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PARTICIPANT OBSERVATION OF A TEACHERS' ONLINE COMMUNITY
DURING THE COVID-19 PANDEMIC IN GEORGIA

MA thesis

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Abstract

Participant observation of a teachers' online community during the COVID-19 pandemic in Georgia

      This ethnographic study followed a Facebook group of Georgian teachers during the COVID-19 pandemic. Qualitative and quantitative data were collected from March to June 2020. As an exploratory participant observation, this study offers insights into the group from a member/administrator perspective. The study explores the roles of group members, their reasons for joining, and discussion topics, it reviews the most discussed posts, frequent words, and also contains interviews with its teacher members. The findings included that questions and discussions about digital tools for teaching were the most frequent types of posts. Teachers seek for help and learn from each other in an online environment.

Contents

Introduction

In February 2012, Georgian media proudly announced the opening of a "Future Classroom" for one of the public schools in Akhaltsikhe. Different channels circulated the pictures of a classroom, where smiling children sat at their desks with large screens, looking at a smartboard on the opposite wall. Akhaltsikhe is a small town in Georgia, where I was born and raised. At that time I was studying Information Technology at the local university there, where we often wrote lines of programming language on a blackboard instead of the computer and where we learned about the computer hardware theoretically, without seeing and touching them. The idea of the "Future Classroom" excited me until I was told that it was being used only for special events and open days. Teachers simply found it too complicated and unnecessary to use.

Historical overview of the Georgian education system

Since the collapse of the Soviet Union in 1991, several major reforms have been implemented in the Georgian education system. The sudden fall of the Georgian economy in the first few years of independence negatively influenced the budget for education. In 1994, public spending on education constituted only 1% of gross domestic product (GDP). Despite economic and social hardship, some important improvements took place, such as creating a concept of the Georgian education system (1990), implementing standards in education (1993), drafting the law of Georgia on general education (1996), printing new textbooks and other activities.

International donors and humanitarian organizations started funding different sectors in Georgia from 1995. The World Bank, Open Society Foundation, and UNICEF actively funded various educational programs starting from kindergartens. After the year 2000, many educational facilities were closed and new ones were opened, employing new educators and specialists. New types of attestation for the teachers were implemented and general rules for enrolling into higher education were drafted. Georgia was becoming a western-oriented country and started implementing international standards in education.

National exams and an assessment center, established in 2004, coordinated the creation of a new centralized model of national examinations. Starting from 2005 the center has been facilitating international assessments by the International Association for the Evaluation of Educational Achievement (IEA). Since 2007, the Teachers' Professional Development Center, has provided numerous trainings and certifications to teachers and implemented various programs to support the education of the population in rural areas and ethnic minorities, as well as inclusive education (Chkuaseli, Sanadze, & Kitiashvili, 2014).

Some of the recent programs in the Georgian education system include career advancement schemes for teachers, distributing personal computers to all first-graders and older students with excellent grades, integrating computer literacy skills in both teachers' and students' education. Overall, a lot of public and international funding has been allocated for the Georgian education system. In 2017, public spending on education is reported to have reached 3.8% of GDP and is planned to be raised to 6% by 2022 (Ministry of Education, Science, Culture and Sport of Georgia, 2019).

International assessments

Unfortunately, more funds and more training in education has not really led to success on the international level. Georgian students and teachers have consistently been scoring low on different international assessments.

In the Programme for International Student Assessment (PISA) 2018 results, Georgian 15-year-old students scored 380 in reading, which ranked them at the 69th place out of 76 participating countries. They received a score of 398 in Math, ranking them at 66 out of 78, and 383 in science, with the rank of 72 out of 77 (The Organisation for Economic Co-operation and Development [OECD], 2018).

Interestingly, according to the same data by the OECD (2018), compared to the PISA 2015 results, in PISA 2018, Georgian 15-year-olds scored even lower in reading (-22 score), science (-28 score) and math (-6 score). Figure 1 below displays the trends in PISA assessments in 2009, 2015, and 2018 (in 2012 Georgia did not participate).

Except for school subjects, it seems that Georgia is scoring low in financial literacy and the motivation to attend the school. In the financial literacy assessment, Georgian students ranked at 19 out of 20, and in the amount of skipped classes 76 out of 76 according to the PISA 2018 test. Students in Georgia also reported having one of the weakest positive feelings, ranking them at 60/69 (OECD, 2018).
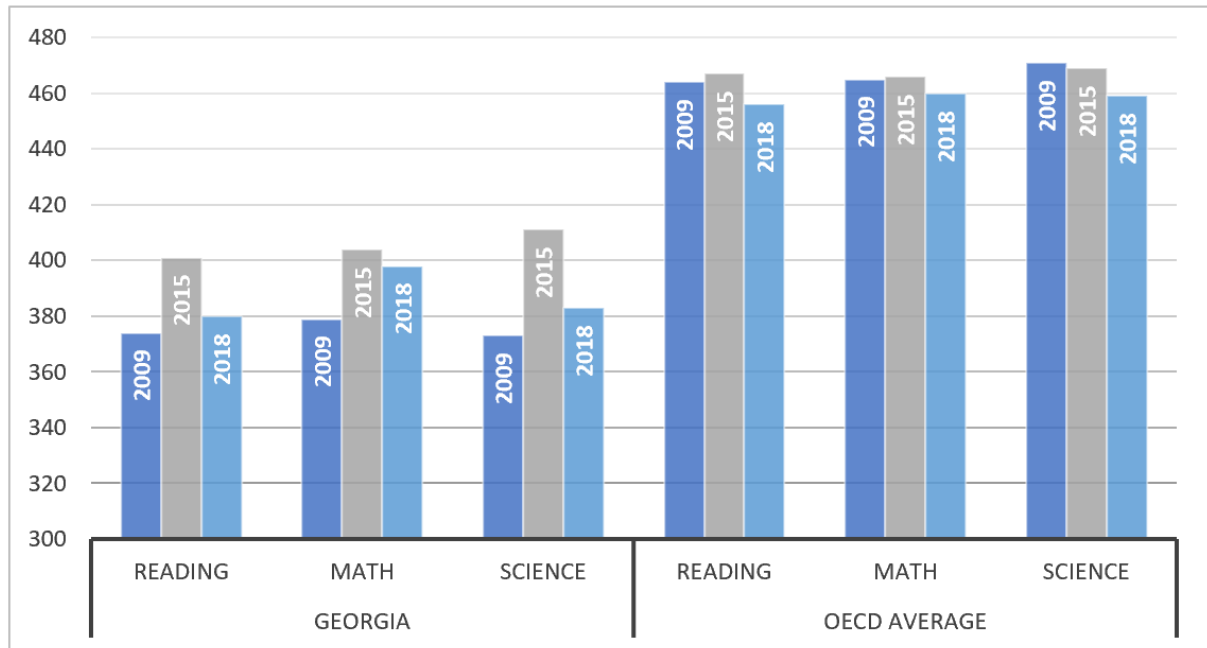
Figure 1. Georgia's PISA performance in 2009-2018 relative to OECD average

Similarly, Georgian 4th and 8th graders scored below average in math and science within the Trends in International Mathematics and Science Study (TIMSS) in 2007 (Ina V.S. Mullis, Martin, & Foy, 2008), 2011 (Ina V.S. Mullis, Martin, Foy, & Arora, 2012), and 2015 (Ina V.S Mullis, Martin, Foy, & Hooper, 2016). Overall, in contrast to the PISA results, TIMSS shows mostly an increase in scores over the years, but the latest results are in 2015, the same year when Georgia showed the highest scores in PISA.

In the same study in 2015, 69% of the 4th grade Math teachers and 62% of the 8th-grade teachers reported high job satisfaction (average = 52%). 85% (4th grade) and 88% (8th grade) of the teachers have completed at least a master's degree, while the international average is only 26% (4th grade) and 25% (8th grade). Reports are similar to science teachers as well (Ina V.S Mullis et al., 2016).

Georgian 4th graders showed lower than average achievements in reading as well, according to the Progress in International Reading Literacy Study (PIRLS). The trends in Georgia's performance in TIMSS and PIRLS are presented in appendix 1. In a study in 2016, 88% of the parents were reported to be "very satisfied" with their children's' schools while the international average is only 65% (Ina V.S Mullis, Martin, Foy, & Hooper, 2017).

The report from the Teacher Education and Development Study (TEDS) in mathematics pointed out that in Georgia the teaching profession is not very highly regarded and that the

"entrants to teacher education are rated as low achievers compared to other students in their age cohort" (Tatto et al., 2012).

It seems like all the efforts of the government, educational reforms, and budget increases did not seem to help the actual education level of students and teachers.

Integrating meaningful use of educational technology (EdTech) into the classrooms as well as using it for self-study could, arguably, lift some of the tension and give students and teachers the possibility to educate themselves through available online resources.

In recognition of this situation, my initial master's thesis was going to be an experimental study based around an intervention involving the integration of Khan Academy, as one particular digital learning and teaching platform, in Georgian math lessons. The research was very suddenly interrupted at the beginning of March due to the coronavirus pandemic. In a matter of a few days, the whole world became part of one big experiment with no control group.

Emergency remote teaching

In December 2019, a new coronavirus was identified and started spreading to the whole world. By July 31, it infected 17 106 007 people worldwide with coronavirus disease 2019 (COVID-19), resulting in 668 910 deaths (World Health Organization, 2020). The numbers are increasing daily in the period of writing this text. A few weeks after the identification of the virus, new social distancing rules started to apply in different countries, resulting in a lockdown of many cities and countries. As a result, schools and other educational facilities had to close globally, creating a need for *emergency remote teaching* (Hodges, Moore, Lockee, Trust, & Bond, 2020).

According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), more than 1.59 billion learners around the world could not attend schools and universities and 194 countries had to shut down their educational institutions due to the COVID-19 pandemic during the peak on April 3, 2020 (UNESCO, 2020).

On March 2, schools in Georgia were also closed. Unaware of how long the pandemic would last, some, mostly private schools started distance teaching right away, the others waited for further instructions from the Ministry of Education. Teachers who were more comfortable with digital tools were the first to jump on the train and to start delivering online lessons. A public school teacher, who was quick to start online teaching, said in a private chat that three things contributed to the fact that she had no hesitation: 1. her digital skills, 2. a personal interest

in using EdTech and 3. supportive colleagues who introduced her to technology-enhanced teaching practices abroad.

