The Future of Fitness: Virtually Mediated Fitness and Social Practice in Transition

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Abstract

Objective: To investigate how the practice of fitness changes as group fitness instructors transition to a virtual delivery model precipitated by the COVID-19 pandemic.

Methods: Six group fitness instructors were interviewed in an exploratory, phenomenological study between April 22 and May 19th, 2021 using a social practice theory framework. Textual analysis of the interview transcripts was performed to analyze the competences, meaning, and material elements associated with the practice of fitness.

Results: Based on the results of the interview transcripts, nine key findings were discovered: accountability & motivation; connection & relationships; livelihood; business operations; job fulfillment & burnout; feedback & cues; career training; experience; and client form.

Conclusion: The findings of this study indicate that the disruption of technology in the context of the practice of fitness has changed, at least temporarily, what it means to be a group fitness instructor.

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Introduction

Canada's fitness industry has annual revenues near $4 billion (Statistics Canada, 2018); always evolving due to the wants and needs of clients, recent years have seen a boom in boutique fitness studios popping up in urban centres. Boutique fitness studios are gyms that offer group fitness classes, compared to traditional set-ups found at 'Big Box Gyms'. Now, in light of the COVID-19 pandemic, boutique fitness studios are grappling with concerns around business continuity due to government mandated shutdowns and uncertainties surrounding new public health measures. To help mitigate some of these effects, studios have been adopting digital platforms, digital fitness applications, and renting out equipment as a means to continue to run group classes for clients from their own homes. However, how does the prevalence of group fitness mediated by technology change the experience of this fitness practice? In an attempt to answer questions about how digital fitness technologies affect fitness and activity levels, numerous research studies have been undertaken. For example, researchers have explored the phenomena of hybrid spaces, where physical space and digital information intersect (de Souza e Silva, 2006; Frith, 2013) as well as how digital technologies have made fitness an ongoing, never-ending activity due to on-demand accessibility (Millington, 2014a). Other researchers suggest that the use of specific features in digital applications can affect individual health behaviours and motivation to exercise (Lee and Cho, 2017).

However, these studies have primarily investigated the effects technologies have on in-person fitness or participation in physical activity, and have not yet explored how fitness mediated by technology, such as virtual fitness instruction, changes the experience or disrupts the actual practice of fitness. This topic, as it relates to the fitness industry and the wider field of communication studies, is important to examine because when new technologies disrupt

activities in our daily lives, businesses, and pastimes, it is necessary to explore how our habits, practices, and societies change or stay the same as a result.

The purpose of this study is to draw on social practice theory (Shove, 2012) to examine the impact of digital, or virtual, technology in the overall experience of group fitness from the perspective of fitness instructors as they shifted to online classes during the pandemic. This study chose to focus on instructors rather than clients, because fitness instructors not only offer a unique view into the pivot to virtual fitness during the COVID-19 pandemic, but they can speak with authority on the fitness industry and they are typically more invested in the practice of fitness compared to clients as their livelihood is supported through fitness training and instruction. However, this study uses a small sample of research participants, and is therefore not exhaustive of all virtual fitness experiences, but merely representative in scope limited to fitness studio environments and fitness professionals.

In order to gain insight into some of the factors that affect virtual group fitness a qualitative phenomenological approach was adopted for this exploratory study for the reason that "phenomenological methods are particularly effective in bringing to the fore experiences and perceptions from their own perspectives and therefore at challenging structural or normative assumptions" (Lester, 1999. p.1). This study hopes to highlight a comprehensive understanding of how technology changes the experience of group fitness, as experienced by group fitness instructors since they are the individuals most affected by this disruption and hold a vested interest in both fitness instruction and the well-being of clients participating in their classes.

This study follows a qualitative approach using descriptive phenomenology to describe the experiences of group fitness instructors. Six certified, group fitness professionals from the Edmonton, Alberta area were interviewed virtually, and described their experiences having

transitioned over to a virtual model of group fitness class delivery over the course of the COVID-19 pandemic.

Likewise, the literature that supports and informs the design of this study will follow Shove et al.'s (2012) theoretical text, *Dynamics of Social Practice.* This book seeks to explain how social practice theory can be used to understand social change and address how practices emerge, exist, and disappear; the elements that constitute a practice; and how the links between practices are created, renewed, and reproduced (Shove et al., 2012). This text serves as an important influence in the development of this research paper to fully explore how virtual fitness instruction impacts the practice of group fitness.

