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Graduates Working Virtually: Its Effects on Newcomer Socialization

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Abstract

Covid-19 has accelerated the trends of digital socialization. The differences between traditional and digital socialization are enough to influence the socialization process for graduate newcomers. Researchers have yet to explore the full effect of digital socialization and the possibilities it carries. We collected our data through a self-completion survey from newcomers who had graduated within the last 12 months from business schools. This study focuses on graduate newcomers and how digital socialization affects their socialization process. First, we examined whether virtual work is related to organizational socialization, and second, how virtual socialization tactics and virtual supervisor support relate to organizational socialization. Lastly, we examined the relationship between virtual work and intention to quit by performing a mediator analysis with the three organizational socialization domains: organization, role and relationship. The results indicate that virtual work is not directly related to graduate newcomer socialization. However, virtual socialization tactics were related to socialization in the organization domain, and virtual supervisor support was related to socialization in the role and relationship domain. We did not find any support for the relationship between virtual work and intention to quit in our mediator analysis.

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1.0 Introduction

An increase in virtual work and the pandemic have resulted in graduate newcomers having to start their careers virtually. The Covid-19 crisis quickly put millions of people worldwide at a health risk. Many countries implemented strict measures to contain the virus from spreading. The social distancing has resulted in a significant fall in total working hours, increase in digital work and work from home. We make use of the digital world for work and socialization more than ever before (The Economist Intelligence Unit, 2020). According to a report from The Economist Intelligence Unit (2020) the Covid-19 pandemic has accelerated the trends for greater digitalization in the way we work, with comprehensive changes. We can now work from anywhere, allowing us to step out of the office. Furthermore, development in communication has increased the availability and frequency of when one can be reached for working purposes, making connecting with people much easier. According to HR Magazine (2021), graduates have been conflicted about the idea of starting their careers remotely. 59% of UK students do not want to start working remotely while 41% want to start working remotely, creating integration issues for organizations and employers. With almost half of graduate newcomers wanting to start digitally, the employers must ensure that the digital socialization process is on par with the traditional process. Therefore, there is a need to study the effects that digital work has on graduate newcomers regarding the socialization process and turnover intentions.

1.1 How will Covid-19 affect newly graduates' socialization process?

Newcomers during the pandemic have been given a different starting point than others who graduated before the pandemic. Reduced office working hours, less social face-to-face interaction and substantially more virtual work has set newcomers in an uncertain situation. Organizations must ensure that newcomers successfully adjust to the situation while, at the same time, trying to adjust themselves. The socialization process is crucial for newcomers, particularly graduates, to track their progress, familiarize themselves with the organization and forge relationships (Chao, 2012). Cooper-Thomas et al. (2012) suggest that newly graduated and unskilled individuals need a more customized socialization experience than others, which was also found by Saks et al. (2007). Therefore, we

urge the importance of studying what types of socialization have the best effect on graduates.

Furthermore, the pandemic has forced us to interact with each other through screens rather than face-to-face. As a graduate newcomer you most likely enter the workplace with little to no experience. In a traditional work environment, newcomers can physically go and ask for help from an experienced member, usually their supervisor, next door which helps them familiarize themselves with their tasks and role in the organization. Moreover, at the workplace you will continually meet new people and learn from others by observing. Forming relationships to others and learning from them are considerably harder with remote work (Gruman & Saks, 2018). Tacit knowledge may also be hard to pass on to newcomers in a digital environment (Ahuja & Galvin, 2003). Graduate newcomers may find it hard adjusting in the organization due less physical contact with others and the culture. Many may feel isolated from the organization and the culture which may cause stress, motivational issues and a lack in the sense of support (Eurofound, 2020). For graduate newcomers this can have a negative impact on their organizational socialization development in role, organization and relationships (Cooper-Thomas et al., 2020). Thus, their intention to quit may increase. There have been studies on young workers in Europe where 15% of young workers reported that they felt isolated most of the time when working (Eurofound, 2020). This is the highest reported for all age groups.

Finding the right work-life balance is important to ensure that work pressure does not get overwhelming. In a traditional workplace, newcomers have scheduled when to meet and when the day is over. Remote work usually does not have the same scheduling for working hours. Thus, graduate newcomers might struggle to find the balance between working and personal life, making it hard to adjust to your role in the organization. Further, there could also be a risk of graduate newcomers being exploited to work more than what is normal because they do not have any reference or experience of what the normal workload is. This can lead to exhaustion and negative experiences with managers, supervisors and the organization as a whole that can damage the socialization process. Eurofound (2020) found that during Covid-19, young workers in Europe feel more physically exhausted at the end of the working day (37%), which is the most for all age groups.

1.2 Socialization and digital socialization

Through the socialization process, newcomers develop the necessary skills, attitudes and knowledge to fit in the organization and adjust to their roles (Gruman & Saks, 2018). When entering an organization, newcomers enter an unfamiliar environment in a state of uncertainty. During the first months or year they learn how to think, interact with other employees and how to behave to be accepted as a part of the organization. It is required that they learn both the technical and social behaviors and attitudes to be an effective member (Gruman & Saks, 2018). These are the general requirements for any newcomer, regardless of whether the socialization takes place physically or virtually. In general, the socialization process is considered a learning process where much of the learning happens through observing more experienced members and supervisors (Klein & Weaver, 2000).

One of the biggest challenges in virtual work is the adjustment of newcomers and adapting to the new organization due to the lack of regular contact with others (Ahuja & Galvin, 2003). Information and communication technologies (ICTs; Gruman & Saks, 2018) have presented new ways to socialize newcomers. However, we do not know very much about how such technologies help or hinder the socialization process yet (Gruman & Saks, 2018). ICTs are changing the way we work, and many activities and practices are being done digitally today (Gruman & Saks, 2018). Online recruitment is becoming more common, and over a third of learning activities are happening electronically (Watson et al., 2013). Digital briefing and orientation sessions are increasing and are likely to keep increasing in the future (Wesson & Gogus, 2005). Working from home is becoming a very common practice for many organizations as well (The Economist Intelligence Unit, 2020). The ICTs of the digital era have created many new possibilities for how we can socialize newcomers. Specifically, digital socialization leverages ICTs so that newcomers can more easily adjust to the working environments and learn the skills, attitudes and behaviors necessary to fill their role and be accepted by the organization (Gruman & Saks, 2018). However, with digital socialization comes questions of how efficient socialization through digital devices can really be. For example, do digital socialization practices provide newcomers quality information? Does lack of face-to-face interactions lead to a slower increase in learning and decrease the time of task proficiency for newcomers? Or as in our case: How does

digital socialization affect newcomer adjustment and distal outcomes such as the intent to quit?

1.3 Research question: How does virtual work and virtual socialization tactics affect the newcomer socialization process and the intention to quit for recent graduates?

Our research aims to contribute to the newcomer socialization literature, specifically regarding graduates. Due to the fact that the majority of newcomers consists of experienced newcomers (Carr et al., 2006), research in the field has been focusing on fully understanding their behaviors and facilitating their adjustment (Cooper-Thomas et al., 2012). Therefore, we believe that graduate newcomers have not been receiving the attention they deserve. In this study, we seek to examine how the degree of virtual work and virtual socialization tactics affect the socialization process for graduate newcomers and their intentions to quit. As regular home working grew 159% from 2005 to 2018 and early 2020 (The Economist Intelligence Unit, 2020), outcomes of role, relationship and organization socialization, and other factors, such as socialization tactics and intention to quit, can now be more easily tested in a virtual setting for newcomers and in our specific situation, graduate newcomers. We sent out an email with our survey through BI Alumni and class representatives of Norwegian School of Economics and BI to over 350 graduate students who meet the criteria: graduate 2020 or later and from the Master of Science programs from business schools. From this we received 50 respondents. Our questionnaire has been set up to capture the degree of virtual work, virtual activities and the outcomes of it. First, we have set up questions to measure the degree of virtual work that each individual does. The degree of socialization is measured in three socialization domains presented by Cooper-Thomas et al. (2020): role, organization and relationship. The survey also takes into account the extent to which the graduates have been exposed to virtual socialization tactics, whether they have had a supervisor available during their socialization period, and how they feel about quitting their job. Our study allows us to see how well graduates have adjusted to their new environment during the pandemic and how the degree of virtual work has affected their socialization process. To our knowledge, there has been little research done on how the Covid-19 pandemic affects graduate newcomers' socialization process. As the socialization process has substantial effects for graduate newcomers on their careers (Bauer et al., 2007; Saks et al.,

2007; Cooper-Thomas, 2020) it is of great importance to find and reveal areas where the process is failing.

2.0 Theory

In this section we examine previous literature regarding organizational socialization, newcomer adjustment, virtual work, socialization tactics, supervisor support and intention to quit. This review looks at how these aspects are related to graduate newcomer socialization in a virtual setting. The review lets us examine the differences between traditional and digital socialization and the challenges that digitalization has presented us with. We start by presenting organizational socialization and newcomer adjustment from a general perspective before we take a closer look at newly graduated newcomers and how they are socialized. Furthermore, we present literature on socialization tactics and supervisor support and how these work in a virtual setting. Finally, we will take a look at what previous research has said about the relationship between virtual work and intention to quit.

2.1 Organizational socialization in general

Organizational socialization refers to the primary process and period where newcomers adjust to their new roles in a new job or new organization and learn how to be an effective organizational member (Feldman, 1981; Bauer et al., 2007, 2020). Socialization is a process that is influenced by both the organization and the newcomer (Bauer et al., 2007). The transition between student and work life is a salient experience which leaves a big imprint on graduate newcomers. During this period newcomers learn to perform their new job and how to fit in with their coworkers (Bauer et al., 2020). Their expectations are weighed against reality, and they form an opinion of how they fit into this new environment and what kind of impact they can have in this new setting (Bauer et al., 2020). A more detailed definition of organizational socialization is “a process by which an individual comes to appreciate the values, abilities, expected behaviors, and social knowledge essential for assuming an organizational role and for participating as an organizational member” (Louis, 1980, p. 229-230). For the majority of organizations, organizational socialization is a crucial human resource (HR) function that affects the organization and its groups and individuals (Saks & Gruman, 2018). New employees must be oriented and socialized within the

organization and culture. For decades, researchers have demonstrated the positive effects of organizational socialization and the vital role it plays in making newcomers adjust in their new environment (Bauer et al., 2007; Saks et al., 2007; Cooper-Thomas, 2020). Most of the literature in newcomer socialization is done with a concern of understanding what a newcomer passes through to develop into an organizational member (e.g., Chao et al., 1994; Cooper-Thomas et al., 2012; Saks & Gruman, 2018).