On 10 March, a new group was created on the social media platform Facebook. "It [Facebook] is an online arena for presenting ideas, communicating, interacting, and making social connections" (Ramadan, 2017). Facebook groups allow their members to publish posts for other group members to see. The posts can be simple texts, pictures, links, videos and other formats. Members can write comments under posts and reply to others' comments. It is also possible to "react" to the posts or comments. Reactions are done via small emoji buttons, representing the following: "like", "love", "care", "ha-ha", "wow", "sad" and "angry".

The Facebook group is called *Online Education in Georgia*[1] and was founded by two Georgian professionals in the field, Nutsa Kobakhidze[2] and Maka Eradze[3]. The aim of the group was set to provide a space for conversation around the topic. Teachers, school principals and other administrative staff, lecturers, students, parents, policymakers and other Ministry of Education employees, researchers, EdTech companies, non-governmental organizations, journalists, other stakeholders, and interested parties quickly gathered in the group and started discussing the next steps in Georgian education during the pandemic.

Some members started posting instructions on how to use different tools for teaching in the digital world, some created content about different ways to teach online, (a poster about synchronous and asynchronous learning, for example), some teachers started creating and sharing resources, others - copying, adapting to their needs and using in their classrooms. The group grew very quickly and attracted more attention.

For my master's thesis, I decided to follow that group and conduct an ethnographic study. Because of my interest, I had a great opportunity to join the founders of the Facebook group as an administrator which allowed me to not only be one of the group members but also to move my digital fieldwork from 'front stage' to 'back stage' (Goffman, 1990,1959), enabling me to observe and gather more information on the group whilst participating in managerial discussions and decisions.

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[1] https://www.facebook.com/groups/319522702345176/

[2] Assistant Professor in Comparative and International Education, Faculty of Education, the University of Hong Kong

[3] Postdoctoral Research Fellow in Technology-enhanced Learning and Learning Analytics, Faculty of Educational Sciences, University of Modena and Reggio Emilia, Italy

Facebook group observation

In March 2020, 8 years after the announcement of the "Future Classroom", I contacted a parent of a student who goes to the same school and asked if the teachers finally started using the classroom. The answer was the same: "only when visitors come and on the open days". Such top-down approaches often have a similar effect. Teachers in that small town in Georgia, just do not see the context to use the room and they also lack the skills to experiment with the technology that is available for them.

Emergency remote teaching changed the most common practices in education. Teachers had to start experimenting, they had to use digital technology and learn new skills. Needs for such skills were naturally created, otherwise, teaching couldn't happen. Now the teachers had to reach out to learn and develop their practices. Unlike before, they couldn't avoid using digital technology. And to some extent, all of their lessons became "open days", where whether they wanted it or not, parents were present during their lessons.

While at the beginning of my observations of the Facebook group, I didn't have clear questions in mind. I was observing everything until I saw patterns that interested me: teachers in the group actively started sharing the resources they were creating for online teaching and others were reusing them in their lessons. Some teachers started asking questions on how to use different digital tools and soon, video tutorials were recorded and uploaded by other teachers, explaining how to use the tools, and so on. To sum up, teachers started teaching each other. Other related Facebook groups were formed by the teachers, some for just sharing resources and tutorials. Already existing teachers' groups became active with similar exchanges and content as described above. After noticing all these patterns, I was able to narrow my work and formulate the following research questions (RQ):

RQ1: What are the characteristics of the observed Facebook group? Who are the members? What are the group's dynamics?

RQ2: What do teachers' talk about in the Facebook group during the COVID-19 pandemic?

RQ3: If and how do Georgian teachers learn from each other on social media?

The research is exploratory. There is no hypothesis to be tested, the main aim is to document how the group develops, what becomes relevant, and which topics become less urgent in time.

Theoretical Background

Ethnography online

The online environment makes it logistically easier for a researcher to conduct an ethnographic study: there is no longer a need to physically go to the location to observe people or an organization. Also, it's never been easier for individuals to virtually gather together, despite their distant locations, through different online platforms. In the Merriam-Webster[4] dictionary, social media is defined as "forms of electronic communication (such as websites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (such as videos)". Facebook is such a platform, a social media tool that is most commonly used in Georgia. According to Statista (2020), 2.85 million Georgians use Facebook as of April 2020. In July 2020, 68.61% of social media users in Georgia used Facebook (Statcounter, 2020). The platform provides useful data that are available for Facebook group and page administrators, making online ethnography easier.

Social media tools provide good opportunities for easy communication between their users. Researchers point out many advantages of computer-mediated communication (CMC) such as supporting more frequent and explicit communication of emotions (Derks, Fischer, & Bos, 2008), quality conversation (Pettigrew, 2009), and increased satisfaction (Perry & Werner-Wilson, 2011). Even though it has become physically easier to "people watch" online, this comes with its consequences. Very often it is not clear who really sits behind a user's profile with whom we engage. We do not see the real social interaction but only screen-filtered written messages, that can be edited if a person decides. Many subtle messages and non-physical communicational messages are lost online and it becomes more difficult to provide a thick description of social interactions. Archer and Akert (1977) conducted an experiment that proved that a lack of nonverbal cues made understanding the meaning and context very hard and produced "radically different levels of interpretation accuracy".

There are nonverbal cues in the language of CMC as well, such as exclamation marks to communicate excitement or frustration, or writing words fully in capital letters to communicate it as shouting (Harris & Paradice, 2007) and there are icons, representing facial expressions, called emojis. Just like in face-to-face conversations, it's not always straightforward and understandable what we see or read and what the communicator means.

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[4] https://www.merriam-webster.com/dictionary/social%20media

Let's bring out Ryle (2009 [1968]) example of understanding the differences between winking and twitching, which was later analyzed by Geertz (1973). "the difference, however unphotographable, between a twitch and a wink is vast" - Geertz says.

> The winker is communicating, and indeed communicating in a quite precise and special way: (I) deliberately, (2) to someone in particular, (3) to impart a particular message, (4) according to a socially established code, and (5) without cognizance of the rest of the company. (Geertz, 1973)

While the other characters from Ryle's example, such as the boy who twitches, or the one who rehearses the wink to later make a parody of the initial winker, conduct the same action of contracting the eyelids, the message (or lack of) they communicate is very different.

We do not see the facial expressions and deliberate nonverbal communication online, but we see the texts that people publish, sometimes accompanied by emojis. To me, a "Smiley" is a new wink. It can mean to portray positive feelings and attitudes, such as happiness, warmth, or ambiguity and sarcasm (Derks, Bos, & Grumbkow, 2008), negative attitudes, such as passive aggression, or to communicate the higher social standing, intelligence level (Glikson, Cheshin, & van Kleef, 2017), etc. Importantly, studies show that the interpretation of emoji usage differs across cultures (Bai, Dan, Mu, & Yang, 2019).

Recognizing such cues isn't easy and requires a large amount of time spent in the community and the platform. I have always been an early adopter of new technology and digital tools and spend quite a lot of time online, including social networking. I have been an active Facebook member since 2008 and according to my RescueTime[5] tracker, I spend 30-40 hours every month on the platform, mostly interacting with the Georgian community. These are the reasons why I feel confident to correctly understand the subtleties of behind text meaning, emoji usage, and tone of messages and to properly observe the reactions in this social media platform.

Facebook is the most used social media platform in Georgia, where people of all ages interact with each other, including teachers and their students. In fact, Working together in such a platform allows teachers to learn more about their students, their perspectives and better adjust their teaching to their students' interests.

The Facebook platform has a lot to offer to everyone in education. The Education Foundation calls Facebook a "'Swiss Army Knife' of tools to unlock learning for young people within and beyond the classroom" (The Education Foundation, 2013). Although, in this research, we do not look into how the platform is used for the education of students, but observe how

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[5] http://rescuetime.com/

different parties in the field of education interact and work together using a Facebook group as a tool.

Social learning, professional networks, and peer learning

The number of professional communities in social media keeps growing. More and more people turn to each other to exchange information, to teach, and to learn, to give and receive advice on their complex, real problems. This type of learning is not new. Albert Bandura, founder of the social learning theory explains in his publication in 1971, that "most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions, this coded information serves as a guide for action" (p22). According to his theory, social context is as important in learning, as is cognition. Online professional communities offer exactly the social context, where members can learn and imitate others' ideas, knowledge, and actions.

Around that time, researchers started writing extensively about the importance of professional networks. (Parker, 1977) studied 60 networks aimed for school improvement and recognized 5 key common characteristics. They were "a strong sense of commitment to an idea, a sense of shared purpose, a mixture of information sharing and psychological support, a facilitator who ensured voluntary participation and equal treatment, and an egalitarian ethos." (Lieberman, 2000). Lieberman also analyzed the networks as learning communities and found that "although educators are attracted to networks that seek to promote important and lofty goals (e.g., literacy, student-centered education), high moral and/or educational purposes are not sufficient when teachers need to solve immediate and pressing problems. Networks that last, that hold their members, and continue to attract new teachers understand that they must account for the daily pressures of teaching, even as they seek to advance larger ideals".

It is also well-researched how traditional professional development strategies, where teachers are passive receivers of information, do not work very well. Programs initiated top-down, giving teachers no chance for complex, real-world, and relatable education is destined to be unsuccessful. Little (1993) studied how "the dominant training-and-coaching model—focused on expanding an individual repertoire of well-defined classroom practice" does not really answer recent teaching goals and challenges.

Today, in the digital world, creating and being a member of professional networks and other communities is easier than ever. "Connectivism: a learning theory for the digital age" was developed by George Siemens in 2004. He describes blogging as a type of learning from the

community. Bloggers produce the content, from a very personal perspective, and other bloggers, interested in the same field of interest - write and consume each other's content.

> The starting point of connectivism is the individual. Personal knowledge is comprised of a network, which feeds into organizations and institutions, which in turn feed back into the network, and then continue to provide learning to individual. This cycle of knowledge development (personal to network to organization) allows learners to remain current in their field through the connections they have formed.

One of the focuses of this thesis is to find out how peer education and networking affect teachers' professional development. What drives teachers to join groups and learn from each other? Literature repeatedly underlines the positive aspects of peer education in various fields.