Therefore, to investigate the scenario and approach outlined above, the following research question for this study was developed:

RQ: How does the practice of fitness change as instructors transition to a virtual delivery model?

This research study is divided into three sections: the literature review summarizes key academic literature on which this study is based; the research design and methodology chapter details the approach and methods employed in the data collection process; and, the findings and discussion chapter analyzes the gathered data, explains its results, and discusses its implications to the practice of group fitness.

The subsequent chapter will explore the search of the relevant literature and how the above mentioned research question for this capstone project was developed.

Literature Review

Introduction

The COVID-19 pandemic precipitated a disruption to the health, routines, and lives of everyone worldwide. Included in this was the interruption of fitness and overall physical activity. Gyms and fitness studios shuttered and many adopted alternative forms of exercise and spaces to exercise; some moved outdoors to walk or run, others rushed to purchase equipment and outfitted their homes into gyms, while many turned to virtual spaces. These actions and spaces all affected the way we practice fitness in our daily lives. Hoping to better understand how the practice of fitness, or the experience of fitness, changed when technology was introduced, this project, using a social practice theory framework, explores the experiences of group fitness instructors and the relevant literature offering varying interpretations of the virtual or digital fitness landscape.

This literature review, in exploring the experience of virtual group fitness, will outline an explanation of the search methodology, including the research questions that were developed to guide the literature search. These research questions aim to uncover how the experience of group fitness changes due to the relationship with technology, precipitated by the COVID-19 lockdown of 2020. Further, the inclusion and exclusion criteria of the literature will be presented, and a discussion will provide a comprehensive understanding of the existing literature relating to the overarching themes that support the research questions: digital fitness technologies; social media fitness, online networks, and communication; COVID-19, physical activity, and fitness; and the theoretical context for which the research project will be framed.

On balance, there will be a summary of the literature including key findings of the relevant literature as well as addressing the existing gaps in the literature and how these limitations will be explored.

Methodology

Wanting to examine the pivot to virtual models of fitness precipitated by the COVID-19 pandemic, and how the introduction of technology changes the fitness experience, the literature search was guided by the following questions:

RQ1: How does the group fitness experience change moving online?

RQ2: What features of group fitness classes have the most impact on participant motivation and commitment; what does this look like in a virtual model (especially feedback)?

The literature search was organized by recording and filing the selected literature using the reference management software, Paperpile. Using primarily the University of Alberta's Library Academic Search Complete and EBSCO databases as well as Google Scholar, specific keywords and terms were searched, which were then recorded into a separate Google document. The following keywords and combination of keywords were included in the literature search.

Literature Search Keywords	
fitness or exercise or physical activity and virtual or digital or online	media and fitness or exercise or physical activity
digital fitness	fitness or physical activity and COVID-19 or coronavirus or pandemic
media and fitness	social practice theory and health or fitness
biopedagogy and online or digital	interactivity and fitness or exercise or physical activity
online fitness or digital fitness or virtual fitness	on demand or streaming and fitness;
internet and fitness or exercise or physical activity.	YouTube and fitness or exercise
digital technology and fitness	uses and gratification theory and fitness
indoor cycling and fitness or online	group fitness or hiit and digital or online

Outside of using the online databases to search for keywords, the reference lists of relevant articles already identified were also used to help find additional sources. Overall, the literature search yielded 68 articles, which was subsequently narrowed down to 50 articles using the eligibility criteria outlined in the next section of this review.

Eligibility Criteria

This literature review sets out to give the reader insight into the current research and thinking on digital fitness and technology. In order to refine the literature to 50 of the most relevant sources, the following parameters for eligibility were defined.

Year of publication. In order to keep the knowledge of digital fitness relevant to the context of group fitness moving online during the COVID-19 pandemic, the researcher felt it was important to ensure the literature explored was relatively recent as technology evolves so quickly, therefore, the literature was limited to articles published within the last fifteen years.

The exception being for articles relating to the study's theoretical framework, which could be outside of this fifteen year timeframe.

Peer review. Unlike other more established topics of research on fitness, the fields of virtual fitness and fitness technologies are still emerging; relevant peer-reviewed sources that detail exactly the specific virtual technologies or fitness activities this research project aims to explore are limited.