2.2 Organization, role and relationship socialization domains

Research in organizational socialization is often related to newcomer adjustment which are characterized by the three indicators: role clarity, task mastery and social acceptance (Feldman 1981; Bauer et al., 2007). *Role clarity* is about understanding the job tasks to perform and which tasks to prioritize (Feldman, 1981). *Task mastery* refers to learning the tasks that make up the job and being comfortable in your role, often referred to as self-efficiency (Bauer et al., 2007). Lastly, *social acceptance* is about getting accepted and feeling comfortable with your peers (Bauer et al., 2020). Many studies of organizational socialization today still use newcomer adjustment indicators very similar to those presented by Feldman (1981). Early assessed newcomer adjustment is often associated with the outcomes such as improved performance, task mastery, job satisfaction, organizational commitment, work engagement, and reduced turnover (Cooper-Thomas et al., 2020; Bauer et al., 2007; Saks et al., 2007). At the individual level, newcomer adjustment indicators are used to measure how well workers are socialized. The reason that organizations use newcomer adjustment is because of the relationship to the distal outcomes mentioned above (Bauer et al., 2007).

The most recent approach for measuring newcomer adjustment known to us is Cooper-Thomas et al.'s (2020) Newcomer Understanding and Integration scale (NUIS). The authors used the critiques and key problems from previous measures with a review of the newcomer socialization literature to derive three core socialization domains called *organization*, *role* and *relationship*. The *organization* domain concerns how newcomers are socialized in the organization. This is in regard to formal aspects, such as history, structure and values, and informal aspects, such as stories and rituals for how to behave. The *role* domain has to do with how

newcomers understand their role, in terms of how to perform task, to what standard and task responsibility. The *relationship* domain is concerned with the newcomers' need to establish relationships with colleagues that are valuable and effective to become integrated socially. The measures for these constructs have been developed by leveraging previous items from four previous measures, holding on the best items that met the strict quality criteria and resisted the critique from previous researchers. The measures were tested with a series of quantitative assessments of dimensionality and item quality with over 1800 newcomers across six samples (Cooper-Thomas et al., 2020, p. 446). Because of the strong reliability and validity, our study will also utilize these constructs to measure newcomer socialization. A thorough review of the development of the measuring instrument will be reviewed in the method section.

Studies from Bauer et al. (2020) support that newcomer resources in general show positive or no association to early adjustment, which indicates that resources mostly support socialization to newcomers. However, specific resources showed support to different domains of socialization. The definition of resources is vague but allows us to identify what resources that newcomers find valuable in particular situations (Saks & Gruman, 2014). For example, personal resources, such as proactive and optimistic personality, showed positive association to early adjustment in role clarity, task mastery and social acceptance (Bauer et al., 2020). Other personal resources, such as knowledge and skills were only associated with early adjustments of role clarity. Material resources, such as having a desk from the first day, was also only associated with early adjustment of role clarity. Social resources, such as greeting the manager on the first day, were associated only with higher early adjustment of social acceptance. Status resources had a negative effect on early social acceptance. Meaning that newcomers entering from higher job levels had lower levels of social acceptance (Bauer et al., 2020).

2.3 How virtual work affect graduate newcomer socialization

Covid-19 has accelerated the existing trends towards digitalization (The Economist Intelligence Unit, 2020). The disruptive effects of Covid-19 pushed companies to take a leap of faith into partially or completely uncharted waters. Digital solutions were forced, and companies had to adapt quickly in order to meet their own, customers' and employees' needs in this new virtual work life. Despite the progress

digitalization has made during this pandemic, there are still huge flaws and weaknesses that must be assessed (Deloitte, n.d.). One aspect that we wish to bring more attention to is digital socialization, more specifically digital graduate newcomer socialization. From experience, working digitally as a newcomer, the socialization experience was very different from a traditional one. For example, communicating and sharing information with the supervisor was not as simple as first thought. There could be days without any reply, causing delays in job tasks, despite having real-time messaging, mails and video chatting available. Sometimes, tasks could get quickly wrapped up, resulting in time where there was nothing to do but wait for new tasks. Traditionally, you just walk up to your supervisor's office and ask for help or new assignments. Moreover, contact with others at the organization was extremely limited, making it hard to form relationships. However, organizational information, such as information about history, structure and objectives and goals, was very easy to access as they were always available online. To understand more on the concept of digital socialization, we will take a more extensive look into previous literature. Some research that studies virtual socialization settings are from a time when technology was much more limited than it is today (e.g., Wesson & Gogus, 2005; Ahuja & Galvin, 2003). Despite that, they may still provide useful information regarding newcomer behavior.

2.3.1 Graduate newcomer socialization

One study found that length and relevance of a newcomer's prior experience must be taken into consideration during the socialization process (Reichers et al., 1994). This was also later supported by other researchers, which found that graduate newcomers have a bigger socialization need than experienced newcomers (Saks et al., 2007). Additionally, neophytes, such as newly graduated and unskilled individuals have a greater need for a customized socialization experience rather than others with higher job knowledge and relevant experience (Cooper-Thomas et al., 2012). Moreover, graduates may be particularly vulnerable at organizational entry, which can make them easier to influence and more sensitive to socialization cues (Ashforth, 2001). This can be a valuable discovery, but digital issues can make this less useful as newcomers have a harder time interacting with their peers and supervisors, making it difficult to pick up social cues and tacit knowledge (Gruman & Saks, 2018; Ahuja & Galvin, 2003). However, the vulnerability causes the effect of socialization attempts and practices in general to be more powerful for graduate

newcomers than others. For example, Saks et al. (2007) discovered that the relationship between socialization tactics and positive outcomes is stronger for graduate newcomers than more experienced newcomers.

Furthermore, Feldman and Brett (1983) found that newly hires rely more on resources from the organization and seek organizational guidance, while more experienced newcomers used strategies that gave them control of their own situation. What is also worth noting is that newcomers enter the organization with uncertainty and the goal of socialization is to reduce that uncertainty and increase predictability (Berger, 1979, cited in Bauer et al., 2007). It makes sense that uncertainty is highest among graduates, as they enter without any prior experience, not knowing much about the culture or how to form relationships. Because of the high degree of uncertainty and the desire to fit in, it is to assume that since graduates start at the lowest point, which is not socialized at all, digital work is going to socialize them anyway, but only to a certain extent. For example, gaining any experience by working on your tasks can socialize you in your role or talking to your supervisor and another experienced member may increase the relationship domain up from the lowest point. However, to reach higher levels of socialization, digital socialization must be able to perform at the same levels as traditional socialization (Gruman & Saks, 2018).

2.3.2 Virtual work and virtual groups

Gruman and Saks (2018) introduces the process of newcomer adjustment through leveraging information and communication technologies (ICT), which they call e-socialization. The authors suggest a number of ways where e-socialization differs from traditional socialization that can have both positive and negative effects. Their model presents that e-socialization practices lead to three outcomes in a sequential order. newcomer capital (human and social capital), newcomer adjustment and socialization outcomes. Basically, e-socialization first leads to newcomer capital which leads to newcomer adjustment (organization, role and relationship domains for our study) and then to distal socialization outcomes such as job satisfaction and intentions to quit. (Gruman & Saks, 2018, p. 114).

Virtuality is a complex construct that is difficult to define (Gruman & Saks, 2018). A commonly known essence of virtuality is that it relies on communication

technology to communicate across boundaries (Dulebohn and Hoch, 2017). It is important to note that groups or employees can be geographically dispersed to practice virtual work, but it is not a requirement. For example, two colleagues can demonstrate virtual work despite being co-located. For example, video chatting while working in the same office (Gruman & Saks, 2018). This is important as during Covid-19, many employees may work at the same office, but are not in contact with each other while communicating virtually. An important factor for virtual work is that virtuality varies in the degree (Gruman & Saks, 2018). Gruman and Saks (2018) suggest that the effects of virtual socialization will differ from traditional socialization methods based on the degree that the virtual socialization is different in the tasks, information acquisition and relationship-building from the traditional methods.

Taking a look at more previous research, the literature regarding socialization in virtual groups is mostly focused on information seeking and information providing (e.g., Ahuja & Galvin, 2003). There is no clear distinction between virtual newcomers in one organization and newcomers in virtual groups. We suspect that online socialization in general will be similar to newcomer's socialization in virtual groups. This is supported by Gruman and Saks (2018) who presents this specific assumption as a challenge for online socialization. The authors explain that this is because online socialization will be more task-focused than socially focused. Thus, research on newcomers in virtual groups can be highly relevant to review as well.

In virtual groups, the socialization process gets undermined due to lack of face-to-face interactions and less visible material cues, making it harder to pick up the finer details in the communication (Asatiani et al., 2021). These challenges could present themselves as barriers to construct a shared knowledge base (Powell et al., 2004). Due to the lack of the physical environment in a virtual workplace, newcomers might struggle to pick up social cues the same way as in a traditional physical environment (Ahuja & Galvin, 2003; Wesson & Gogus, 2005). In a virtual setting, the group members need to communicate the tacit information of norms, values and expectations in other ways. The need for explicit communication is more important in the virtual setting for newcomers in order to pick up the social cues from other group members (Ahuja & Galvin, 2003). These findings show that newcomers in virtual groups need to be more active in their information acquisition regarding

social information. However, Ahuja & Galvin (2003) found that many newcomers still engaged in silently watching for cues to norms and expectations, for example by seeking information in group emails, to gain knowledge of the group norms and expectations. Nevertheless, we suspect that the aforementioned degree of uncertainty among graduate newcomers will be so high that virtual work will lead to a positive change due to more predictability in the job, despite the shortcomings. Thus, our first hypothesis is:

Hypothesis 1a: A higher degree of virtual work will have a positive effect on socialization in the organization domain for graduate newcomers.

