more efficiency, etc., but also knowhow about reinforcing change. This will probably induce other ways to provide services and to communicate in social work. In this chapter it is argued that social work students use of Facebook reveals various challenges and opportunities that may be relevant to social work in the future. Knowledge about and competence on how to use social media should therefore be related to theory and supervised professional training during the course of study. This investigation contributes towards underpinning the importance of more research on the topic.

References

1. Andersen, S. T.(2018), Bruk av sosiale medier åpner for handlingsrom ved barnevernfaglig arbeid, kap.4.Red. Schönfelder, W, Thomassen Andersen, S & Aune Kane, A (2018), Handlingsrom i barnevernet, Muligheter og begrensninger for profesjonsutøveren, ISBN:9788245023862, Fagbokforlaget
2. Henderson, R.M. and Clark, K.B. (1990), "Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms", *Administrative Science Quarterly*.
3. Swanson, E., B., and Ramiller, N. C. (2004). Innovating mindfully with technology. *MIS Quarterly*, 28(4):553-583.
4. Fichman R.G.and C.F.Kemrer, (1997). The assimilation of software process innovations: An organizational learning perspective, *Management Science*, vol.43,pp.1345-1363,1997).
5. Fichman, R. G, (2004) "Real Options and IT Platform Adoption: Implications for Theory and Practice", *Information Systems Research*,15(2) 132-154.
6. Lyytinen K., Rose G. (2003b). The Disruptive Nature of Information Technology Innovations: The Case of Internet Computing in Systems Development Organizations, *MISQ* , 27,4, pp. 557-595.
7. von Hippel, E., and Tyre, M. J. (1995). How learning by doing is done: problem identification in novel process equipment. *Research Policy*, 24(1), 1-12. doi: 10.1016/0048-7333(93)00747-H .
8. von Hippel, E. (2005). *Democratizing Innovation*: <http://web.mit.edu/evhippel/www/books.htm>
9. Tuomi, I.(2002). *Networks of Innovation – Change and meaning in the Age of the Internet*,Oxford University Press, 2002.
10. Chesbrough, H. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*, Boston, Harvard Business School Press.
11. Andersen, S. T.(2013), *User-centered innovation in psychiatric healthcare by using mobile technology*,(PhD thesis), University of Oslo, Oslo. (2013).
12. Kojan, B.Marthinsen, E & Clifford, G. 2014, *Barnevern og sosiale nettsamfunn - en utforskende analyse*, Norges Barnevern 02-03 / 2014, Vol 91.
13. Befring, E. (2009). NOU 2009:08. *Kompetanseutvikling i barnevernet - Kvalifisering til arbeid i barnevernet gjennom praksisnær og forskningsbasert utdanning*. Oslo.
14. Gottvasli, K.Å. (2012). *Kunnskaps- og prestasjonsutvikling i organisasjoner. Rasjonalitet eller intuisjon og følelser?* Trondheim: Tapir Akademiske forlag.
15. Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). New York: Free Press.
16. Rogers, E. M. (2003). *Diffusion of Innovations* (4 ed.). Glencoe: Free Press.
17. Leveson, N. (2004) *A New Accident Model for Engineering Safer Systems*, *Safety Science*, 42,4, 230-270
18. Olsen O. E., Lindøe H. P. (2009) *Risk on the ramble: The international transfer and risk and vulnerability*, *Safety Science*, 47, 743-755
19. Johannessen A., Tufte P.A, & Kristoffersen L.(2004). *Introduksjon til samfunnsvitenskapelig metode*.Oslo: Abstrakt forlag
20. Thagaard, Tove (2013). *Systematikk og innlevelse. En innføring i kvalitativ metode*. 4 utg. Fagbokforlaget. ISBN 9788245014938. 239 s.
21. Kvale,S. og Brinkmann, S. (2009), *Det kvalitative forskningsintervju*,Gyldendal akademisk,Utgave:2. utg. ISBN: 9788205385290
22. Malterud, K. (2001). "Qualitative research: Standards, challenges and guidelines." *The Lancet*. 358: pp. 483-488.
23. Enjorlas, B, Karlsen, R., Steen-Johnsen, K., Wollebæk, D. (2013) *Liker-liker ikke*, Cappelen Damm
24. Skirbekk, S. (2014). *Sosiale systemer*. I Store norske leksikon. Online 18.februar 2018,https://snl.no/sosiale_systemer.
25. Bø, I. & Helle, L. (2013). *Pedagogisk ordbok* (3. utg.). Oslo: Universitetsforlaget.
26. Eide H og Eide, T., *Etikk og kommunikasjon*, ISBN 9788204085146, Oslo (2005).