Grey literature. Contrary to the search on peer-reviewed, scholarly articles, a plethora of grey literature exists on the topic of this capstone project. Especially in light of the COVID-19 pandemic, and the instant rise in popularity of virtual home fitness devices and applications during the spring lockdown. However, the number of grey literature sources that offer a snapshot of the present digital environment was kept to a minimum, so as not to cloud over the academic perspectives.

Country of origin/Cultural context. This research project was conducted within a Canadian context, and most of the literature examined was framed within a similar cultural context: North America, Australia, or Western Europe.

Organizing and categorizing the data. As mentioned above, the literature collected was organized in a reference management software program, Paperpile; but was further organized by creating categories or themes in which to sort all sources. These categories included: theoretical perspectives; digital fitness technologies; social media, online networks, and communication; COVID-19, physical activity, and fitness. If any articles did not clearly fit into one of these categories, they were not included in the literature review.

Discussion of the Literature

      Digital fitness technologies. We are in the midst of a second fitness boom, which is characterised as: socio-technical- an integration of people and 'things'; interactive; data-intensive; customizable; networked; and commodified (Millington, 2016, p. 1185). The second fitness boom is also classified as 'fit for prosumption', production and consumption merged together (Millington, 2016, p. 1186). With the integration of sophisticated, interactive fitness hardware and software into one's daily routines, the fitness participant is more scrutinized than ever before because of these pervasive new technologies such as fitness trackers, Apple iWatches, and countless free and subscription-based apps that track and train the user. Likewise, with the development of new at-home-fitness smart equipment such as Peloton, Tonal, and The Mirror, technology is evolving beyond platforms, applications, and wearable devices (Duffy, 2020). Digital at-home fitness options are beginning to disrupt the traditional fitness market; and the COVID-19 pandemic has only expedited this process. Peloton, the tech company who pioneered smart-home-workout devices with their indoor spin bike, reported growing their revenues by $100 million in the span of one year, with plans to now expand into other areas of home fitness (Hambrick, 2017). During the early days of the mandated spring COVID-19 lockdown, studios and gyms scrambled to adapt to an online model, and avid-gym goers rushed to purchase home fitness equipment and smart devices (Gurman, 2020). Stay-at-home orders precipitated the trend of people and technological devices connecting in new and more ways than ever before.

      As users connect with their fitness devices, they engage in a form of two-way communication. The literature states that most view their wearable devices as social. Many report that their devices regularly communicate to them, creating a two-way dialogue between

the device and the individual; and that it is these communications that prompt them to change or modify their fitness behaviours (Kreitzberg et al., 2016). Yet it is the prevalence of these health-tracking and fitness technologies that have produced a form of digitally mediated biopedagogy. Producing a 'body' whose actions and activities are shaped by algorithmic processes (Williamson, 2015, p. 135). Where human practices are influenced by computational processes, Williamson (2015) introduces the term 'calculated publics'; constructed through traceable activities and presentation of a public that would not otherwise exist except that the algorithm called it into existence (p. 135). These emerging health and fitness technologies influence more than our daily activities and diet, they also quantify the individual, and subtly reshape our beliefs and behaviours.

Moreover, in terms of changing fitness behaviours, some specific app features are found to be more effective at motivating, and more importantly, retaining users. Social presence for networking and community building, competence, and autonomy are all significant features that lead to longer-term usage (Lee and Cho, 2017). Likewise, other characteristics that motivate and retain users of digital fitness applications include: recordability, networkability, credibility, comprehensibility, accuracy, trendiness, and entertainment. Where accuracy and entertainment are surprisingly, not the most significant influencing factors (Lee and Cho, 2017, p. 1451). Similarly, the literature also shows that success results due in part to several advantages and features of an app, including: targeting all forms of sedentary behaviour across all environments; automatically monitoring sedentary behaviour, eliminating the need for self-reporting; using monitored data to remind users when to become active; and providing reinforcing feedback in real-time (Bond et al., 2014, p. 7). However, the literature indicates that gender differences can also play a significant role in user motivation (Molina and Sundar, 2020, p. 72). According to

Molina and Sundar (2020), males and females are motivated by very different fitness goals, and therefore different features of digital fitness applications and devices will appeal to each gender (p.72).