Hypothesis 1b: A higher degree of virtual work will have a positive effect on socialization in the role domain for graduate newcomers.

Hypothesis 1c: A higher degree of virtual work will have a positive effect on socialization in the relationship domain for graduate newcomers.

2.4 Socialization tactics

Socialization tactics is one of the socialization practices that has received most attention in the socialization literature (Saks & Gruman, 2012). Socialization tactics refers to an organizational practice that helps newcomers adapt into their new role during the socialization process. (Van Maanen & Schein, 1979; Saks & Gruman, 2011). Van Maanen and Schein (1979) presented that organizational socialization tactics used on newcomers could be divided into six bipolar dimensions: collective-individual, formal-informal, sequential-random, fixed-variable, serial-disjunctive, and investiture-divestiture. *Collective* socialization involves placing newcomers in groups and putting them through the same common experiences, while *individual* socialization involves separating newcomers and putting them through more unique experiences. *Formal* socialization refers to activities which clearly separate newcomers from experienced members such as training classes to learn tasks and fit in their role, whereas *informal* socialization involves more activities that do not clearly separate newcomers from experienced members and learning happens on the job while working. *Sequential* socialization provides a fixed sequence of steps that the newcomer can follow to learn the role, while as in a *random* socialization this sequence is unknown or in constant change. *Fixed* socialization provides the

amount of time it will take to complete each step of the socialization process, whereas in a *variable* process the time is not known. *Serial* socialization takes advantage of experienced members in the organization as mentors or role models, while *disjunctive* socialization does not. *Investiture* socialization provides social support from more experienced members to newcomers, whereas *divestiture* socialization provides negative social feedback as a way of making the newcomer adapt.

From a factor analysis, Jones (1986) presented three factors that are represented by six tactic dimensions. First, *social* tactics include the investiture and serial dimensions. These tactics provide necessary facilitation through learning and social cues and are considered the most important dimensions (Jones, 1986). The sequential and fixed dimensions is what makes up the *content* tactics, which have to do with the content of information that newcomers receive. *Context* tactics include formal and collective dimensions and is about how the information to newcomers is provided. Jones (1986) suggests that social tactics are the most important “because they provide the social cues and facilitation necessary during learning processes” (p. 266). It is worth mentioning that Jones (1986) classified the placement of the fixed-variable and investiture-divestiture dimensions opposite to what Van Maanen and Schein (1979) suggested. This is important as many studies have followed Jones’ (1986) approach with regard to what is considered institutionalized and individualized socialization tactics (Saks & Gruman, 2012).

The six dimensions mentioned in Jones’ (1986) three factors are what makes up institutionalized socialization tactics (investiture, serial, sequential, fixed, collective and formal). With institutionalized tactics the organization often tries to fit the newcomer in a pre-set role to ensure organizational fit by providing information that reduces uncertainty from early entry through a formalized and structured socialization process, thus keeping the organizational status quo (Saks & Gruman, 2018). *Individualized* socialization tactics is made up from the other six dimensions (individual, variable, random, informal, disjunctive and divestiture) and is mostly used to make newcomers develop their own path to fit their role and challenge the status quo (Saks et al., 2007).

2.4.1 Traditional versus virtual socialization tactics

In a traditional setting, meta-analyses found that institutionalized socialization tactics are positively related to self-efficiency, job satisfaction, organizational commitment, fit perceptions and job performance and negatively related to role conflict, intention to quit and role ambiguity (Bauer et al., 2007; Saks et al., 2007). Bauer et al. (2007) connects socialization tactics to newcomer adjustment, which we in our study refers to as the socialization indicators: organization, role and relationship domains. In addition, Saks et al. (2007) found that institutionalized socialization tactics were more beneficial for recent graduates than experienced newcomers. This makes sense as rather than forming their own role, graduate newcomers are more likely to seek guidance from the organization and more experienced members (Feldman and Brett, 1983). Because of that, it makes sense that they will be more affected and respond differently than other newcomers on some tactics, which may also be true in a virtual setting. This assumption is supported by the results from Saks et al. (2007) who suggested that recent graduates in general showed a stronger relationship between socialization tactics and socialization outcomes than other newcomers. For example, the authors found that graduates showed a stronger relationship between social, content and serial tactics and intention to quit. Further, context, collective and sequential tactics had stronger associations with role orientation. Lastly, institutionalized tactics were strongly related to role ambiguity.

For virtual socialization tactics, Gruman and Saks (2018) found that e-socialization tactics can have direct positive and negative effects on newcomer adjustment and socialization outcomes. The authors suggest that organizations must take individual considerations when choosing socialization tactics so that employees can work on HR activities, such as orientations and training programs, at their own pace. Because of this, virtual socialization tactics are usually more individualized than institutionalized (Gruman & Saks, 2018). However, as mentioned, institutionalized socialization tactics produce greater newcomer adjustment and distal socialization outcomes (Gruman & Saks, 2018).

The biggest challenge for a virtual environment is to prevent socialization tactics from being weakened, especially institutionalized social tactics. This type of tactics will usually suffer the most due to the low availability of supervisors and role

models who can demonstrate acceptable behavior and support newcomers in building their identity (Gruman & Saks, 2018). A second challenge which occurs by e-socialization is that institutionalized content tactics may be compromised due to online personalization and customization (Gruman & Saks, 2018). The lack of formal tactics, such as deadlines and time scheduling of the socialization process, make newcomers adapt and learn at their own individual pace, which may compromise and slow down the socialization process. Third, a virtual environment may cause context tactics to be more individualized due to less grouping during the socialization process (Gruman & Saks, 2018). This will prohibit newcomers going through the same experiences and learn and share from them together. Newcomers may develop values and attitudes that are not aligned with the organization and undermine social capital, such as reciprocal behavior, that has been built.

Research shows that both individual and institutionalized socialization tactics can have a positive effect on newcomer adjustment and socialization outcomes (Saks et al., 2007; Gruman & Saks, 2018). As mentioned before, recent graduates are more vulnerable than other newcomers during entry, making them more sensitive to socialization influences and cues (Ashforth, 2001). Therefore, it makes sense that any type of socialization tactic, individualized or institutionalized, will have an impact on the socialization process for the graduate even in a virtual setting. Gruman and Saks (2018) argue that tactics that focus on developing attitudes and values that are aligned with the organization are particularly valuable for online newcomer socialization. Thus, we hypothesize that:

Hypothesis 2: Virtual socialization tactics will increase socialization for graduate newcomers in the three socialization domains: (a) organizational, (b) role and (c) relationship.

2.5 Virtual supervisor support as a social tactic

Saks et al. (2007) found that social tactics (serial and investiture) had the strongest predictors to newcomer adjustment outcomes. These results were stronger for graduate newcomers than other newcomers. Therefore, it is problematic that the biggest challenge of e-socialization is how to enable social tactics. Fang et al. (2011) found that social tactics are extremely important for newcomers to help them build social capital in which to make newcomer adjustment. Building on these

findings, our study will examine the relationship of how effective social tactics will be in a virtual environment, in the form of virtual supervisor support. We draw out the factor of social tactics from virtual socialization tactics, which makes virtual socialization tactics a variable to measure all other types of socialization tactics, except virtual social tactics.

Traditionally, research suggests that supervisors are highly beneficial for newcomers during the socialization process (e.g., Nasr et al., 2019; Kammeyer-Mueller et al., 2013; Major et al., 1995). Going into a new job requires you to interact repeatedly with your supervisors and co-workers to get to know your tasks, priorities, expectations and other necessary information to be efficient and create relationships (Kammeyer-Mueller et al., 2013). Major et al. (1995) suggest that supervisors and co-workers are key players in the socialization process, especially when newcomer expectations are not met. The authors found that unmet newcomer expectations were problematic for outcomes indicating successful socialization. However, these negative effects could be reduced by involving supervisors and co-workers in the newcomer's socialization process. Further, Louis (1980) found that social support is important for newcomers to cope with the new job demands and help them deal with pressure that a new job can have, as well as any changes and surprises they might encounter during the socialization period.

Gruman and Saks (2018) suggest that to increase the chances of achieving positive human and social capital, newcomer adjustment and socialization outcomes, organizations should strategically implement more institutionalized e-socialization tactics, despite the challenges that e-socialization presents. This is because these kinds of tactics provide newcomers with online mentors and supervisors to coach them and help them develop their identity. In addition, institutionalized e-socialization tactics ensure that newcomers go through the same training and get the opportunity to discuss it collectively. Such tactics also usually include fixed schedules and deadlines that are set for newcomers to uphold when completing certain components of socialization.

Furthermore, several studies have found that interactions and between newcomers and their peers, coworkers and supervisors (Reichers, 1987) and developing relationships (Korte, 2010) are one of the primary mechanisms for successful

socialization, often outside of formal training context (Feldman, 1989, cited in Gruman & Saks, 2018). Moreover, Rollag et al. (2005) found that newcomers that had adjusted more quickly had a bigger network of relationships with their co-workers.

However, Driskell et al. (2003) suggested that “interaction that is mediated by technology may lead to less intimacy and difficulty in establishing relationships” (p. 303). Gruman and Saks (2018) presents some challenges for e-socialization regarding interactions between newcomers and other organizational members. First, informal learning opportunities will be heavily reduced because of considerably less interactions (Bartel et al., 2007). Second, online socialization will most likely prevent optimal communication and create difficulties such as lack of social cues and delays in feedback (Powell et al., 2004). Especially for graduate newcomers this will provide a challenge as they lack experience and are unfamiliar with the work tasks (Bartel et al., 2007).

Therefore, we also suspect that the degree of virtual work will interfere with the relationship of social tactics and newcomer adjustment, but not to the extent that it is rendered nonsignificant in regard to newcomer socialization. Due to the challenges that virtual work presents, we suggest that the relationship between supervisors and graduate newcomers might even be more important in a virtual environment than traditional.