In a study by Duncan-Howell (2010), 86,7% of teachers, who were members of a professional online community considered the community as a meaningful part of their professional development. Community members mostly seek ideas and examples to solve their personal, immediate problems in their teaching practice. Tour (2017) observed teachers who self-initiated professional learning through their personal learning networks. Participant teachers used various digital tools for their professional development. They use Twitter, to communicate with peer teachers, to cooperate, collaborate, socialize, and to reflect. They describe this form of learning as valuable.

There is no doubt that learning can happen online. Unlimited resources are already available for consumption without having to get out of the comfort of our homes. And the internet has become more or less accessible to the whole world, making it easier for people to communicate. The possible barriers of personal, face-to-face interactions are gone, people can communicate without showing their faces or even revealing their true identity. Among other types of social interaction, users of social media turn to each other for education. Peer learning sometimes referred to as peer-assisted learning, is long studied as an effective way of education for students and for professional adults as well.

Research by Jackson and Bruegmann (2009) concluded that students experience larger achievement gains if their teachers engage in peer learning. In one of the recent research published on this topic is by Menezes and Premnath (2016), peer-lead teaching is evaluated as "[at] an appropriate level of difficulty and delivered in a less threatening environment than other methods of teaching" by the participants of the case study. Today various institutions and organizations promote peer learning and peer production.

I will conclude this part with the most recent and perfect example of how quickly successful peer learning can be in today's world. When schools started closing in February 2020 because of the coronavirus outbreak, one 16-year-old boy started using the social media platform

TikTok, popular in his age group, to teach algebra, geometry, and chemistry (CBS New York, 2020). He quickly gained 650 000 followers, received more than 5 million likes, and numerous positive feedback from teenagers around the world. I think that TikTok is Siemens's blogging (2004), today.

Finally, I believe, the educators who want to teach a certain age group, should try to step in their digital reality, to better understand their students, or more importantly, to adapt their teaching environment to their needs and language. Teachers turning to Facebook is just one step closer.

Participation divide and other limitations

As mentioned above, it is logistically easier to observe people online, but it is much harder to understand and feel the whole communication. Body language and facial expressions are not visible, oculesic, haptic, and proxemic feedback is absent, the tone of the voice is not heard. According to Albert Mehrabian's (1981) 7%–38%–55% Rule, only 7% is communicated by the words, 38% - by the tone of the voice and 55% - by body language. Although some argue about the distribution of the percentages, most scientists agree that body language plays a big role in communication. Thus, although I, as an observer, am familiar with the social media environment and can guess the attitude of the communicator, I can not be as confident as I would be in case of real-life communication.

Even though the other page administrators and I examine every user that requests to join the group, there could still be bots or people who are not what their user profile claims. This means that I cannot prove that the study is done only with real and identified people.

Although 63% of Georgians use Facebook (World Population Review, 2020), I cannot assume that teachers are well-represented in the Facebook groups observed for this study. For many teachers, there are problems with the internet connection or owning a device for regular interactions on the platform and of course, lack of technical knowledge to even use the platform. Such teachers are simply absent from this study. In fact, there was a study done by Blank and Lutz (2017) about using social media data for research and concluded that none of the social media platforms are representative of the general population and that "Social media data cannot be used to generalize to any population other than themselves".

Except for the lack of access or technical skills, there are other layers that also create the participation divide. Although Facebook is used by more women than men, which is also true for the page "Online Education in Georgia" (more on the details will follow later), according to Hargittai and Jennrich (2016):

Women, members of underrepresented racial and ethnic groups, and those of lower socioeconomic status tend to contribute to online conversations at lower levels. Such unequal participation then results in the underrepresentation of certain perspectives on the many user-generated content platforms that hundreds of millions of people peruse on a daily basis.

Except for gender, race, ethnicity, and socioeconomic status, the level of education also plays a role in producing the content online (Schradie, 2011). Although all teachers in Georgia have at least a college degree, their level of education still differs and may contribute to the participation divide. Moreover, different education levels among parents and other group members also influence the whole group dynamics.

With the digital interaction, different biases come into play, such as the algorithm bias. For example, the Facebook news feed is different for everybody. Each user sees the posts that, according to the Facebook algorithm, are important and interesting for them. Taking this into consideration, it's possible that highly skilled teachers are not very involved in this particular Facebook group, because its posts do not appear often on their news feed.

Taking all the above limitations into consideration, the results of this study should be taken cautiously and cannot be generalized to the whole teacher population.

Methods

The Facebook group observed in this thesis, "Online Education in Georgia", was created in March 2020, at the same time when this research started. Because the group had been newly created and people had just started joining and having conversations, participant observation was the rational choice for this ethnographic study. There was no special focus or patterns in the beginning, everyone was trying to make sense of what was going on because of the pandemic and how to continue teaching and learning. Participant observation allowed me to take in all the details, observe the joining users, their conversations, topics, demographics, and everything else at the same time.

Having a previous teaching experience, being a mother of school-age children, and a student of a blended learning program, allowed me to smoothly interact and understand teachers' parents' and students' points of view. My interactions were contextual and my participant observation became an "observant participation" (Moeran, 2007). I became a member of the group just like any other member, by sending the request and being approved. But one of the admins of the group played the gatekeeper role for me: she allowed me to become an administrator and collect the data that Facebook provides.

Population

There are more than 5600 members in the group (June 30, 2020). According to the data provided by Facebook (Figure 2), 88.7% of the members are women. Among them, the largest age group is 35-44 (28.4%), followed by 25-34 (25.2%). The large majority of the members, around 3900 users, are located in Tbilisi, the capital of Georgia. The rest are distributed throughout different cities, small towns, and villages. Around 120 members are located outside of Georgia, like myself.
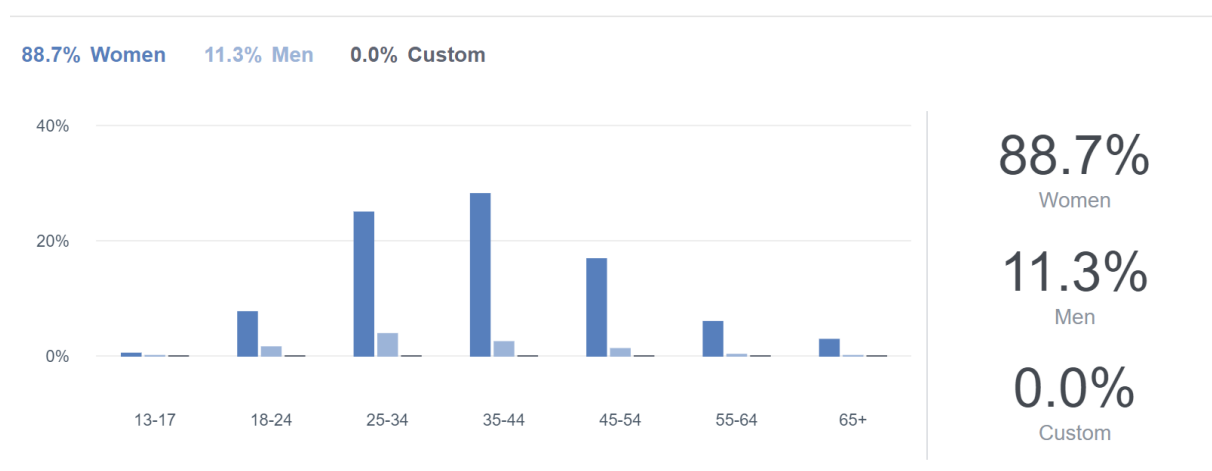
88.7% Women   11.3% Men   0.0% Custom

Figure 2. Age and gender distribution in the group. The screenshot is taken from Facebook group admins panel of "Online Education in Georgia"

The main audience includes teachers, school and other educational institutions' administrative personnel, students in higher education, policymakers and other representatives of the ministry of education, experts and interested parties in the field of education, parents, nonprofit organizations, working in the field of education, journalists, training centers, and other private companies.

To become a member, a Facebook user has to answer 2 questions: what is their role (e.g. teacher, parent) and why they want to become a member. They also have to agree to the membership rules about respectful behavior and not to use the group for monetary gain (for example by advertising a product/service). Membership requests are individually considered by the page administrators. Underage users are not approved but because it's a virtual world, there is a chance that very well-maintained fake profiles managed to join the group without truly representing who the user really is.

I analyzed 672 consecutive member requests in the period of March 14-17, to find out more about the distribution of the roles. 245 users answered the membership questions and I was able to profile the other 256 by examining their Facebook pages. In total, out of 501 members, 363 are assumed to be teachers (some of them are parents as well), 29 - students, 88 - parents, and 21 - various, including university lecturers, journalists, and others. For this purpose, the teachers' category includes school teachers, university lecturers, and trainers.

According to the sample size calculator by Surveymonkey[6], the above results can be generalized for the entire population in the Facebook group of ~6500 with more than 95% confidence level. Figure 3 below displays that teachers create the majority of the group members.
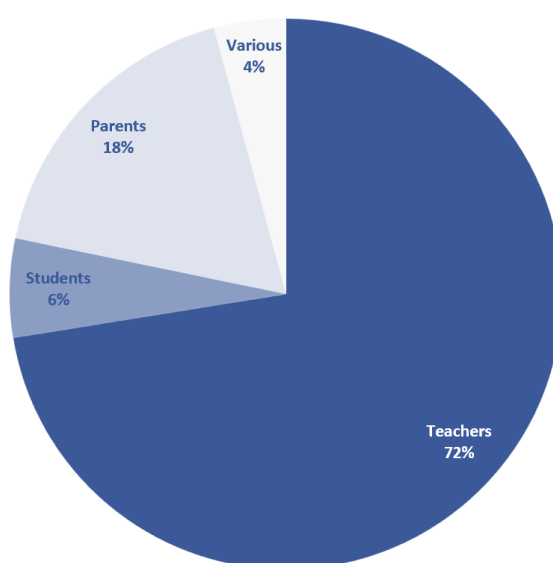

Figure 3. Distribution of roles in the group in regards to online teaching

To triangulate the data, I created a poll on the Facebook page on June 25, asking members about their role regarding online learning. By 1 July, 196 members had taken part in the poll. According to their answers, 151 (77%) of them were teachers, 29 (14.8%) - parents, 4 (2.04%) - students and 9 (4.59%) - various. 21 participants also reported a second role (i.e. teacher and parent) but only the first one was counted in the above calculations.