The literature denotes that young people (aged 16-25) value the agency, accessibility, customisation, and convenience allowed by digital fitness technologies, but that they also value the importance of face-to-face and personal online connections that support their health and fitness (Lupton, 2020). Whereas some may enjoy the new capabilities afforded by on-demand fitness technology, a study by Millington (2014a) counters that the increase in mobile health and fitness technologies have become a pervasive force that enables the key tenets of a control society (p. 480). The 'medicalization' of cyberspace seems to be in the interest of self-improvement, but bigger problems may exist such as, privacy implications, and data and social surveillance (Millington, 2014a, p. 491). The smartphone and other technological devices enable health and fitness activities, but they have also made these activities on-demand; meaning we no longer need to be in the gym to be exercising or physically active, we can do these activities anywhere at any time. This lends to the notion of being in a control society where the 'work' is ongoing and never ending- constantly guided towards achieving unattainable body and fitness goals (Millington, 2014a, p. 492). This phenomena is also described in the literature as the concept of a hybrid space, where digital information, social connections, and physical space intersect to create an 'always-on' dynamic for the user (de Souza e Silva, 2006; Frith, 2013). Health and fitness devices and applications highlight the role of consumer culture by affixing positive meanings to the ideal fit and lean body, and take this to new levels by not only emphasizing the ideal, but by assessing and telling us how to achieve it (Millington, 2014b).

This counter perspective highlights the cautionary side of digital fitness, stating that we should be wary of these applications and devices for three reasons: first, the narrow representation of the ideal, and often unobtainable, active body; second, the health divide that is created by purchasing power, with that being limited to those with extra income and the leisure time to participate; third, the questionable relations that underlie equipment production due to the tech industry's record of labour inequalities (Millington, 2014b, p. 502).

Social media, online networks, and communication. Different models of technology, such as social media and online networks, support online fitness activities, but are not directly reflective of this project's specific area of research; however, they still provide valuable insight into the prevalence of the online fitness trend. Due to the nature of social media allowing instant feedback, users experience satisfaction, pleasure, or affinity by means of the reactions of others to their user-generated content (Stollfuß, 2020). Goodyear, Armour, and Wood (2019) reveal the prevalence of young people using social media and online networks for accessing health-related information; according to results, 53% of young people actively use social media to acquire health-related information online; with 60% of those individuals specifically seeking out content on physical activity and workouts (p. 680). Moreover, three structural elements are identified in the literature as supporting learning in both online and face-to-face communities: domain, community, and practice (Gunawardena et al., 2009, p. 5). These elements function together to create a social structure that assumes responsibility for developing and sharing knowledge, which correlates to an online environment for fitness instruction. This literature presents evidence of the efficiency of online models and media influences for exercise, the rise in popularity of fitness-related social media content in the new online fitness landscape, and strategies for increasing user engagement. Specifically, the matter of online feedback will be an

important piece to explore in this capstone project. In other studies where instructors showed personal involvement, provided participants with autonomy for options and choices, and provided workouts suited to individuals' levels, positive results for engagement were produced (Ntoumanis et al., 2017).

Likewise, social media allows for the quick sharing of numbers and behaviours, and fits into the wider discourse of content creation that makes up the majority of activities on the internet (Lupton, 2013, p. 29). The literature highlights how self-quantification through fitness applications allows for reflexivity, and how the iterative process of self-tracking makes connections between our data and behaviours. Arguing that self-quantification supports neoliberalist values, Lupton (2013) indicates that the data collected through self-monitoring has a performative quality, because a big part of self-quantification is the sharing or aggregation of data with online communities through social media (p. 29). The research also denotes that self-quantification has led to the commodification of individual users' data through various modes of self-tracking that have evolved into the following: private, pushed, communal, imposed, and exploited (Lupton, 2014, p. 5). Aspects of the self-quantification phenomena and the self-monitoring of health activities and behaviours is no longer an individual focus, but a larger one for society and our online networks to analyze and interpret.