Hypothesis 3: Virtual supervisor support will be positively associated with all three domains of socialization: (a) organizational domain, (b) role domain, and (c) relationship domain.

2.6 Intention to quit

Meta-analyses from Bauer et al. (2007) and Saks et al. (2007) provide evidence that newcomer adjustment evaluated in the early stages of the socialization process is related to turnover and intentions to quit. The indicators act as a warning for the organization of the turnover potential, and also works as a representative of the possibility that both the new employee and organization are wasting their efforts (Allen & Shanock, 2013). In a virtual environment, Golden (2006) suggests that telework is positively related to commitment and negatively related to turnover

intentions, meaning that a higher degree of virtual work is associated with a higher commitment towards the organization and lower turnover intentions. More recent reviews looking at organizational psychology during the pandemic might suggest the same (Rudolph et al., 2021). However, these effects are considered null or minimal, indicating that virtual work and teleworking does not have a great impact on the aforementioned factors. Rudolph et al. (2021) also points out that the literature lacks certainty within Covid-19's implications and virtual work. We have examined the small body of literature regarding virtual work and intention to quit, and we see that virtual work has a modest effect on turnover. From our observations we see that the literature has not taken into account the importance of the newcomer's socialization process. The more recent studies emerging during the Covid-19 pandemic have not investigated this either. Within the literature of socialization, several authors have looked at mediating relationships with the socialization dimensions investigating socialization outcomes. Cooper-Thomas & Anderson (2002) mediated the effects of organizational socialization tactics on turnover and Klein et al. (2006) also used Chao et al. (1994)'s dimension as mediators to socialization outcomes. Furthermore, in the literature, several authors have found a relationship between socialization and turnover (e.g., Cooper-Thomas et al., 2020; Bauer et al., 2007). We therefore want to use newcomer socialization as a mediator to see if there is a relationship between intention to quit and virtual work, as this has to our knowledge not been tested for in the literature.

Hypothesis 4: The three socialization domains, organization, role and relationship will act as a mediator for the relationship between virtual work and intention to quit.

Figure 1 below present a visual representation of our hypotheses. The blue arrows present hypotheses one and four, while the green and orange represent hypothesis two and three respectively.

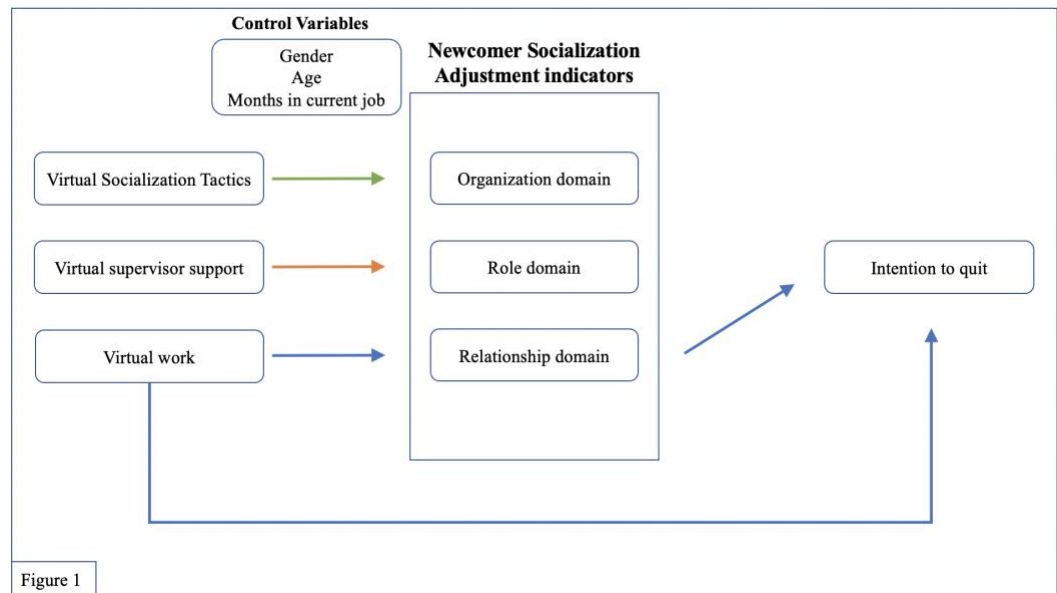


Figure 1

3.0 Method

3.1 Population and sample

We seek to gather respondents from the population: graduates from the Master of Science programs from business schools, who have been employed less than 12 months at the time of our data collection, which makes them graduate newcomers. Research has not suggested any precise time frame to measure the newcomer socialization and adjustment process. However, the first year has traditionally served as the time frame for studying newcomer socialization (Bauer & Green, 1994; Fisher, 1986, cited in Allen, 2006). Studies also find that socialization activities have the greatest impact within the first year (Kammeyer-Mueller et al., 2013; Feldman, 1994). We would argue the selected timeframe is appropriate to enable the respondents to more precisely remember their experiences during the socialization process. The sample consists of 50 respondents. We consider the population relatively homogenous to limit biases through differences within occupational groups and environment.

3.2 Survey administration

The link to our survey was sent through BI Alumni to around 350 students and students at Norwegian School of Economics (NHH) that both graduated in 2020 and falls under our population criteria. We asked participants to voluntarily complete an online survey distributed by contact persons. First, we contacted BI Alumni by mail to present our study. Further, we had a meeting with our contact

person about the possibilities to limit the distribution to our population. This was possible, and through our contact the survey was distributed to all previous students that fit our criteria. We also added a little text to the distribution mail to ensure that those who respond were in fact within our defined population.

Because of the low response rate from BI graduates, we had to contact other business schools. NHH class representatives helped us distribute the survey within their class groups as well to increase our sample size and the likely precision of it. Similar to the process with BI Alumni, the class representatives distributed the link to previous master students graduated in 2020. Thus, we were able to keep our homogenous group. We believe that the similarities of the programs and students at BI and NHH also will help keep the homogeneous sample we are aiming for. Throughout this process we have not had any lists of individuals for our sample. We have tried to reach out to only representatives of graduates of 2020 to increase our chances of a representative and generalizable sample of the population.

We collected data from a cross-sectional survey. For our sample collection we used Nettskjema, which is the new recommended standard at BI and is also accepted by NSD, to create a questionnaire. Previous research has not optimized their questions to fit in a virtual setting. Therefore, we have modified questions from previous research and studies to ensure a better fit for the setting we want, to be able to collect more precise answers. We provide a more thorough description of the measurements further in this chapter. Participants had to provide their age, gender, time in full time job, time in current job and the degree of virtual work done in the last year to control whether our sample is a good fit for our research question. We did not require any name, emails or other information that could identify the participants. Thus, keeping the answers anonymous. The survey also includes Likert-type items about newcomer adjustment, virtual socialization tactics, virtual supervisor support and intentions to quit. Further, we did include all answers from the participants in our study. Based on the answers provided, the sample looked like a good representative of the population we want to examine. A link to our survey can be found in Appendix A together with our questions.

3.3 Ethical considerations

Ethical considerations, data-handling and GDPR has been rigorously assessed throughout this study. Prior to our research design and sampling strategy we consulted with our institution's Data Protection Representative to secure legal and ethical standards. We were recommended using the tool "Nettskjema" which is the new survey standard at BI. This tool is GDPR compliant and ensures total anonymity. Furthermore, throughout the process and how our surveys were distributed, it was passed around as an anonymous link, and we had no access to any lists when these were distributed. We have been assured that our survey has been sent to representatives of our defined population, but we do not know the identities of our respondents. When it comes to our constructs and measures, we consulted with the Data Protection Representative and none of our questions are identifiable nor considered sensitive.

3.4 Development of newcomer socialization indicators

In the newcomer socialization literature, there has been an ongoing debate on how to measure newcomer socialization adjustment and outcomes (Feldman, 1981; Chao et al., 1994; Bauer et al., 2007). This is, according to Cooper-Thomas et al. (2020) due to problems of conceptualization, and how to construct measures of socialization. Allen et al. (2017) stressed the importance of constructing better measures of socialization in their "future research" section. We wanted to revise the literature and reviews of the measures over the last decades and leverage them to find the most suitable scale for the virtual setting and our study.

Cooper-Thomas et al. (2020) revises the various measures in the literature, and the most commonly used are the CAS, NSQ, EAS and OSI which stands for, Content Areas of Socialization (Chao et al., 1994), Newcomer Socialization Questionnaire (Haueter et al., 2003), Employee Adjustment Scale (Cooper-Thomas & Anderson, 2002) and Organizational Socialization Inventory (Taormina, 1994). Furthermore, there is still an ongoing discussion in the field throughout the years of research on measures and scales of socialization, not only by Cooper-Thomas et al. (2020) which is exemplified.

First, Chao et al. (1994) and their CAS-scale were a 6-domain measure to socialization, but even the authors has acknowledged that it is not certain that the six domains completely define their constructs and that there might be some

problems with discriminant validity. The CAS was also the earliest that was widely used, where the others were developed as a response to it (e.g., Cooper-Thomas et al., 2020). One of the main issues as mentioned by scholars in the field are that some of six CAS-domains are multi-dimensional, meaning that some of the concepts are included in several domains. For example, language domain including items of organizational, group, profession and trade (Cooper-Thomas et al., 2020) and the history dimension is included in three scales (Bauer et al., 1998, cited in Cooper-Thomas & Anderson, 2002). Furthermore, the role learning dimension of socialization is another weakness according to Saks and Ashforth (1997).