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[6] https://www.surveymonkey.com/mp/sample-size-calculator/

Data collection

When users sign up for Facebook, they agree to the terms of service[7], which among other things, explains what kind of data the platform uses from the members in exchange for the services. Some of that user data are also accessible for the Facebook group administrators. These include the number of posts, comments, reactions, and active members each day, popular days and popular times, number of views of each post, list of posts, list of members, age, gender and location of members, top contributors, admin activities. Quantitative data, such as age, gender, and location of members provided by Facebook, poll results, member requests, and their roles regarding online learning, number of posts, reactions, and comments, is used and analyzed in this research.

The following qualitative data were also collected: reasons for joining the group, contents of the posts and comments, reactions to the posts, and individual semi-structured interviews with the teacher members. The content from the Facebook group is anonymized at the data collection stage and no names or any other identifiable information is stored for further analysis. Given that this Facebook group is about education in general and not about rather sensitive topics where people share personal stories, the data analysis has not and will not cause any harm to the participants, in fact, the findings may even contribute to the aim - finding good practices and ideas for education.

The group observation took place for 3,5 months, starting from the period of its creation, 10 March to 30 June. Except for the demographics data provided by Facebook, I used other external application, Sociograph[8], to export the list of posts and the number of reactions and comments. The application does not export the names of the users who made the posts. I also manually searched for the top 32 posts with the most number of comments and copied the content from the comments into the database for further analysis. While analyzing the posts, I deleted any personal information, if it was part of the content.

I analyze and discuss the most commented and most reacted to posts. I also took notes of general group dynamics and special events happening in the group, which I discuss below.

To understand more about the participant teachers themselves and try to answer the third research question, I interviewed two members of the Facebook group who are teachers. One was chosen for the interview as the most active teacher participant in the Facebook group during June 2020 (data provided by Facebook). After the first interview, I decided to choose the second

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[7] https://www.facebook.com/terms.php

[8] Analytics application for Facebook groups and pages: https://sociograph.io/

respondent, somebody I had previously known, who had different characteristics (an inactive member of the group, older than the first respondent, longer teaching experience, less technologically-savvy). The interviews took place on 12 and 15 July 2020 and lasted around 30-40 minutes each. Both interviews were conducted using the Facebook Messenger video call. "Videoconferencing, allows for an interview that closely resembles the natural back-and-forth of face-to-face communication, including verbal and nonverbal signals" (Salmons, 2012). Before starting the interview process, both I and the respondents made sure that the video quality was clear and we could see and hear each other well. Only the audio was recorded with the consent of the teachers.

The interviews were semi-structured, which allowed the respondents to talk freely and express their opinions, ideas, and attitudes. I had the possibility to ask additional or clarifying questions as well.

The following guiding questions were asked:

1. Tell me about your teaching experience, where do you teach and which subjects? How long have you been teaching?
2. How did your school respond to the pandemic and school closures?
3. How was your personal experience after school closure? Were you able to deliver distance lessons? If yes - what type? If no - what was the reason?
4. What did you learn that you didn't know before the pandemic?
5. Why did you join the Facebook group: Online Education in Georgia?
6. What was your experience in the group?
7. Do you think you learned something new from the other teachers in the group? Do you feel like you taught the others something valuable?
8. Do you want to add anything?

Data Analysis

The first stage of the data analysis was to determine the population, which is described above, under the Population subchapter. The percentage of the demographics is provided by Facebook itself.

In the second stage, group activity was analyzed. The data on numbers of posts each day, number of comments and reactions, popular days, times, and active users, were provided by Facebook as a spreadsheet which made it possible to perform operations.

For the content analysis, I exported the list of posts using Sociograph. 1102 rows were exported from the total number of 1211 posts. After formatting it to start the analysis, I left the following columns to work with: type (status, video, link...), reactions (number of reactions of each post), comments (number of comments under each post), date (of when the posts were published). I added two more columns: category 1 (main category) and category 2 (secondary category) and sorted each post under the following categories, listed by alphabetical order:

- **Article/blog/opinion** - includes links to external articles, blogs, and Facebook posts about the process of transforming the school, about personal opinion, policy recommendation. It excludes content where the main topic is about the introduction of tools/instruments, educational resources, and news websites.

- **Courses/webinars/trainings** - includes Facebook events about upcoming webinars and information about different courses and trainings.

- **Emotional** - posts of members sharing about their feelings or the troubles they encounter in their teaching or learning.

- **Group** - group administration and organizational posts.

- **Local news** - sharing information about new development and policy in the field of education.

- **Practices** - posts by teachers sharing about their own practices and teaching experience.

- **Psychology** - posts related to psychological aspects of teaching and learning during the pandemic, tips, and advice for teachers and parents.

- **Questions about practices** - teaching practices and experiences.

- **Questions about tools** - to use for learning and teaching online.

- **Questions about resources** - learning and teaching materials.

- **Research** - surveys, questionnaires, and similar posts for research purposes.

- **Resources** - posts including teaching materials, created by member teachers, or shared from other sources.

- **Tools** - posts aimed to introduce or discuss various digital tools for learning and teaching and their tutorials.

- **Various** - posts that are not included in any of the other categories. Please note that posts that are not related to education-related issues during the pandemic are moderated and deleted by the group administrators. So in this category, only group-related posts are included.

The above categories were developed using the inductive approach because there is not enough knowledge about the phenomenon and the aim is to learn more (Elo & Kyngas, 2007).

"Particular instances are observed and then combined into a larger whole or general statement" (Chinn & Kramer, 1999).

In total I categorized 840 posts out of the exported 1102, the rest 262 posts were exported either as a blank row or did not have indications to allow for categorization (e.g. only emojis with a possible link that was not exported). The process of assigning categories to the posts may be subjective but it is not exactly a limitation. The advantage of participant observation is that the observer is part of the community and experiences everything together with them. An external person might have categorized the posts differently and more objectively but it would not necessarily be more accurate, because they would be missing the whole context and emotions behind it. Participant observation allowed me to gain an "intuitive understanding of the meaning of [my] data" (Guest, Namey, & Mitchell, 2013).

Except for the categories, I looked into which words were used the most frequently. I analyzed all of the exported posts and 1971 comments from the most commented 32 posts (according to the data from Facebook, the total number of comments are 7185, more details follow in the results section). For word frequencies, I used the word count analysis tool by Textfixer[9]. The result gave a total word count of 71385 words. It's worth noting that some post types, such as pictures, videos and links may or may not contain text at all. I removed general common words, such as "and", "or", "this", etc., also the links and emojis, which were counted as words as well. After that I merged synonymous words together, (e.g. "child" and "kid") and the same words but in different forms (e.g. "student", "students", "student's") and words that were used both in Georgian and in English (e.g. names). Additionally, I was interested to see which digital tools were discussed most often and I created a separate list for that. As a result, I created a list of 20 most commonly used words and the list of 20 most commonly discussed digital tools. I used this manual method, in Excel spreadsheets, because the posts are in Georgian language and so far, no tool can automatically analyze the textual content.

Qualitative data such as content from the most popular posts, comments, observation notes, and interviews are also discussed and analyzed from the participant observation point of view.

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[9] https://www.textfixer.com/tools/online-word-counter.php

Results

Reasons for joining the group

Out of 1400 collected responses when requesting membership, 456 of those wishing to join the group responded why they wanted to do so. Although all 456 responses are unique, many of them repeat the same content. Most members joined the group because they wanted to simply get informed about the topic and news around online education in Georgia. The responses included: "to learn more about teaching online", "learn about distance education", "I am interested in new trends in online teaching".

Teachers typically answered that they wanted to learn more in order to use the new skills in their classrooms: "help my students", "learn more about the resources to be able to effectively conduct online teaching", "I want to learn how to teach", "to involve my students with disabilities into the online learning process", "I'm ready for the challenge".

Some wanted to not only receive but also share information and try to teach others: "my aim is to learn about the methods of distance teaching, use it for my own practice and support my colleagues", "I want to give and receive new information", "share my knowledge", "I want to offer distance consultations to my colleagues", "I want to help [probably mostly older] teachers use Zoom".

What exactly the teachers want to learn varies: "Create interesting tasks", "I hope to learn how to prepare for teaching, how to create new resources", "I am interested in which methods and platforms are used for teaching online", "I want to learn more on how to use Teams, I think I will get the answers in this group", "maybe I can find some interesting tests".

Parents responses were as follows: "so that my child gets education", "my child is starting school this year, I want to learn more about the teaching process, style and methods", "find interesting resources for my child", "I am a parent of a 4th grader and I'm ready to support the school so that they transfer their teaching online, but the school isn't showing the initiative which worries me", "because children are bored", "so that my child is not behind the program".

Journalists were interested in finding content to share with their audiences: "Find news and share them", "I am interested because of my profession". A psychologist joined the group to "[...] offer distance consultations for interested group members". Various responses included: "Our organization plans to support the Georgian government in this field, I am interested in the possibilities", "I don't want it, they are forcing me", "Using the Georgian experience to design an online teaching system for Australian schools", "I want to know what is happening, what is

planned and then I will decide on my role", "I want to get in touch with interesting people in this group".

Overall group activity

The Facebook group "Online Education in Georgia" was created on March 10. From its creation until the end of the month, 4854 members joined the group. In April - 557, in May - 156 and in June - 41 new members were added. In total, by June 31 the group consisted of 5608 members.

In March, 580 posts were published in the group, which resulted in 4989 comments and 20112 reactions (like, love, etc.). On average, 2979 members were active every day, which means that they read at least one post in the group. Below is the table (1) containing the data of the other months for easy comparison.

Table 1. Overall group activity

Month	# of posts	# of comments	# of reactions	Average # of daily active members
March (10-31)	580	4989	20112	2979
April	327	1456	5808	2104
May	191	473	2524	1598
June	113	267	1600	1359

On average, each post received 6 comments and 25 reactions. But over time the ratio of comments and reactions to posts decreased. Moreover, the last day of school in Georgia was on 20 May, so after that, the group became less relevant for the teachers. The most popular day of the week for group activities (number of posts, comments, etc.) was Wednesday and the least popular - Sunday. The most popular time was noon on Friday, followed by 17:00 on Wednesday. The graphs provided by Facebook are included in Appendix 2.

Content analysis

Post types and categories

Various types of content can be published on Facebook by its users. The most common types include statuses, links, photos, videos, and events. A status is simply a text, without including a picture or anything else. Links are content from other websites that are shared on Facebook. A link usually includes a thumbnail and a short summary of its content and by clicking on it, a new window is opened where the content is located. An event can be created for a webinar, an online or face-to-face discussion, a conference, etc., where the announcement about the event, its times, and a description is published. Users can join the event on Facebook and participate in the discussion.