Similarly, the literature clearly denotes that a link between social media, mass communication, and interpersonal communication exists. While examining messages transmitted within fitness culture through social networking sites as well as how in-person and online social networks influence physical activity, the literature indicates that all networks produced an increase in physical activity; however, existing networks (i.e. family and friends) proved most effective online by providing users with an enjoyable online social experience in addition to the

raw data, placing importance on the inclusion of a user's existing online social network (Jong and Murray, 2016; Rovniak et al., 2016; Stragier et al., 2016). Additionally, the literature provides evidence that mass communication about physical activity also has an impact on levels of physical activity. Years of public health messaging that does not appropriately convey the values and priorities of physical activity that identify closely to all women when comparing those with high vs. low levels of activity (Segar et al., 2017). Current communication practices about physical activity could be improved to better align with the beliefs and value systems of women in an effort to promote better and sustained habits of activity (Segar et al., 2017).

Comparatively, the use of YouTube as a digital platform for exercise is a very popular free option for many users, and there is literature that explores the intentions of YouTube followers who watch content produced by fitness influencers to actually exercise. Providing theoretical context into media influences, including uses and gratification theory, there is consensus in the literature that only individuals who are already physically active have the intention to exercise along with YouTube videos, compared to followers who are not physically active and merely observe (Sokolova and Perez, 2020).

Social media and other online platforms allow for instant feedback, networked communication, and more customization. The literature shows that all of these features help contribute towards sustained or improved levels of physical activity, yet some of these measures only prove most effective to individuals who are already physically active.

COVID-19, physical activity, and fitness. Fitness has existed for a long time, and the origins of group fitness go back to the 1960's when the concept of aerobic exercise was introduced (Wing, 2014). Naturally, our practice of fitness has evolved over time to better meet

the needs of society, similar to many other innovations and facets of life, but we are now seeing a new evolution take place. Fitness technology is growing, and coupled with new health measures and restrictions, our health and fitness practices are changing further. Studios and gyms are having to adopt new technologies that allow members to experience fitness in new ways, outside of the studio (Kestenbaum, 2019) .

Looking to explore how the move to online group fitness changes the experience, the literature dictates that pre-pandemic, individuals who reported interacting with members before, during, and after a fitness class perceived a higher level sentiment of groupness; and that larger classes also predicted higher feelings of groupness (Evans et al., 2019, p. 727). Likewise, fitness instructors and their communication styles play a significant role in motivation and promoting entitativity (Evans et al., 2019, p. 727). Additionally, an exceptional service experience at fitness centres has a positive and significant effect on customers' perceived membership value; therefore, similar customer service strategies could be employed by fitness centre managers for both in-person group fitness and virtual classes to create a positive experience (Baena-Arroyo et al., 2016). Similar literature concludes that equipment, environment, accessibility, and fees are the most significant factors that influence enrollment at fitness centres (Jang and Choi, 2018, p. 1043). However, the literature also indicates that the longer period of time a member is enrolled that more importance is placed on the factors that directly affect exercise, equipment and environment (Jang and Choi, 2018, p. 1043); for instance, the effects of music and light on participant performance during indoor cycling classes show that levels of pleasure are significantly higher when music is introduced to the workout, and that feelings of tiredness are significantly lower when music is playing and lights are dimmed (Shaulov and Lufi, 2009).

Whereas, the factors that do not impact exercise, such as fees and accessibility, decrease in significance over time (Jang and Choi, 2018, p. 1043).

Comparatively, the literature indicates that most women choose fitness centres as their main exercise location, yet fitness centres are more frequently associated with self-objectification and self-critique, with group fitness classes being particularly problematic due to the presence of mirrors and typically very thin instructors; however, the opposite is true of time spent exercising outside of fitness centres (Brown et al., 2017). This can make the case for virtual fitness where class participants can workout in the comfort of their own homes, with the option to turn their cameras off for complete privacy.