The OSI measure may not be ideal or suited for the newcomer socialization, it is described as a measure which has high inter-correlation with their “training”-dimension containing the organizational process instead of newcomer socialization, and they also have a more untraditional dimension being the “future prospects” (Cooper-Thomas et al., 2020). The NSQ, which is made by Haueter et al. (2003), is a more newcomer focused measure, which is to some degree created to account for the weaknesses of the CAS, with examples being that the NSQ had a stronger focus on including knowledge of one’s role behaviors (Haueter et al., 2003). To avoid the multi-dimensional issues, the authors composed the NSQ down to three dimensions: organization, group and task. This aligns with most of the more recent measures in that the number of dimensions is rather reduced and more compact than the previous ones such as the CAS (Cooper-Thomas et al., 2020). However, the three dimensions has included more items (Haueter et al., 2003). This is a slightly different approach to the six-dimensional CAS of Chao et al. (1994) which tried to include fewer items per dimension. Cooper-Thomas et al. (2020) criticize the NSQ and the group dimension with the items included in that dimension, as not all newcomers work in groups. Further, they also criticize poor generalizability because specific questions cannot be generalizable. Moreover, Cooper-Thomas et al. (2020) also identified other weaknesses in the NSQ, such as poor discriminant validity and the inclusion of long items.

Prior to the NSQ and NUIS, which is Cooper-Thomas et al. (2020)’s contribution, it was a recurring event that scholars were taking items from several measures and different scales to adjust it to their study (Cooper-Thomas et al., 2020). The Newcomer Understanding and Integration Scale (NUIS) is to our knowledge the newest addition to the list of measures/scales to measure newcomer socialization.

It is assessed and constructed based on all other previous scales and the critiques of them (Cooper-Thomas et al., 2020). The NUIS divides socialization outcomes in three domains of socialization: organization, role and relationship. They are all tested and show high item reliability (Cooper-Thomas et al., 2020). We consider this scale as robust based on the literature assessed and choose to integrate their items into our own study.

3.5 Measures

In general, our responses were measured with a 7-point Likert-scale from 1 (*strongly disagree*) to 7 (*strongly agree*) unless other instructions were given. Our study required some modification to certain items in some of the constructs. We wanted to take virtual work into account when measuring socialization tactics and supervisor support to see the effect they have on newcomer adjustment in a virtual setting. Thus, we have modified the items in those constructs from other studies to better fit our study.

3.5.1 Newcomers socialization

We utilized the NUIS by Cooper-Thomas et al. (2020) to measure newcomer adjustment in addition to three questions derived from Haueter et al. (2003). The NUIS consists of 15 items over three domains: organization (five), with the item example of “I am familiar with the structure of my organization.”; role (five), with the item example of “I know how to perform my tasks that make up my job”; and relationship (five), with the item example of “I have a good relationship with other workers in the company”. We have added one question in addition to each domain, making it six items in each. See Appendix A for a full list of items.

3.5.2 Degree of virtual work

We could not find any items that were derived from earlier research of virtual work to put in our survey. We derived our own items based on the studies and research done from the review. We made two items to measure virtual work. The first question is “How many days did you work virtually last week?” with the response being in days, from 0 to 1-2 days, 3-4 days and more than 5. The second question is “How often did you work virtually the last 12 months?” with the response being in a percentage scale measuring in sections of 20 (e.g., 0%, 20%, 40 %, etc.). In our analysis we used a single-item scale. We used the question “How often did you

work virtually the last 12 months”. Our reasoning for not including both items is that we want to measure how much virtual work they have done since they started working. Therefore, we do not believe that the question “how many days did you work virtually last week?” is a good measure of this.

3.5.3 Virtual socialization tactics

We measured virtual socialization tactics using items from Jones (1986). We modified a four-item scale to better fit our study with virtual work. An example of an item is “When I joined the organization, I got personal virtual onboarding instructions from my supervisor or other to help me be prepared for my tasks and responsibilities”.

3.5.4 Virtual supervisor support

Virtual supervisor support was measured with four items. To our knowledge, there are no established or previous measures in the literature for supervisor support in a virtual setting. We have however been leveraging the existing literature to construct our own items. The most commonly used scale to measure virtual supervisor support is PSS-scale (perception of supervisor support) from Eisenberger et al. (2002). Other scales we have come across are one made by Cheng et al. (2003) and their job content questionnaire and assessed alternative measures such as Baloyi et al. (2014). All of the aforementioned scales and measures are made in traditional settings, where much of it is within the POS literature and measures the supervisor quality. We had to adapt and modify our scale to be suitable for a virtual environment, and we have had more focus on the availability of supervision rather than the supervisor’s quality when we made ours. This comes with some implications which we will elaborate in the “discussion” section.

3.5.5 Intention to quit

To measure the graduate’s intention to quit we used a three-item scale from Michigan Organizational Assessment Questionnaire (MOAQ) made by Cammann et al. (1983, cited in Wanberg et al., 2002) to measure intention to quit amongst graduate newcomers in a virtual work setting. An example of an item is “I often think about quitting” and “I will probably look for a job in the next year”.

3.5.6 Control variables

We used age, gender and months in the current job as control variables. It is plausible to assume that younger people handle technological changes better. Therefore, we use age as one of our control variables. Literature suggests that experience can influence the socialization process and socialization tactics (Allen, 2006; Bauer et al., 2020). Thus, months in the current job are included as a control variable. We also include gender to see if virtual work will affect sex differently. If so, organizations could benefit from differentiating socialization for men and women.

Furthermore, we have converted our ordinal variables (age and months in current job into numerical values to make the computation in R. less complicated and more comprehensible. For *age* we had set up intervals (under 21, 21-25, 26-30, 31-35 and over 35) which we changed to numerical variables of 1 for under 21, 2 for 21-25 and so on. Meaning that a mean of 2.6 for age put most of our respondents to a value of 3 or more, which means that most of our respondents are put in the range of 26-30 or higher. For *months in current job*, we had intervals of under 3 months, 4-5 months, 6-7 months, 8-9 months, 10-11 months and 12 months or more. We changed these into numerical values where 1 is under 3 months, 2 is 4-5 months and so on. We are aware that the distance between category values is not equal across the range, and that some categories may contain more values than categories with little distance between highest and lowest value. This is not optimal, however in those categories (under 21 and over 35) where the distance is not equal to the other categories, there are only two respondents, which should not be critical for our analysis. For *gender* we set a value of 0 if man and 1 if it is woman in our analysis. A full overview of the changes can be seen in Appendix B.

3.6 Preliminary analysis

In this section we first present a brief analysis of our survey data before we take a look at the reliability of our measures and the descriptive statistics.

3.6.1 Survey data analysis

Our sample consists of 54% male between the age of 21-30 years, with the exception of one participant who is younger than 21. Most women are also the same age as men, with five women being over 30 years old. We see that only six total participants are outside the age range of 21-30. We would argue that our sample

does not differ from the population in regard to gender and age. It is to assume that most graduates are somewhere between 21-30, and maybe some over 30. Further, 76% of all participants work mostly (60% or more) in a virtual working environment. The length in full time-job and in current-job varied from less than 3 months to more than 12. We choose to include all answers as we see that even if some people have worked full time for more than 12 months, they have only worked a few months in their current job, which can indicate that they may have graduated and changed occupation or job, which can put them in a newcomer position close to other graduates.

3.6.2 Reliability of measures – Cronbach's Alpha

To measure the strength of our measures, we ran a Cronbach alpha analysis which the results can be seen in table 1. The Cronbach's alphas ranged from 0.78 - 0.93. For the organization domain, the means range from 5.12 to 5.62 and Cronbach's alpha range from 0.81 to 0.93. Role domain means range from 5.08 to 5.72 and Cronbach's alpha range from 0.88 to 0.95. For the relationship domain, means range from 5.14 to 6.12 and Cronbach's alpha range from 0.69 to 0.87.

For the other study variables, virtual socialization tactics has a mean range of 3.92 to 5.82 and Cronbach's alpha range from 0.69 to 0.88. Virtual supervisor support has means in the range of 5 to 5.36 and Cronbach's alpha range from 0.72 to 0.90. Lastly, intention to quit has means range from 2.6 to 2.7 and Cronbach's alpha range from 0.93 to 0.98. According to Bell et al. (2019), a value of 0.7 and above is good, 0.8 and above is better and 0.9 and above is excellent. Overall, the evidence of internal reliability supports the robustness of our survey.

Table 1
Cronbach's Alpha

	Items	Cronbach alpha	Range
Organizational domain	6	0,87	0.81 - 0.93
Role domain	6	0,91	0.88 - 0.95
Relationship domain	6	0,78	0.69 - 0.87
Virtual socialization tactics	4	0,78	0.69 - 0.88
Virtual supervisor support	4	0,81	0.72 - 0.90
Intention to quit	3	0,93	0.93 - 0.98

Range with 95% C.I.

3.6.3 Descriptive statistics

Table 2 below shows the means, standard deviations, and correlations within the study variables. First, we have noted that the variance in virtual work is considerably small, which may have an impact on our results. Out of our three socialization domains, only role socialization is significantly positively correlated to virtual work, while organization and relationship socialization is not. Interestingly, virtual work and intention to quit are not significantly correlated, which is a useful observation for step 1 in our mediator analysis for hypothesis 4. Furthermore, virtual socialization tactics show a strong correlation to virtual supervisor support. Lastly, virtual socialization tactics and virtual supervisor support are significantly negatively correlated with intention to quit.

Table 2

Correlation Analysis for Study Variables

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1. Organizational domain	5,5	1,06	1								
2. Role domain	5,4	1,03	0,59***	1							
3. Relationship domain	5,5	0,93	0,55***	0,69***	1						
4. Virtual work	0,66	0,25	0,08	0,32*	0,06	1					
5. Virtual socialization tactics	4,7	1,45	0,40**	0,44**	0,37**	0,46***	1				
6. Virtual supervisor support	5,2	1,23	0,45***	0,65***	0,69***	0,27	0,57***	1			
7. Intention to quit	2,6	1,74	-0,46***	-0,23	-0,29*	-0,18	-0,37**	-0,34*	1		
8. Age	2,6	0,76	-0,20	0,14	-0,11	0,12	-0,02	-0,21	0,16	1	
9. Months in current job	3,18	1,38	0,30*	0,23	0,26	0,11	-0,04	0,04	0,03	0,15	1
10. Gender	0,46	0,5	-0,07	0,10	0,04	0,18	0,04	-0,001	0,06	0,17	0,08

Note: N = 50

*p < .05

**p < .01

***p < .001

4.0 Results

4.1 Explaining socialization outcomes

4.1.1 Data analysis strategy hypothesis 1-3

We examined hypothesis 1, 2 and 3 by using ordinary least squares multiple regression in R. For the first model, we regressed the organization domain on the control variables: gender, age and months in current job. We did the same regression for both role and relationship domains as well. In the second model, we regressed the organization domain in addition to the study variables, the degree of virtual work, virtual socialization tactics and virtual supervisor support, together with the same control variables. We also regressed the role and relationship domain with the same study variables and control variables as for organization domain. This means that we had three separate regressions for both model 1 and model 2. Table 3 presents the results of the multiple regression analysis for hypothesis 1, 2 and 3.