Out of 1114 posts from March 10 to June 31, that Sociograph was able to export, there were 356 links, 112 photos, 493 statuses, 150 videos, and 3 events.

I categorized 95 (out of 1099) posts as article/blog/opinion. The post which received the biggest amount of comments and reactions was about navigating what is distance teaching, clarifications, and opinions:

> I think some didn't understand what exactly distance teaching is. They think it's simply conducting a 45-minute long online lesson. [...] 1. Distance teaching is not only about using Teams, Zoom, Skype, Google Classroom, or similar platforms. [...] It is about using many platforms, technologies, including electronic libraries, TV lessons, everything that's available for us. 2. What is your aim? Give knowledge to the students, explain new material, strengthen what was already learned, evaluate. You can use any technology possible to fulfill these from a distance. [...] 7. Let's not aim for perfection. Do what we can. Each attempt is appreciated.

Here is an excerpt from another similar post:

> I believe we have to admit that we cannot maintain the same quality in education. [...] We should take a look at this distance/online/asynchronous teaching, as another way to survive this time and plan what to do with those students who are not able to be fully involved. [...] Summer sessions can be added in schools as needed. Every school should have a plan on how to monitor students' involvement, how to evaluate…

Some posts are simply shared links from other websites and personal blogs.

89 posts were categorized as courses/webinars/trainings. Here are examples of the most popular ones:

> Hello. First of all, I am very glad to be able to share my experience. I have been in this field for several years and each of my scientific research and trainings have been about digital technologies. I am now offering [...] to share my experience. You can sign up here if you're interested. Free of charge, of course. [...] Update: registrations are no longer accepted since the limit was reached in the first 2 hours and the sign-up form is closed.

And another one:

> Our common project, "Education Research Association" - is a community of people interested in research in education. [...] This is our first activity. Register as a participant or a presenter…

40 posts were categorized as emotional:

> Wouldn't it be great if children read straight from the books to the teachers who are giving texts to learn by heart? Maybe that can end such practice in some schools. P.S. Children, it's important to put your books in a good place.

> #thankteachers You may know that May 4-8 is teacher appreciation week. [...] Parents are able to see the role of the teacher now, when they have to fulfill some of their roles. [...] If you like the idea, you can thank them too. You can think of many ideas (electronic greeting cards, virtual flowers) to support and thank the teachers.

Group administration and organizational posts were 45:

> Hello, there is a lot of useful information in this precious group but sometimes I cannot find what I'm looking for. For example, the video was posted yesterday about how to set up an online lesson. Maybe we can gather such resources separately.

11 posts were categorized as local news and updates:

> [link] So that everyone has the information on what the Ministry of Education is doing and so we don't overlay the activities.

83 posts were about sharing practices, both personal and from others internationally and locally:

> [photo] This is how they teach at Harvard.

> I conducted an online lecture today with 100 students attending. It wasn't bad for the first lecture. There were some awkward moments: 1. It would be good to have an assistant in the room, who can turn the light on or open the windows… 2. It's hard to manage a big group. 3. It's hard to read the questions in the chatbox while talking and delivering a lecture. 4. It's hard to talk in an empty room… Sometimes you think you're talking to yourself. 5. It's hard when there is no one in the auditorium when the lecturer is accustomed to looking in the eyes of the students. 6. It's additional stress when the lecture is being recorded. I will share more experiences again.

11 posts were related to psychological aspects of distance education:

> [link] This webpage is for school psychologists. There is a list of advice on how to help students while the schools are closed due to the coronavirus

148 posts were questions about practices, resources, or tools. The majority of questions (105) were about the tools.

> Can Facebook Messenger handle a video call with 12 students at a time?

> I need help with Microsoft Teams by someone who has used it for their lessons. I have a couple of questions. Thank you in advance

What do you want to know about teaching online with Zoom? I will try to help you with everything.

15 posts were related to research - questionnaires, contact requests, interview invitations, etc.

Teaching resources were shared 117 times, mostly from personal practice, but also links from educational platforms such as KhanAcademy and TED-Ed.

I am sharing my lesson with you: "The structure of the earth". The lesson is for 9th graders. Why this subject? Because there is not enough information in their textbooks. Because we cannot conduct lab practices right now, I decided to include the lab/observation in the lesson, which the students can do at their homes.

As promised, I am sharing the plan and resources of my lecture today - globalization of happiness. If you like the theme, write to me and I'll send you the ready lecture and the documentation, PowerPoint presentation, group activities, forum questions, etc. [...] 1. I started the lecture with the music [...] 2. Using a PowerPoint presentation, I introduced the subject and linked it to the previous material. 3. I used the interactive platform Mentimeter [...]. 8. I summed up the lecture, gave homework, and said goodbye with the same music in the background. The length of the lecture: 2.5 hours.

Digital tools were introduced or discussed 128 times.

Hello, and I hope you're all fine! I would like to present a completely free service to create tests [...]. We used to teach democracy courses there but now we built up the platform to create tests. My friends and I have already tested and it works without any problems. [...] We tried to make it simple to interact and upload the tests [...]. We cleared the website to make more space for your tests. [...] By the end of the day we will post a video instruction on how to use the platform!

[link] Detailed answers on many questions about using Teams for distance teaching. We also discuss the additional aspects of using technology for teaching.

If you don't know yet, Zoom discontinued the 40-minute limit in the free subscription. I have been delivering lectures for 2 weeks, 30-80 students attend in different groups and Zoom would switch off until yesterday. Yesterday I was notified that there was no more limit and I was able to continuously use it for three hours. It happened automatically, I didn't do anything.

58 posts were sorted under the category "various".

Hello. I'm looking for a blogger who writes about education. Do you have any recommendations? [...]

Maybe this question was already posted. Where can I buy a writing device that connects to the computer?

I was not able to categorize 259 posts, because they didn't contain enough information (e.g. video-type post with no description and no link). Figure 4 displays the chart of the above-mentioned categories.
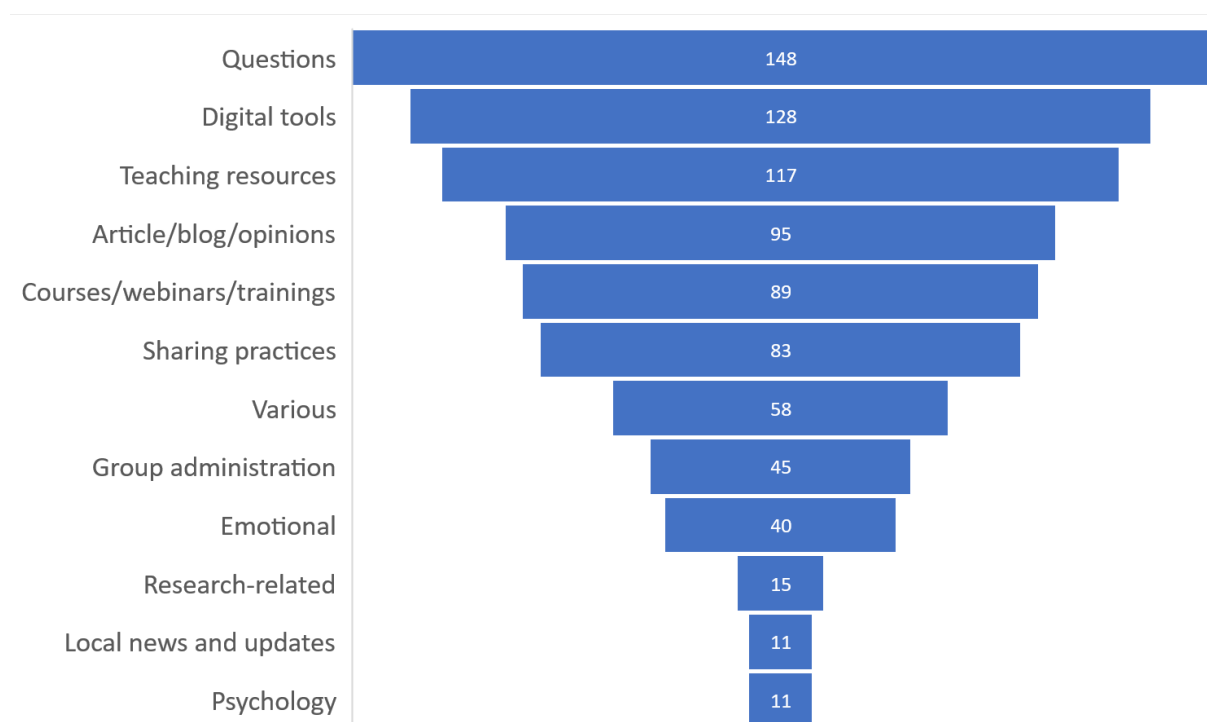
Category	Value
Questions	148
Digital tools	128
Teaching resources	117
Article/blog/opinions	95
Courses/webinars/trainings	89
Sharing practices	83
Various	58
Group administration	45
Emotional	40
Research-related	15
Local news and updates	11
Psychology	11

Figure 4. Frequency of all post categories in the Facebook group

To gain a deeper understanding, I looked at how the 6 largest categories: "questions", "digital tools", "teaching resources", "article/blog/opinions", "courses/webinars/trainings" and "sharing practices" were distributed over the months. As discussed previously, over time the group activity slowed down and the number of new posts was decreased. Each category followed this trend except for one. The category "courses/webinars/trainings" didn't show the continual decrease. Figure 5 below shows a 100% stacked column chart where the numbers in colors display the number of posts in the particular month. The green columns for "courses/ webinars/trainings" show that this category became the most frequent one in June, while in March it was the least frequent one, compared to the other 5 then larger categories.