Subsequently, the COVID-19 pandemic abruptly disrupted the daily lives of millions bringing on a new normal, which includes adapting to self-isolation, quarantining, and physical distancing restrictions. The long-term health effects of these new measures are still unknown; however, the physical impact may include sudden loss in much needed daily physical activity (Bland et al., 2020). Likewise, restrictions prohibiting access to exercise may directly affect one's ability to create a better immunity response to COVID-19 (Bland et al., 2020, p. 1713). Evidence in the literature shows that the mandated facility shutdowns to curb the spread of COVID-19 had unintended consequences on the physical and mental health of individuals (Duncan, 2020). A cross-sectional study of adult twin pairs reported a higher number of pairs that showed a decrease in physical activity levels compared to those whose levels stayed the same or increased; this decrease in physical activity was also associated with higher anxiety levels (Duncan, 2020, p. 10). The literature shows that short-term levels of reduction in physical activity could become permanently entrenched (Dunton, 2020); and that no physical activity or very limited activity also results in negative effects on the overall physical, emotional, and

mental health of individuals, where physical activity can strengthen psychological resources and coping skills necessary to deal with social distancing and lockdown restrictions (Füzéki, 2020, p. 5). Additionally, recently published literature concludes that the use of fitness apps is able to buffer the decline in physical activity during mandated lockdowns, and that apps using gamification features, in particular, rate higher by participants for effectiveness (Yang and Koenigstorfer, 2020, p. 5).

Overall, the literature indicates that there is a valid argument for how virtual fitness options may present a viable alternative to those affected by fitness facility closures, who are uncomfortable returning to, or unable to return to in-person fitness due to underlying health concerns.

Theoretical framework. The most dominant theories relating to fitness or physical activity and digital technologies are self-determination theory and uses and gratification theory; however, a lack of literature relating to the literature search questions exists as much of the current literature focuses on fitness trackers and wearable fitness devices. Therefore, a directly applicable theoretical perspective was not discernible. Upon further investigation into social science perspectives that would help frame a qualitative study into the changing practice of fitness, social practice theory was identified.

Social practice is a theory that seeks to explain the link between everyday practices and social situations. In showing how everyday practices, such as driving a car, change and stay the same, social practice theory hopes to respond to complex challenges in society; showing that everyday is the basis for social transformation (Shove et al., 2012, p. 14). Contending that 'social' is situated in practice, where practice is defined as a routinized type of behaviour, social practice involves engaging with communities of interest, creating a practitioner-community

relationship; focusing on the skills and understanding of people in their everyday family, recreational, or working lives (Shove et al., 2012, p. 14). Similarly, examinations of social practice focus on how social activity occurs, and subsequently the outcomes of social activity; integrating the individual and their environment to assess the context, and how it relates to their actions and practices (Shove et al., 2012, p. 14).

This perspective is useful for this research project as it seeks to explain how the everyday practice of fitness, and fitness instruction, occurring in a changed environment alters the practice itself. Shove et al. (2012) argues that practices emerge, persist, shift and disappear when connections to elements, such as technologies, are made, sustained, or broken (p. 14). Social practice theory provides alternative ways of understanding human action in relation to health practices, and reconciles structure and agency in the lived experience of everyday life (Maller, 2015; Maller, 2012).

Likewise, the literature indicates that in a health-valuing society, individuals define themselves in part by how well they succeed or fail at adopting health practices, and assess others on the same criteria (Crawford, 2006, p. 411); health as a practice, and health behaviours, subsequently become part of one's identity. This establishes the importance of fitness and exercise as a social practice, specifically in the context of how individuals adapt to new or changed practices. In a new normal where access to regular fitness activities is prohibited, many will adopt virtual options for physical activity. One's success or failure to adopt these new online practices will significantly change the individual's experience of group fitness. Similarly, according to social practice theory, many activities in daily lives are carried out unconsciously and unreflectively, like going to the gym, driving to work, walking to the store, cooking dinner etc… it is largely subconsciously motivated- these practices are simply part of routinized, daily

life (Williams, 1995, p. 598). Social practice theory also serves as a means to assist in explaining and coping with the adoption and pervasiveness of technology in society. Hynes (2012) states that "technology seeps and becomes embedded into many aspects of modern life and can almost become unnoticeable in accomplishing our daily practices, with much of what we do so unconsciously" (p. 39). This logic fits well to explain the experience of adopting and integrating virtual fitness activities into daily life so seamlessly, and the associated changes in light of the COVID-19 pandemic.

However, theories of practice on the subject and physiology of bodies still require more research, because according to Warde (2014) "sports equipment, weight-loss clubs, fashion clothing, tattooing, plastic surgery, vitamin supplements and alternative therapies provide markets for goods and services, which constitute the practices of body management" (p. 293). Likewise, in respect to the body, theories of practice should be expected to have more emphasis as the body is shaped by performances of other practices: work, exercise, eating etc…(Warde, 2014, p.294).