4.1.2 results

For the control variables, only months in current job showed a significant value ($b = .27, p < .05$) in the organization domain ($R^2 = .10$). In the role ($R^2 = .004$) and relationship ($R^2 = .03$) domain, no control variables were significant.

For hypothesis 1, we predicted that higher degree of virtual work would lead to positive graduate newcomer socialization in the (a) organization domain, (b) role domain and (c) relationship domain. In other words, a higher degree virtual work will positively affect the role domain while negatively affecting both organization and relationship domain. The regression analysis shows that virtual work has no association to neither of the three socialization domains: organization ($R^2 = .30$), role ($R^2 = .46$) and relationship ($R^2 = .50$). Thus, hypothesis 1 finds no support in our study.

Hypothesis 2 predicted that virtual socialization tactics would lead to higher levels of socialization for graduate newcomers in all three domains: (a) organization, (b) role and (c) relationship. The analysis showed that virtual socialization tactics were positively significant with the organization domain ($b = .28, p < .05$) with an R^2 of .30. This indicates that virtual socialization tactics lead to higher socialization in

the organization domain. Role and relationship showed no association to virtual socialization tactics. Thus, hypothesis 2 was partially supported.

For hypothesis 3, we predicted that virtual supervisor support will lead to higher levels of socialization for graduate newcomers in all three domains: (a) organization, (b) role and (c) relationship. Virtual supervisor support shows a positive association to both the role ($b = .53$, $p < .001$, $R^2 = .46$) and relationship domain ($b = .47$, $p < .001$, $R^2 = .50$). Both role and relationship are strongly significant, indicating that virtual supervisor support led to higher levels of socialization in both the role and relationship domains. Virtual supervisor support shows no association to the organization domain. Thus, hypothesis 3 was partially supported as well.

Table 3

Graduate newcomer socialization domains
Regression results for newcomer indicators (H1-3)

	Organization		Role		Relationship	
	β	S.E.	β	S.E.	β	S.E.
Gender	-0,12	0,29	0,13	0,30	0,07	0,23
Age	-0,34	0,20	0,13	0,20	-0,17	0,16
Months in current job	0,26*	0,11	0,15	0,11	0,16	0,09
Model 1 adjusted R ²	0,10		0,004		0,03	
Gender	-0,11	0,26	0,06	0,22	0,08	0,17
Age	-0,23	0,18	0,31*	0,15	0,02	0,12
Months in current job	0,27**	0,10	0,12	0,08	0,15*	0,06
Virtual work	-0,65	0,58	0,31	0,49	-0,65	0,38
Virtual socialization tactics	0,28*	0,13	0,04	0,11	0,04	0,09
Virtual supervisor support	0,22	0,13	0,53***	0,11	0,47***	0,09
Model 2 adjusted R ²	0,30		0,46		0,5	

Notes: N = 50, Gender = 0 if man and Gender = 1 if woman

*p < .05

**p < .01

***p < .001

4.2 Mediation analysis of virtual work and intention to quit

4.2.1 Data analysis hypothesis 4

For hypothesis 4, we examined if newcomer adjustment indicators (organization, role and relationship) can act as a mediator for the relationship between virtual work and intention to quit. We used Baron and Kenny's (1986) mediation test framework. First, we tested the direct relationship between virtual work and intention to quit. For this, we regressed intention to quit on virtual work. The requirement to proceed to step two is that the relationship in the first step need to be significant. Second, we tested virtual work on each of the socialization domains separately, which act as the mediators. By that we mean that we first regressed organization socialization on virtual work. Then we regressed role socialization on virtual work, and finally, we regressed relationship socialization on virtual work. To proceed to the third step, the relationship between the variables here also has to be significant. Third, we ran separate regressions, similar to the second step, with the socialization domains and virtual work (e.g., organization domain and virtual work) on intention to quit, to examine how the socialization domains have affected virtual work and the virtual work variable. For socialization to act as a mediator in the relationship of virtual work and intention to quit, there are two requirements in step three that must be fulfilled. First, the socialization domain must be significant to intention to quit. Second, the strength of virtual work from the first step should be significantly reduced, if not almost non-existing. Table 4 provides the results of this analysis.

4.2.2 results

The analysis of step 1 shows that virtual work is not significantly correlated to intention to quit, which does not fulfil the first step in Baron and Kenny's (1986) mediation test framework. However, Hayes (2009) argues that step 1 in the mediation test may not be needed, and that mediation can exist without the significant direct effect between the variables. In addition, (Shrout and Bolger, 2002) suggest that due to small sample sizes, such as ours, there may be reason to proceed with the mediation test even without the significant relationship in step 1, because the small sample may not be able to predict the effect that actually exists. Thus, we will proceed to step 2 and 3 in the mediation test. At step two we found that virtual work has a significant relationship only with the role domain. The

organization and relationship domain are not significant. Thus, we will only move to step three with the role domain, meaning that role domain is the only domain that can act as a possible mediator in the relation between virtual work and intention to quit. Step three shows no significant relationship between the role domain and intention to quit, indicating that role socialization does not act as a mediator in the relationship between virtual work and intention to quit. Thus, hypothesis 4 is not supported.

Table 4
Mediator analysis for the relationship between virtual work and intention to quit

Step one:		Intention to quit	
	β	S.E.	
Virtual work	-1,22	0,98	
R ²	0,32		
step one adj. R ²	0,01		
Step two:		Virtual work	
	β	S.E.	
Organization domain	0,32	0,6	
R ²	0,06		
Adj. R ²	-0,02		
Role domain	1.29*	0,55	
R ²	0,10		
Adj. R ²	0,08		
Relationship domain	0,18	0,47	
R ²	0,003		
Adj. R ²	-0,02		
Step three:		Intention to quit	
	β	S.E.	Change β
Virtual work	-0,8	1,02	0,42
Role domain	-0,33	0,25	
R ²	0,07		
Adj. R ²	0,03		

5.0 Discussion

This study presents a fresh view on newcomer socialization and socialization tactics and how it relates to virtual work and intention to quit during the Covid-19 pandemic. From our review of the literature in newcomer socialization, we see that literature on digital newcomer socialization on graduates is almost non-existing. With this study we want to shine a light on newcomer socialization that happens at a crucial point in people's careers. Due to Covid-19, digital solutions have been heavily increased and there is a need to examine the effects of these solutions. The aim with this study is to help organizations and newcomers improve the digital socialization process towards graduates and reduce the intent to quit. The results also contribute to the field of newcomer socialization and turnover. Our cross-sectional study utilized a self-completion survey to catch the effects of virtual work, virtual socialization tactics and supervisor support on socialization and the outcome of intention to quit. The results indicate that graduate newcomers benefit from exposure to virtual socialization tactics and that virtual social tactics are highly beneficial to increase role and relationship socialization. Our results regarding virtual work, newcomer socialization and intention to quit did not give any significant results. Furthermore, we have assessed some weaknesses in our study, such as poor questioning and a small sample size, which can be causes for several non-significant results in our study. Lastly, we present some areas for future research based on our findings.

5.1 Theoretical implications

5.1.1 Virtual work and graduate newcomer socialization

Our findings suggest that the degree of virtual work has no association to any of the socialization domains, which indicates that the degree of virtual work does not have any effect on how well newcomers get socialized. We find this quite interesting, because we assumed that graduate newcomers with a high degree of uncertainty would be more socialized whether it is virtual or traditional work. Moreover, we expected that the advancement in technology would make it easier to communicate and share information within the organization, making virtual work more valuable than before. Previous research is very limited or outdated on the subject of digital socialization because of the rapid advancement in communication technology. For example, Ahuja & Galvin (2003) only examined emails to study social and task-

related contexts. The Economist Intelligence Unit (2020) suggested that digital communication and collaboration will impact the way we work, implying a positive or negative change. This may still be true for other aspects of digital work. But based on our findings, we struggle to see any relationship between virtual work and graduate newcomer socialization.

However, we suspect that the lack of variation in our measure of the degree of virtual work does not catch the relationship that is present. Most of our answers ended up in the high end of digital work (20 respondents on 80% and 10 on 60%), providing little variation in the degree of virtual work. Thus, it struggles to detect how the degree of virtual work affects the socialization process, but rather becomes a measure that examines how well newcomer graduates who work in a mostly digital environment are socialized.

We also hold on to the possibility that virtual work, in fact, is not related to how well newcomer graduates are socialized. If these findings are in fact correct, they indicate that the degree of virtuality does not matter in terms of how well graduate newcomers are getting socialized, and that other factors, such as virtual socialization tactics and other online practices, are of more importance to socialize graduate newcomers virtually. But we do not believe that there is enough power in our measure of the degree of virtual work to fully suggest that this is the case.

5.1.2 Virtual socialization tactics and graduate newcomer socialization

Our findings suggest that virtual socialization tactics only increase socialization in the organization domain and have no association to the role or relationship domains, which only partially supports hypothesis 2. We also found partial support for hypothesis 3, which our findings supported that virtual supervisor support increases the socialization in the role and relationship domain. Virtual supervisor support did not have any relationship with the organization domain. We noted that for the role and relationship domains, the effects of virtual socialization tactics were heavily reduced to almost zero, while virtual supervisor support was increased in the same areas (table 3). Based on these findings we would argue that social socialization tactics are more important than other virtual socialization tactics to increase the role and relationship domain.