Most popular posts and other discussions

The most commented post (with 135 comments) which Sociograph was able to export was a group organizational post, calling for volunteers to create working groups:

> Dear friends, in order to not overlap our work, I believe we need to organize more in this group. Maybe specific people can organize special initiatives and we can create smaller working groups. One person can be a part of more than one working group. For now, these topics are relevant: Group #1: a manual for parents, teachers, and students (netiquette, cyber-security [...]. Group #2: internet accessibility (and preparing relevant petitions) [...]. Group #3: organizing teacher volunteers to create teaching resources. Group #4: Issues regarding technology. Group

#5: Psychological issues (behavioral problems, stress management, etc.). Group #6: Trainings, webinars, and video instructions. Group #7: Pedagogical and methodological consultations. Group #8: Civic education [...]. Group members, please comment on who can contribute and in which group. And let me know if I missed anything. Thank you.
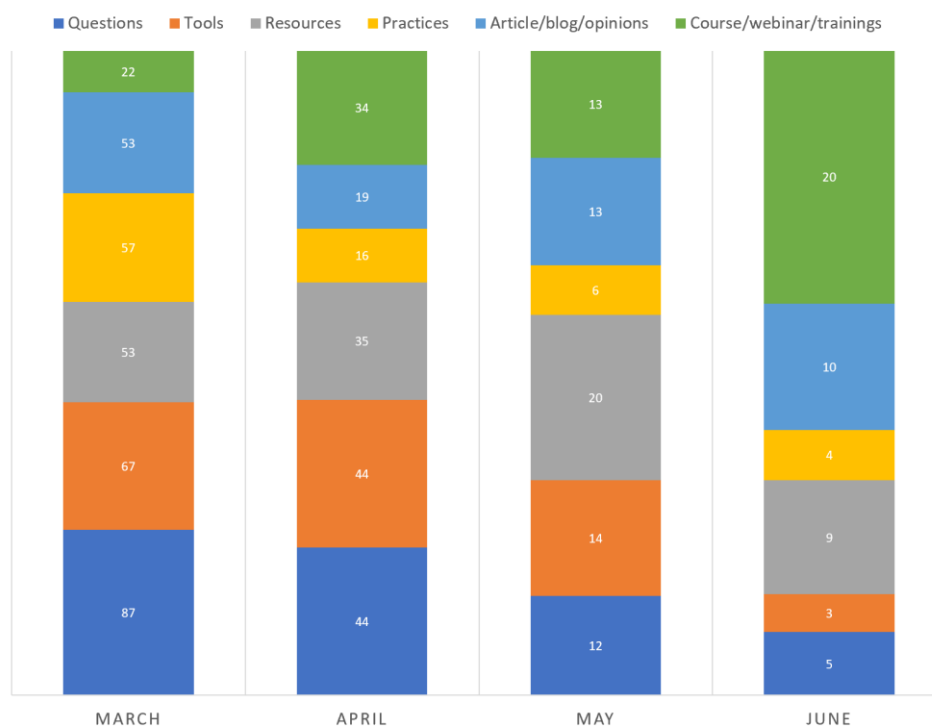

Figure 5. Change in post category frequencies over a period of 4 months

Originally the post included 5 group suggestions but was later edited, as the group members proposed more ideas. Logically, under the post, the group members started signing up to volunteer and started the discussions about their groups. As a result, 8 groups were created with 94 members in all of them. Some are counted more than once since they were members of more than one group. 3 Facebook groups were created by the volunteers themselves and the other 5 - by myself, as a result of the discussion with the other two group administrators. Some groups started functioning and discussing for a bit, some - did not even start discussions, and very soon, all of the groups became inactive. In my observation, one of the reasons behind it is that we, the main group administrators were not managing the sub-sub-groups and no active leaders emerged who would take initiatives and administer the group and their members, initiate leadership, and new activities.

The second most commented post (130 comments) was a suggestion for the Ministry of Education to create TV lessons:

> What do you think about the idea that the Ministry creates centralized lessons in each school subject for each class and broadcasts them on a public TV? The resources can also be uploaded on the Ministry's website. This can partially help with the accessibility problem because not every student and teacher has internet/computer and technical skills. China (but not Hong Kong) did something similar. Those schools (probably mostly private), which can manage the synchronous or asynchronous online teaching, should have the possibility to do so.

The discussion under this post was long and very informative. Most of the group members who commented liked the idea and wrote additional inputs on how it can be organized: create a special TV channel, send handouts to the teachers, have technical support available for the teachers... Many agreed that although it wouldn't solve the problem of accessibility altogether, it would definitely be helpful to some extent. Some completely opposed the idea on various grounds: centralized approach would go against bottom-up initiatives, the program that would be broadcasted, would not match each classroom needs, teachers would not like the idea of their students listening to some other teacher, or that teachers wouldn't be able to integrate the TV lessons into their teaching.

Although the Ministry didn't respond to this post, TV school did really appear on a public TV channel soon after that.

The third most discussed post (111 comments) was from a member, urging the other group members to not advise teachers to use any other tools except for Teams, which was recommended by the Ministry.

> If a public school asks you how to develop their online teaching, I ask you to only advise them to use Teams. It will be even better if you forward them to the administration or resource center. [...] Not Messenger, not Whatsapp or it's cousin Viber [...]. If necessary, it's also possible to use Edmodo [...].

The post had an authoritative tone, as if the author was involved with the recommendations from the Ministry, at least emotionally. The post caused different reactions. Some users did not support the idea that the schools should not have a choice to use the tool they want, and that such limitations from the Ministry would only hinder the developments and innovations. Some teachers asked technical questions, such as how to integrate Zoom in Teams. This post was written in March, but in May, the same member published a link from a personal blog, stating that schools should use Google Meets, with a long list of arguments why this digital tool was the best and most suitable for schools. Under that list, there is a paragraph describing why Google Meets is better than Microsoft Teams. The Ministry's recommendation for schools to use Teams had not changed.

The post with the most reactions (316 reactions) was a welcome greeting to group members who had joined the group:

> Welcome and thank you for expressing your interest with this group! In this group, we will share practical advice and resources in Georgian and in English, which can help better understand online teaching, and in general, specifics of teaching in electronic format. You can also ask questions and get answers. [...]

And the next most reacted post was a picture of Harvard's virtual classroom HBX live: a lecturer standing in a room with a semi-circular video wall, displaying many students. The post says: "This is how they teach at Harvard". Although the virtual classroom is not new and Harvard actually created it several years ago, the picture was very impressive and very relevant to today's struggles in the whole educational community. Besides the 274 reactions to the post, there were comments from users wishing to teach at Harvard, or some taking the challenge: "I'll deliver a better lecture on Monday with Zoom". There was a discussion that even if such technology became available, many students wouldn't be able to participate in live discussions because of a lack of access to the internet, poor living conditions, etc. This discussion reminds me of the fate of the aforementioned "Future Classroom" in Akhaltsikhe, where the school has this advanced technology but isn't able or willing to use it.

I would like to bring out an example of teachers consulting with each other. One member asked a technical question: "I have 12 students in a group and can the Facebook Messenger handle 12 kids?". The post received 43 comments from other teachers. Except for the answer that Facebook Messenger could handle a video chat with a maximum of 8 people, there were suggestions to use other tools, such as Zoom, Teams, Viber, Google Meet. This was followed by discussions on what were the strengths and limitations of each proposed tool and how to deliver a lesson avoiding problems because of the limitations (e.g. divide the class into two groups, use 40 minutes for a free session in Zoom and then sign in again, etc). Some shared their experiences using the tools mentioned above. There was also a comment that children shouldn't be using Facebook since it's not safe for them.

These discussions gave me the impression that the group members really care about helping each other and take their time to share their knowledge and experience with each other. Facebook, as a social media platform is built in such a way, to encourage its members to share in such way. A study by Morris, Teevan, and Panovich in 2010 looked at why people asked and answered on social networking sites (SNS) such as Facebook and Twitter. According to their results, "The responses gathered via a social network appear to be very valuable". People choose to ask their networks on social media platforms rather than searching on the web, "I trust my friends more than I trust strangers", "people that I know are reputable.", "[a] search engine can provide data but not an opinion" (Morris, Teevan, & Panovich, 2010).

Mostly, the group members cared for the common good and contributed constructively, but there were also negative experiences. A couple of discussions gave the impression that the members tried to prove their superiority over others, or just simply talk down to their colleagues. An unpleasant incident also happened: group members worked weeks to create a common database of digital tools with links, descriptions, tutorials, etc. There was a shared Google Sheets file where everybody could add to the list of the digital tools and offer support if needed. Quite a large database was created, but unfortunately, one day somebody tried to delete the content in the file. Luckily, the document was restored and the group admins decided to make it only readable for the public, but nobody would be able to add or change anything else anymore. On the positive side, one of the members volunteered and created a mobile app where people can browse through the database in a nicer environment than a simple spreadsheet.

Frequent words

Analyzing the most frequently used words in the group posts didn't display anything unusual or surprising. *School* was the most often used word (excluding common general words like and, or, etc. that have no value here), followed by *if* and *teach*. Below is the list of 20 most frequently used words in the group, translated in English. The number in the bracket indicates the frequency.

- School (736)
- If (650)
- Teach (633)
- Teacher (591)
- Pupils (535)
- Online (526)
- How (516)
- Possible (427)
- Group (424)
- Lessons (357)
- Children (298)
- Education (261)
- Distance (241)
- Video (234)
- Problem (222)
- Thanks (203)
- Good (177)
- Public (157)
- Experience (151)
- Private (150)

One can feel the uncertainty by looking at the frequent words, which in my observation was a dominant emotion in the group. As if the words even characterize main discussions in the

group: *If school teachers* have to *teach* the *pupils online*, *how* can they make it *possible*? Everyone in the group was trying to figure out what was going on and how to handle the situation.

There were also quite a few discussions about *public* and *private* schools. Some members were focusing on their unique situations, inequalities, and differences in how they can handle online teaching.

Zoom was the digital tool that was mentioned most frequently, followed by Teams. Microsoft Teams was officially recommended for schools to use. The Ministry of Education created accounts for every teacher and student and sent some guidelines to schools on how to sign up and conduct the lessons. There was also some type of centralized support available, which made it easy for the schools to use Teams. Although the government only made a recommendation and allowed schools to use the tool of their choice, some teachers complained in the group that they didn't have a choice and that some school principals were very strict on only using Teams as recommended by the ministry. Zoom was usually the choice for universities, webinars on professional topics, and web meetings for adult education professionals. Below is a list of 20 most discussed digital tools.

- Zoom (170)
- Teams (162)
- Facebook (133)
- Google Classroom (40)
- Google Forms (32)
- Google Meet (20)
- Skype (18)
- Messenger (15)
- Moodle (13)
- Khan Academy (13)
- Google Docs (12)
- Edx (9)
- Viber (9)
- Padlet (8)
- Kahoot (8)
- Blogspot (8)
- Edmodo (8)
- Flipgrid (6)
- Lingwing (6)
- WhatsApp (5)

Some of the names could be overcounted since the Textfixer broke down the links into words. For example, *Facebook* could have been mentioned separately as a tool, but it could also be a part of the link some members shared. Although this can create some inaccuracies, in my observation, the list still appears quite representative of the actual discussions.