In the organization domain, we found that other virtual socialization tactics are more effective. This implies that the other dimensions of tactics that are not included in the social tactics (serial and investiture) are the most efficient ones for this domain. Our study has only examined the factor of social tactics, which means that we cannot with certainty tell which dimension that works best for the organization domain. Cooper-Thomas et al.'s (2020) analysis of the organization domains says that this domain addresses the organization's norms in both formal and informal aspects. Examples of formal aspects are values, history and structure, while the informal aspects can be for example stories and rituals that tell the employees the right attitudes and behaviors in addition to who has power. Virtual socialization tactics that provide graduate newcomers with this kind of information would then be the most efficient way of socializing in the organization domain.

Looking at Jones' (1986) two other factors, content and context tactics, our findings would suggest that these two are more important in the relationship between virtual socialization and socialization in the organization domain than social tactics. It is to assume that learning about the organization and how the structure is built up in a virtual setting is easier by providing good information and having that information available virtually, rather than getting that information from, for example, a supervisor who you might not be in contact with every day. It is difficult for us to suggest anything further than this based on our results. However, future research should examine this relationship to make the virtual socialization process more efficient for organizations and graduate newcomers.

Furthermore, our study does only measure the degree of availability and presence of support and not the quality of the support. These findings implicate that the presence of support itself is important and can lead to increased socialization in the role and relationship domains, but do not assess the quality of the support. In the theory chapter we argued that graduate newcomers enter the organizations with significantly less experience than other newcomers. Thus, any kind of support will help increase socialization. It would make sense that better quality of supervisor support and other types of support would speed up the socialization process and lead to faster rates of adjustment. However, further research is required to acknowledge this.

One issue that we want to address for our construct of virtual supervisor support is in regard to conceptual overlap with the relationship domain construct. As mentioned earlier, Cooper-Thomas et al. (2020) state that the relationship domain is about newcomers' need to establish valuable and effective relationships with colleagues to become integrated socially. Supervisor support, in general, only discusses the relationship between the relationship between an assigned experienced employee and the unexperienced newcomer. This distinction can also be seen in the questions that form the constructs. Thus, the newcomer's ability to form relationships with colleagues can be completely independent of the newcomers' relationship with the supervisor. Therefore, we argue that we have two different constructs that do not overlap. Based on this argumentation, implication of our study can mean that virtual supervisor support helps newcomers form relationships with other colleagues more efficiently in a virtual setting. This is also in line with what research says about supervisor support in general (e.g., Rollag, 2005; Korte, 2010).

5.1.3 Virtual work and intention to quit

Our findings found no support for socialization as mediators for the relationship between virtual work and intention to quit. Neither did virtual work have any direct effect on intention to quit. This is not in line with previous research done in the field, where telework is negatively related to turnover intentions (e.g., Golden, 2006). However, because of the advancement in technology in the last decades, attitudes towards virtual work might have changed. In fact, studies have found evidence that the trend of digital work and work from home have received much support from employees and that many of them want to keep work virtually when the pandemic is over (The Economist Intelligence Unit, 2020). Therefore, our findings can be an implication of the fact that there are other factors that play a more important role when it comes to the intent to quit for graduate newcomers, and not the virtuality itself. For example, virtual socialization tactics and virtual supervisor support.

From our correlation analysis we see that both virtual socialization tactics and virtual supervisor support are significantly related to intention to quit, which might

indicate that there is a relationship there. However, this study has not tested this. From the theory review, socialization tactics and supervisor support had several studies showing their relation to intention to quit (e.g., Allen, 2006; Cooper-Thomas & Anderson, 2002). Therefore, there is to assume that the relationship in a virtual setting would be similar to the established relationship in a traditional setting. We found the relationship between virtual work and intention to quit much more interesting as there are few studies done on this and most of them are outdated. Nevertheless, our assumption that virtual socialization tactics and virtual supervisor support are most likely related to intention to quit should be explored further in the future.

When looking at the socialization domains, we only see that intention to quit has a relation to the role domain, while Cooper-Thomas et al. (2020) showed a negatively significant relationship between intention to quit and the relationship domain. We suspect that the effect might be too small to be picked up because of our small sample size. In addition, as mentioned for hypothesis 1, we are also not confident about our measure for the degree of virtual work.

5.2 General thoughts and observations

Notwithstanding certain methodological problems, our research and especially our literature review has shed light on timely issues, especially for graduates starting their careers at this challenging time. HR Magazine (2021) reported, as mentioned earlier, that 59% of UK graduates preferred to start working traditionally, while 41% want to begin remotely. Looking at the literature on digital and traditional socialization, it is no wonder why the opinions are so divided towards working remotely. Studies have found that social information and tacit knowledge is hard to share digitally (Asatiani et al., 2021; Ahuja & Galvin, 2003), putting graduate newcomers who start working remotely at a disadvantage. Drawing from our findings, they indicate that interactions with others are important to acquire knowledge about the role and form relationships more efficiently also when working in a virtual environment. Based on these findings and our review (E.g., Gruman & Saks, 2018), it is suggested that digital socialization should include face-to-face interactions whenever this is possible, as face-to-face contact foster social learning and socialization to a greater extent than what digital practices do (Powell et al., 2004). Therefore, there is to assume that organizations who want to utilize

digital socialization should include some kind of face-to-face contact for newcomers.

Although we have not managed to find a statistically significant relationship from virtual work on our measures of newcomer socialization, there could be other underlying causes and effects that have a stronger explanatory value. Virtual work might not affect the newcomers as directly but that potentially the variable works through other effects. Our findings may have given these thoughts a potential push for researchers to study. In the literature, the importance of proactive behavior in a traditional setting shows better socialization into organizations, especially for extroverted and open personalities (Wanberg & Kammeyer-Mueller, 2000). Perhaps a Big Five Personality analysis would expose more interesting findings on the effect of virtual work. This is also an impression we are left with from discussions with newly graduated friends and family. Some people in a virtual setting have been left independent and with little supervision earlier than hoped for, while others say that they are less micromanaged and feel less pressure both socially and professionally. Perhaps this is why our virtual work variable is non-significant because how people perceive and handle a virtual setting depends a lot on the individual preferences and personality.

Some recent literature has turned their focus on how to create substitutes for the barriers and challenges that digital socialization presents. Asatiani et al. (2021) discusses this in the light of organizational discontinuity theory (ODT). Discontinuities are negative effects of traversing boundaries which a group or individual would identify as any change in the flow of communication and information that require additional effort to handle (Watson-Manheim et al., 2012). To minimize these discontinuities there are designed actions that are called continuities. Establishing continuities can function as a substitute to certain parts at work where a traditional working environment would have been more effective (Asatiani et al., 2021). Drawing on the arguments from this study over to our research and findings, substitutions may serve as a solution in some instances where digital socialization struggle to follow traditional socialization. For example, can a more extensive structural and individual working approach act as a substitute for the absence of relationships with colleagues and organizational culture to encourage job commitment and engagement in a virtual setting. This might have a greater

effect for newcomers, and especially graduates, as they seek to reduce uncertainty and create a more predictable working environment for themselves.

5.3 Practical implications

We hope that our research may be useful in several ways. In addition, we believe that our survey can be facilitated in a number of ways to be proven useful.

First, our findings from virtual socialization tactics should be taken into consideration when making socialization tactics to socialize graduate newcomers. Findings already suggest that institutionalized socialization tactics are the most efficient way to socialize graduate newcomers (Saks et al., 2007). Building on that, we propose that when assessing virtual socialization tactics, tactics that are social tactics should be focused on when the organization wants to socialize graduate newcomers more in the role or relationship domain. If the focus is on strengthening the organization domain, social tactics are not the most efficient, but other virtual socialization tactics should be considered. We have not specified what other virtual socialization tactics the concept consists of.

Our results supported the findings of Saks et al. (2007) regarding social tactics as strong predictors of newcomer adjustment. We suggest that graduate newcomers should have as many opportunities as possible to interact and meet with more experienced members in the organization also in a virtual setting. Findings from Bauer et al. (2020) suggest that meeting your managers on the first day had an effect on the feeling of acceptance. Moreover, managers might consider assigning an experienced employee as a mentor or supervisor to the newcomer at arrival to represent the organization. The mentor presents the organization's goals and values and focuses on assisting the newcomer develop in the role and grow an identity. Nonetheless, organizations must consider what they expect in return of their social tactics before investing heavily on social tactics.

Our survey can be facilitated by newcomers to assess their own socialization progress by receiving feedback on in which areas they are on track and in which areas they need to more actively be involved. Moreover, the survey can also be facilitated in regard to communication between the newcomer and the supervisor

or manager. For example, by self-reporting from the newcomer, in addition to objective reports from others. Another solution could be to use the items in the survey simply as a framework for conversation between the newcomer and their supervisor or manager to reveal where the newcomer is progressing and where they may need help from others to fill the gaps. Conversations like this can integrate the newcomers' career goals into the organization's goal, which is proven to facilitate stronger organizational commitment (Cable et al., 2013).

Similar to the NUIS (Cooper-Thomas, 2020), our survey can be used to obtain ratings for several purposes. Managers, supervisors and colleagues can use these ratings to identify gaps that could be filled with training or supervision, where practices are successful and could be applied other places, evaluating the effects of recent changes and revealing patterns across domains. Further, organizations can check for links to specific domains in regard to support and turnover.

Another possible way to take advantage of the survey could be to look at the performance of managers, supervisors and coworkers through the newcomers' ratings to see how well they have socialized the newcomer. For engagement surveys this is a common practice (e.g., Cooper-Thomas & Anderson, 2002). However, Cooper-Thomas et al. (2020) explains the risks of leaders, mentors and supervisors exploiting these ratings for their own winnings, putting pressure on newcomers to give them much higher ratings despite what reality tells us.

5.4 Strengths and limitations

5.4.1 Study design

Our cross-sectional self-completion survey may run the risk of common method bias blowing up our results. To somewhat reduce this concern, previous research has utilized the measures of socialization in successful longitudinal studies (Chao et al., 1994). Our study has only performed a Cronbach Alpha analysis to check for the stability and reliability of our measures. Notwithstanding the good results from the analysis, we would suggest a longitudinal research design for a more thorough assessment of our measures to strengthen our survey, despite the fact that newcomers should report increased socialization over time in any case (Cooper-Thomas et al., 2020). A longitudinal design could also measure the degree of virtual work better, and more accurately detect if there are, in fact, a relationship between

virtual work and newcomer socialization. Further, to catch the differences between virtual and traditional work, a longitudinal design could also prove to be more effective.