Interviews

The following two interviews aimed at gaining a deeper understanding of the members of the group and form a foundation for further research on peer learning in teachers' groups online. To protect their privacy, names below do not represent their real identities. The interviews were conducted in Georgian and the below quotations are my own translations. Below are the key points, quotes and my observation notes from the interviews.

Tamar

Tamar started teaching right after graduating from the university as a teacher for elementary level grades, first at a private school, currently at a public one in Tbilisi. She has been teaching Georgian language, Math, Arts, Sports, and other subjects for the past 7 years. At the time of the interview, she had 23 students in her class. In her free time, Tamar writes articles for well-known Georgian teachers' online and printed magazine.

Very soon after closing the schools in March 2020, the Ministry of Education of Georgia suggested that schools should move online using Teams as a tool to conduct the lessons. All public schools were expected to start online teaching from the 1 April. Tamar didn't wait for April to start testing and using Teams. At first, she learned to use the tool and then conducted test lessons with her students. "It was new to me as well as for my students. To get used to it before we started regular full-scale lessons from April, we had test lessons and learned how to use Teams" - said Tamar. Not everyone was able to be fully involved in online lessons. Because of various reasons, 6 students were not able to attend the lessons. Some were out of town and could not be reached, some didn't have computers or access to the internet. "At first we of course had problems, technical problems. Teams would freeze, probably because everyone was using it at the same time, but everything went into a normal pace very soon". She mentioned that except for technical issues, there were also some organizational problems, which she addressed by setting new rules: "just like we have rules in the classroom, I introduced new rules for behaving in online classes and soon we regulated the process very well". Tamar mentioned that she wasn't the only one who started the online lessons very quickly, as her colleagues in the same school started tinkering with the new tools as well before they had to deliver their first online lessons.

Apart from Teams, Tamar used a Facebook group to communicate with parents and other teachers on organizational matters more effectively, "because Teams was new for everyone and we were all very familiar with Facebook. When I wanted to deliver some information to the parents, I used a Facebook group, created especially for communication during the pandemic".

The conversation naturally continued about the new tools that she learned about in order to be an effective teacher.

Tamar finds it positive that this type of distance teaching enabled her to use digital resources that she couldn't before. "We don't always have the technical capabilities at school to show kids something using the projector on a screen and now it was very good. First of all, I started creating resources, especially for Georgian language and math, mostly in PowerPoint". She also used YouTube to search and present animation videos that were relevant to the topics she taught. She learned how to create videos in PowToons. "I used a lot of resources, it was good. I was sharing it frequently".

I asked whether she was sharing the resources which she created with the other teachers and her emotion was immediately lifted up and she started telling in a delighted voice: "Oh yes, I was so happy. I have a large number of resources because I keep everything that I have ever made in my teaching career. And whatever I had created in the past, tests, for example, I would share in the Facebook group and it turned out to be very helpful for the other teachers. I was then also sharing the new resources as I was creating them. And when I would learn about new tools myself, for example, using PowToon, I would record a video tutorial on how to use that tool. Then the teachers use it and sometimes create even better resources than me. It is so much fun." She is also referring to another Facebook group, created by teachers for teachers.

When asked about the group "Online Education in Georgia", Tamar said that a friend recommended it to her "because there were many smart people as its members". She likes that related news is shared in the group, "very necessary for the confusing times". According to Tamar, whenever there was a need, the members of the group came together to quickly address it. "People who I believe are very competent, would post statuses in the group, […] and for me, this group was one of the guides to online teaching, which helped me.".

Tamar said that the Facebook group where she actively shares and browses teaching resources is focused more on a teacher to teacher interaction, while the group "Online Education in Georgia" is useful for communicating with a broader audience.

I asked her about the opinion on a teacher to teacher learning/teaching and the trainings that Georgian teachers regularly receive. She said: "I think it's highly effective when teachers share their practices with each other because teachers know what exactly they need, they have practiced it, they have experience. [...] Trainings are also important and useful because we learn something new but I personally think that communication between teachers is more important. Trainings are usually very general because it has to reach a mass audience. Facebook groups, for example, have been current and very helpful for me and my colleagues".

Mariam

Mariam also graduated from her studies to become a teacher and started her career 39 years ago in a public school in a village, then transferred to a school for children with disabilities, and for the past 31 years, she's been teaching at a public school in her hometown. In her free time, she tutors high schoolers to help them pass the university entrance exams. She teaches Georgian language, literature, and grammar to currently 97 students.

Mariam thinks the most important quality of being a teacher is to love children and then everything is possible. She is very proud of her achievements over many years of her hard work. She is currently a *leading teacher* and aims to soon become a *mentor teacher*, the highest rank available in the Georgian school system.

When the schools were closed, Mariam's school started using Teams to conduct online lessons. She said: "the lessons went well, of course, it was not the same as in the classroom, but overall, they were okay. I explained new material, gave homework, gave feedback and we were able to learn how to navigate in Teams". There were problems too, some students could not go online, didn't have the technical means or for some other reason. Mariam was contacting them by phone and giving them homework to allow them to try to catch up with the class.

Just like Tamar, Mariam also used Facebook for day-to-day communication and organizational matters at her school. They have a group and regularly post information there. They even attempted to go on a "digital field trip", initiated by one of the students. For communication with parents, they have another Facebook group.

To make online lessons a bit more fun, Mariam offered her students to conduct an online drama performance based on a literature piece that they had learned about. They used Zoom, set up the appropriate backgrounds, got dressed up for it, and from the comfort of their home, recorded the performance. The video was then shared with other teachers and received praise. "There were technical problems during the show, the electricity went off for some students, some couldn't connect the microphones and so on, but since they didn't have to learn the text by heart, other kids were able to quickly take over their roles and everything went smoothly" - remembers Mariam. She says that this was a perfect example of learning by doing.

When asked about what she learned because of the new type of teaching, except for Teams, Mariam says she learned how to create video resources and how to record audio. She also learned how to create quizzes and digitally evaluate students' answers. She has been using learningapps.org before and continued to create and share the materials.

Mariam couldn't exactly remember the group "Online Education in Georgia", she said she is a member of many teachers' groups, so we couldn't have a conversation about her experience in this group. She talked about the group which she found the most useful: the group by her own colleagues from the same school. She said they often share their practices and experiences, ask and answer questions, or just share new information. Mariam finds such interaction with her colleagues very useful. To share and learn new practices from other teachers, Mariam thinks regular teachers' conferences are the best ways. She has presented at many of them and learned from others as well.

Except for conferences, Mariam also publishes her resources online. She has up to 60 video resources on her YouTube channel which is available for anyone interested. She also shares her Learningapps resources with the other teachers. Although she doesn't usually use others' digital resources, she knows they are available and where to find them.

Discussion

This was exploratory research with no clear hypotheses to support or oppose. Therefore, here I will sum up the results and my observation notes in this chapter.

The group was created at the right time when the confusion about the future of education was in everyone's mind and people needed a space to gather and talk. There have been much larger teachers' groups on Facebook, but this group was unique because it gathered not only teachers but also other stakeholders in education as well, such as parents, students, policymakers, researchers, and others. Although it is important to note that the group is still mainly a teachers' group since more than 72-77% of its members are teachers. Another key characteristic is that the group was created by someone who is respected in the community and whose opinions are valued. The fact that the posts with the most comments and the most reactions, and many other posts with the biggest engagement, were from Nutsa Kobakhidze, the founder of this Facebook group, testifies that. She is also an external expert since she doesn't work in Georgia and I believe this contributed to the trust. All of the above and possibly other reasons contributed to why the group grew so quickly and why some very good discussions about the topic of distance education, or more precisely, emergency remote teaching, during the pandemic originated there.

For a Facebook group to keep functioning, a person must constantly invest their time to administer and moderate the group, or else the group can get overwhelmed with unnecessary information, or just become inactive. The 8 subgroups were formed quickly and eagerly after

Nutsa initiated and organized their creation but they also quickly faded away. What can we imply from it? The same eager people from the group, gathered together in smaller groups, to make real changes, for the topics they care about. Did they need a leader who would bring up initiatives, manage the workload, manage people, give them tasks? Or maybe they lost their enthusiasm very quickly. Did they think they could not make any changes? Did they not get along with each other and didn't want to work together? Did they not think their work would be acknowledged and praised? Further inquiry is needed to answer these questions.

Below I try to answer the research questions based on the results and the observation.

RQ1: What are the characteristics of the observed Facebook group? Who are the members? What are the dynamics?

Out of the 5600 members by the end of July 2020, 88.7% of the group members were women and 72% or more were teachers. The distribution is not surprising. According to the National Statistics Office of Georgia (2018), in the 2017-2018 school year, 86% of teachers in Georgian public schools were women and only 14% - men.

The group grew very quickly at the beginning of its creation, when the confusion about the future of education started in Georgia, and slowed down gradually, especially after the schools were closed for the summer in late May. The group still remains active in August 2020, at the time of writing up this thesis.

A participation divide was apparent in the group. One teacher said in a personal chat that she doesn't post her resources in the group because she feels like people are competing to gain attention and credibility. Her original resources were very popular in other teachers' groups. Overall, in my observation, resources were shared less in this Facebook group but were posted more frequently in other groups, where teachers felt more comfortable to share.

RQ2: What do teachers' talk about in the Facebook group during the COVID-19 pandemic?

In the first month after the creation of the group, March 2020, the biggest number of posts were questions, mostly about digital tools. The number of questions halved in April and became one of the least posted post categories by June. Teachers became more comfortable with the tool, more structure was settling in schools.

The second-biggest category in March was the introduction and discussion of the digital tools, which became the smallest category in June. It all makes sense because in the beginning

there were lots more unanswered questions and need for the new tools, and later, during the summer holiday, other issues became more dominant.

Courses, webinars, and trainings made up the majority of posts in June, while in March they were insignificant compared to the rest. This is also logical, with more time, it became clearer what was needed and new courses were developed, webinars and other discussions were held to hear from experts, or to share experiences.