Moreover, the respondents' subjective opinions may create distance between the value they set themselves and the actual real value that may be right. Because our respondents are graduates and most likely in their first job, it does not make sense that many of the answers are set so high. For an anonymous survey such as ours this can be difficult to work around. However, future research may find other ways to counter the subjective bias e.g., by asking managers or supervisors to fill out the same questionnaire.

5.4.2 Sampling

We would argue that our sample, apart from its size, is a strength in our study. We managed to get access to our sample through two of the biggest and most important business schools in Norway and their master's degree programs. We were able to reach out to our clearly defined population of graduates of 2020 that started their careers virtually. Thus, keeping a strong homogeneous sample.

One of our most evident limitations of the research is our small sample size. A larger sample size would provide more power to our study and perhaps detect smaller effects that may be present. In addition, a larger sample size will most likely reduce our sample error (Bell et al., 2019). We argue that our sampling is good practice as we have a random sample from our population (Bell et al., 2019).

We would also consider some poor questions in regard to virtual supervisor support that can cause some data collection error for our sample. In some questions for the concept, we see that they were not optimally made to test for a virtual setting. It may then be the case that the concept does not only measure the virtual setting, but both virtual and traditional supervisor support may fall into this construct, also compromising the discriminant validity (e.g., "I receive the right amount of support and guidance from my supervisor").

5.4.3 reliability of measures

To test-retest for the stability of our survey, we suggest a more longitudinal study, despite the assumption that newcomers should normally report an increase in adjustment and socialization over time.

From our Cronbach alpha test, we see that the internal reliability is over an acceptable level for most of our constructs. Bell et al. (2019) argues that a Cronbach alpha of 0.8 and above is typically the rule of thumb for an acceptable level of internal reliability. Still, many researchers argue that lower values, usually 0.7 and above, are considered efficient. (e.g., Schutte et al., 2000). In our cases we value our Cronbach alphas as acceptable in all cases, strengthening our internal reliability. In addition, we have reviewed previous socialization measures and the critique of them to ensure that we achieve the strongest predictors.

We especially find our degree of virtual work variable weak. Since we made it a 1-item only concept in our survey, the internal reliability is hard to measure and the reliability of the concept in general should be questioned. Moreover, we see that the variation in answers for virtual work is small, thus the variable fails to find any relation between the degree of virtual work and the other study variables.

5.4.4 Validity of measures

We would argue that our concepts of newcomer adjustment and intention to quit has face validity. Both concepts have been used, criticized and revised many times to construct the best measures for the concepts. In regard to the concepts of virtual supervisor support and virtual socialization tactics we find the face validities somewhat questionable. Previous research has not presented any measures of these concepts. However, we leveraged previous literature on traditional socialization tactics, supervisor support and quality of supervisor support as we mentioned in the method section. Thus, we consider these newly established measures to have potential for revision or improvement.

We also question the convergent validity of virtual work, as we had no measures from other researchers or studies to compare with when creating the concept. Further, we advise more testing of the concept “virtual work” and the degree of it to strengthen the reliability and validity.

Another issue that came up for our study was the discriminant validity of our construct of virtual supervisor support in relation to both the relationship socialization domain and traditional supervisor support. We have addressed both these issues in previous sections. We are concerned about what type of supervisor support our items actually measure. Since two out of four questions lack the virtual indication in the questions, there may be a risk that they also measure traditional supervisor support, which is something we already have established as a strong effect on graduate newcomer socialization.

5.4.5 Generalization and replicability

We initially do assume that our study is generalizable for our population, as we have focused on a business-oriented section of graduate newcomers. There is a possibility that results could be generalizable for other graduate newcomers in Norway living in other work sections and in their twenties. However, the results may not be representative for other newcomers, nationalities, occupations or maybe even outside a pandemic setting. However, we argue our study is replicable as we have explained our steps and have the necessary measures and procedures presented in the appendixes. Our research model is very simple, as we have only done simple and multiple regression models in R. The biggest challenges for replication would be to gain access to the same population and sample. We would also note that there is a consideration about the setting we conducted our study, during the Covid-19 pandemic, which can be hard to replicate.

5.5 What could we have done differently?

In the aftermath of our study, we have reflected and given some thought to what we have done, and what we could have done differently to improve the study. There is no definitive way of saying what the absolute right way of doing this is. However, we see that some parts of the study could have been designed a bit differently to open up for the exploration of traditional versus digital socialization. We wanted to do the study anonymously, meaning that some obstacles were hard to find another solution for. For example, getting the best measure for the degree of virtual work. The better solution would be to get real time numbers of digital working hours, but that would most likely give us the means to identify our respondents. Therefore, we

would argue that we had a good solution for this, but we were unfortunate with the low response and variation in the answers. Yet, there are a couple of major issues in our study, and we would like to discuss three of the most notable ones that could have been done better.

First, we would like to address our measures. In our study, we choose to group up some of the measures, such as age, months in current job and the degree of virtual work. We did this to make our analysis in R easier, but we have experienced that grouping, in fact, made it harder. Instead of getting numerical variables, we got categorical variables, which made our analysis more complex, and our results were more difficult to decipher. Additionally, we were made aware that groupings of variables can cause information loss after we had already sent out our survey. Moreover, we had to change our categorical variables to numeric, as we have explained in the measures section, which can also be a cause for loss of information. If we were to do this study again, we would like to change our questions that had grouped up answers to be more specific. Such as the exact age, months at work and the degree of virtual work.

Second, we additionally had a measure for traditional socialization in our survey, which we did not utilize. Our initial thoughts were to include a section where we would compare traditional and digital socialization, but our design made it hard to do so. Our design was not made with a clear traditional versus digital socialization distinction. We measured the degree of virtual work and how much traditional socialization, in addition to virtual work, the respondents were exposed to, which was very low as well. A possible solution to this for comparing the two concepts could be to compare two samples where one is graduates that started their careers virtually and the other sample is graduates that started traditionally. In this way, the distinction between virtual and traditional is clearer and it is easier to see the differences.

Third, as we have addressed, there are several questioning issues in our survey that may have caused more than one error. The virtual supervisor support variable, in particular, has been an annoyance during our study, considering the work we put into design items for this construct. Throughout this paper we have discussed several problems that this may have caused in regard to conceptual overlap with

other concepts, validity and data collection error. Therefore, a change in these questions would be in order for future research.

5.6 Implications for future research

In retrospect, after analyzing and reflecting on our study and its implications, we acknowledge that we did not manage to get a good measure on the degree of virtual work. In the future, we suggest that researchers studying digital work and socialization should assess and take on the degree of virtuality to study the differences in the digital socialization and traditional socialization in terms of socialization adjustment and outcomes. Gruman and Saks (2018) also state the importance of the degree of virtuality and that it should be assessed to study the differences in e-socialization practices and traditional practices.

Based on the findings of virtual supervisor support we suggest that researchers take a closer look at the relationship between the organization domain and virtual socialization tactics. In our study we did not specify what type of tactics virtual socialization tactics were. As mentioned, we set virtual socialization tactics as a variable containing all other tactics, except for social tactics. Our results indicate that other virtual socialization tactics are more effective than social tactics for the organization domain. Therefore, future research should examine this relationship to assess what type of virtual socialization tactics works best for the organization domain. It would be to assume that virtual tactics that capture the organization's formal aspects of values, history and structure, in addition to the informal aspects of rituals and stories would be most effective for this domain (Cooper-Thomas et al., 2020). As discussed earlier, researchers should look at content and context tactics as effective tactics to increase socialization in the organization domain.

Moreover, our study suggests that the presence of virtual supervisors is important for socialization in the role and relationship domain. Our review of traditional socialization also shows that social support to newcomers is important (e.g., Saks et al., 2007). Researchers studying supervisor support often measure the quality of the supervisor (e.g., Eisenberger et al., 2002). We suggest that future research do the same for virtual social support tactics. There is to assume that more frequent communication between supervisor and newcomer will increase socialization, but

how will the quality of the communication and the quality of supervisors affect this relationship?

As we did discuss in the section above, our study does not directly compare traditional vs. digital socialization. Therefore, future research should compare online socialization to traditional socialization. Based on our review, it is to assume that virtual socialization will result in lower newcomer adjustment and socialization outcomes compared to traditional socialization. If we look at the possibilities for a combination of traditional and digital socialization instead of as two separate concepts, a comparison of them would enable organizations to fully understand the strengths and weaknesses and utilize a combination of both traditional socialization and digital socialization practices to make the socialization process more efficient.

Gruman and Saks (2018) suggests that online socialization will be more individualized than institutionalized. However, research on traditional socialization suggests that institutionalized socialization tactics work better for graduate newcomers (e.g., Saks et al., 2007). To our knowledge, there has not been any studies comparing individualized and institutionalized tactics in a virtual setting. Future research should investigate these tactics in a virtual setting and see the effects they have on newcomer adjustment and socialization outcomes.

6.0 Conclusion

This study sought to increase our understanding of digital socialization and how we can improve the digital socialization process. Our findings show that how much time spent working virtually for the first year as a graduate newcomer, did not affect the socialization process. Further, the results indicated that virtual socialization tactics increased socialization in the organization domain, while virtual supervisor support increased socialization in the role and relationship domains. The implications we see from this study is that virtual socialization tactics and virtual supervisor support are more important for the graduate newcomer socialization process than virtual work. It is the digital practices and activities that have a bigger impact on how well the graduate newcomer is socialized. Neither did we find any support that virtual work affects the intent to quit among graduate newcomers. This comes to show that graduate newcomers might be so accustomed to digital solutions that virtual work seems like an ordinary practice and not something that can create

barriers to form relationships and commitment. Digital socialization and virtual work are growing, and our study indicates that these subjects continue to be promising and interesting topics to explore further.

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