The most popular posts were organizational ones (creating sub-groups, working on a database), posts about general discussions of the state of education and suggestions to the Ministry of Education, emotional posts such as worries how the students with no means to access to the technology or internet would be able to participate in online lessons, discussions about different digital tools to use in online teaching, discussions on differences in public and private education during the pandemic, sharing international good practices and personal experiences, etc.

RQ3: If and how do Georgian teachers learn from each other on social media?

147 questions were posted out of the 840 categorized posts. That's almost 18 %, the largest category of types of posts. 128 of them received their answers, and more often than not - discussions in their answers. The remaining 19 questions were lost among the other posts and left unanswered. Most of the questions were by teachers, asking about which digital tools to use, or about specific tool-related questions. Some teachers were asking for resources for their lessons, where to find them, how to create them, etc. And some asked their colleagues about their experiences and their practice: How did others deal with specific circumstances? Shall they obtain consent from students to record a lesson? How long should lessons be for elementary classes?

The interviews with two practicing teachers helped get a deeper understanding of this question and lay some foundation for further research. Tamar, an experienced, but still relatively new teacher compared to Mariam, was one of the very active participants in the group. She shared many tutorials, while she herself was learning and trying out new digital tools, creating resources, etc. Mariam, with almost 40 years of teaching experience, reported that she learns best at teachers' conferences. Although Mariam has missed the discussions in the observed Facebook group, she was able to learn about the new digital tools herself and even came up with very original lesson ideas, such as producing an online performance with her students, using Zoom. She proactively shares all of her achievements online, as well as with her colleagues in her school and at teachers' conferences.

To answer the research question, yes, teachers do learn from each other on social media and they do so in various ways. They ask for help and provide support to each other, they actively participate in discussions about digital tools, their experiences and best practices. This is apparent after the presented initial data analysis and observation. But the observed Facebook group only includes a very small number of teachers compared to the overall teacher population in Georgia, so the conclusions only apply to this specific group. Other possible research can extend this study to a larger scale, for example, gathering similar data from other social media groups with more teacher members.

Limitations

The participation divide is one of the limitations. Some teachers in Georgia still don't have regular access to digital technology or the internet. Only the ones with such privileges are able to join social media, and few among them chose to join the observed group. On the other hand, some teachers simply don't have enough technical skills to actively participate in social media discussions. The group is surely not representative of the whole population of all Georgian teachers. Therefore, the results of this research cannot be in any way generalized for a larger population, than the observed Facebook group.

From a participant-observer point of view, I notice that teachers exchange more frequently about their daily practices, materials, and experiences in other teachers' groups where every member is supposed to be a teacher, even the other group is much larger. They probably feel most comfortable, because only their own colleagues are reading the posts, and the competition feeling is less prevalent.

Data collection also had some limitations. Facebook doesn't provide the tools to export the list of posts, so external software was needed. Sociograph was able to export most of the posts but not all of them. Some data was missing even in the exported file. The analysis, although it seems quite representative of the overall activities of the group, might have missed important posts. What Facebook does offer to group administrators is the post list of the last 28 days from the day it was exported. It would be possible to create an exact database of the posts, number of comments and reactions, but it is too late for this thesis to do so, as more time has passed since the group was created. It will be a lesson learned for me and a useful tool for future research with similar goals.

The categorization of posts is subjective, although as discussed, this does not necessarily represent a limitation. One limitation is that some posts were assigned two categories, for example, digital tools and resources, but for clearer analysis, only one was chosen, the more defined category.

The interviews aren't meant to be generalized to the whole Georgian teacher population. The two interviews in this thesis were aimed to learn from the participant teachers themselves, but more such interviews from different teachers could have drawn a better picture.

Lastly, I translated all qualitative data from Georgian into English myself as the observer. Even though the content is translated with the same meaning, some between-the-lines meanings may be lost in translation and my own experiences and biases may have influenced the translation.

Acknowledgments

Author's declaration

I hereby declare that I have written this thesis independently and that all contributions of other authors and supporters have been referenced. The thesis has been written in accordance with the requirements for graduation theses of the Institute of Education of the University of Tartu and is in compliance with good academic practices.

Tatia Johnson   17 / 08 / 2020

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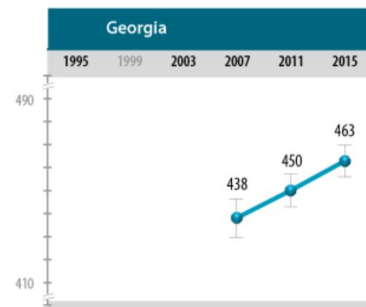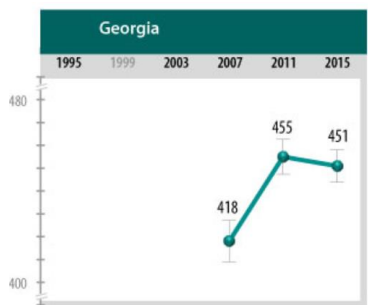World Population Review (2020). Facebook Users By Country 2020. Retrieved from https://worldpopulationreview.com/country-rankings/facebook-users-by-country

Appendices

Appendix 1

Georgia's performance in TIMSS over the years 2007-2015
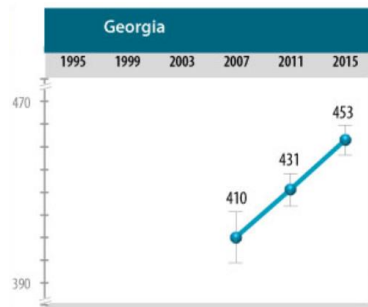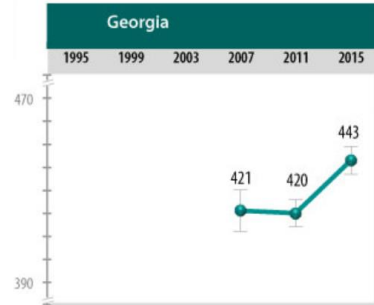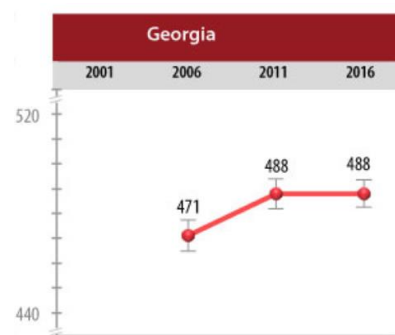

Math, 4th grade

Math, 8th grade

Science, 4th grade

Science, 8th grade

Reprinted from TIMSS 2015 International Results in Mathematics by Mullis et al. (2016)

Georgia's performance in PIRLS over the years 2006-2016
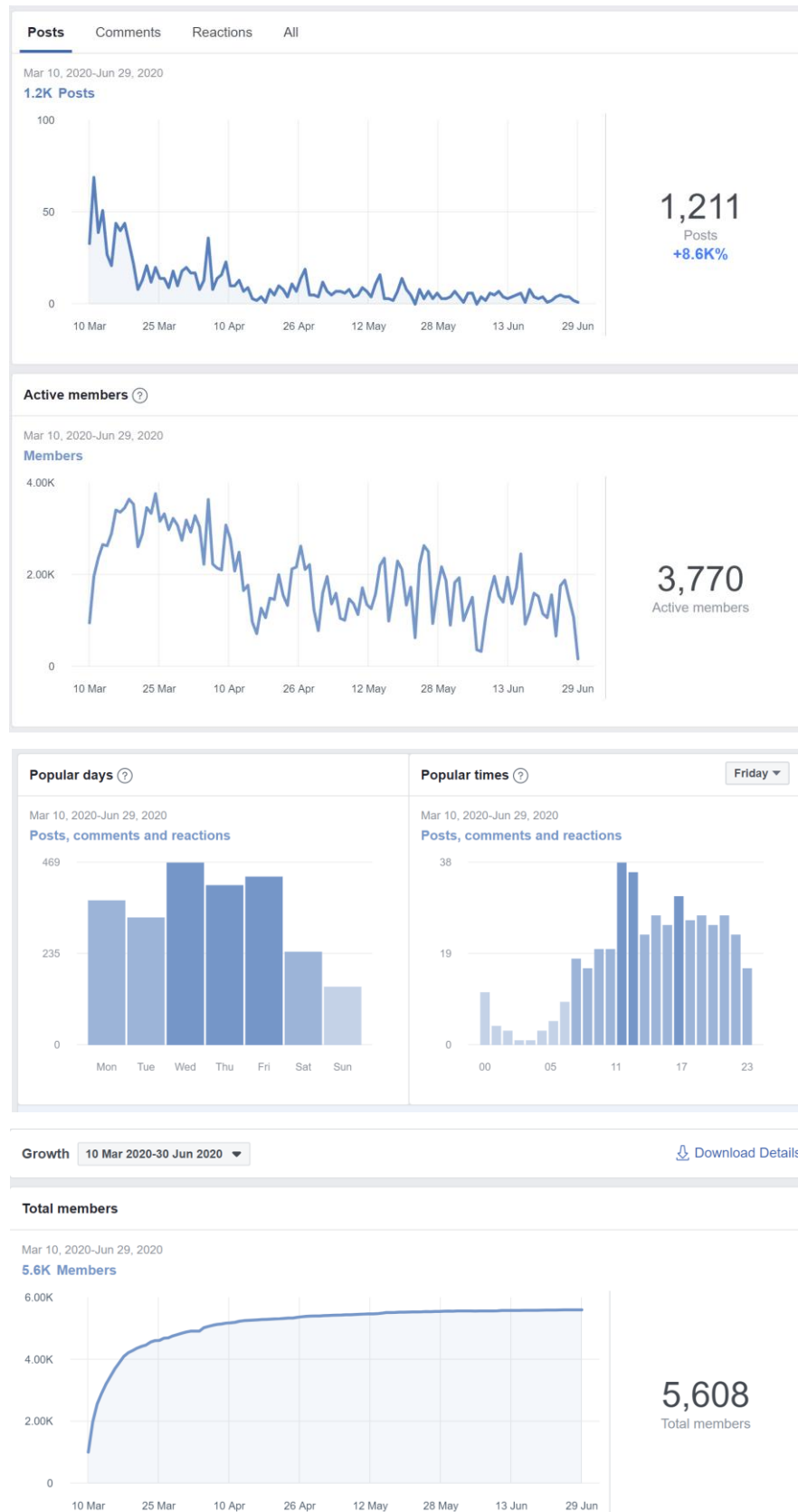

Reading, 4th grade

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Appendix 2

Screenshots from Facebook group, *Online Education in Georgia* analytics

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