In the context of this study, social practice theory will serve as the appropriate theoretical framework to examine how the practice of group fitness may be changing. Shove et al. (2012), refers to an interdependency between "forms of bodily activities, forms of mental activities, 'things', and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge" (p. 23). To simplify, all of these activities can be collapsed into one of three elements defined by Shove et al. (2012) as competences, material, and meaning (p. 23). Linking these elements together is what constitutes a practice. Following this

logic, the researcher will be able to explore the competences, materials, and meanings associated with virtual group fitness to determine how or if the practice is changing.

Summary of the Literature

    Key Findings. The findings of the literature indicate that some of the biggest distinctions are how digital fitness devices and applications need to evolve over time as the needs of the user change with sustained usage (Fritz et al., 2014). For instance, in devices connected to online social networks, from a long-term motivational standpoint, it's more effective for users to connect with peers who share similar activities or goals (Fritz et al., 2014, p. 495). Similarly, technological features of home workout devices and applications may help motivate users to exercise and enhance the overall experience. The literature notes that gamification features can positively impact user engagement, including: rewards for specific behaviours achieved, competition (constructive competition), social network integration for feedback and notifications, and convenience (Goodwin and Ramjaun, 2017, p. 187). Additionally, there are varying effects of using high vs. low immersive virtual fitness environments as a means of increasing user engagement and enjoyment. Higher immersive environments make the user feel more present, thus increasing enjoyment, where enjoyment has a beneficial effect on motivation levels; however, the use of a virtual coach providing biofeedback (i.e. heart rate) does not necessarily increase user enjoyment, although it can mitigate some of the negative effects of a virtual workout (i.e. overstimulation) (IJsselsteijn et al., 2006, p. 696).

The prevalence of new fitness technologies may change the relationship to in-person fitness, and it certainly changes the overall experience, but the literature guides the notion that these technologies can help sustain and enhance physical activity levels. This is useful to denote

in respect to the current fitness landscape that has drastically had to overhaul traditional practices in light of COVID-19.

      Addressing the gaps and limitations. Overall, much of the current literature explores how technology impacts individual health behaviours, but as many of these devices, and the fact that studios and gyms are only now adopting new technology in light of COVID-19 restrictions, there is little direct research on how technology changes the experience of group fitness classes that stream online. This research study will explore this phenomenon and seek to explain how the experience of group fitness changes as it is mediated by online interventions. Similarly, there exists significant gaps in research on the impact of physical activity and COVID-19, so a need for further research into whether virtual interventions for health and exercise activities are effective alternatives to face-to-face options is necessary.

Conclusion

      Through this literature review, the shift in fitness practices that has been precipitated by the COVID-19 pandemic and government mandated shutdowns was explored. The literature discusses the prevalence and trends in digital fitness technologies, the features and aspects that contribute to sustained usage of these digital devices, an examination of traditional media influences on fitness and physical activity levels, and early findings on the impact of the COVID-19 lockdown on personal health.

      This literature informs the proposed capstone research on how technology changes the experience of group fitness, while seeking to address some of the identified gaps that exist in the current literature on the impacts of fitness and technology. Interview data collected from group fitness instructors because of their direct personal experience working virtually, passion for fitness and client wellbeing, and possessing the ability to speak with authority within the local

Edmonton group fitness industry will result in contextualizing the changing group fitness landscape, and revealing insight on the future of fitness practices. Overlaying this research will be the theoretical lens of social practice theory. This framework will serve to explain in which ways the practice may be experiencing a transition by focusing on the competences, material, and meaning associated with virtual group fitness instruction in this context. Therefore, based on the findings of the literature review, the following research question for this study was developed:

RQ: How does the practice of fitness change as instructors transition to a virtual delivery model?

The subsequent chapter will introduce the proposed research design and methodology, sampling strategy, and data collection process used for this capstone project to answer the above research question.

Research Design and Methodology

Introduction

Social practice theory provides alternative ways of understanding human action in relation to everyday practices, and reconciles structure and agency in the lived experience of everyday life (Maller, 2015; Maller, 2012). Daily practices such as, driving, exercising, and cooking actively combine the elements of materials, competences, and meanings (Shove et al., 2012, p. 14); and as connections between these elements are made or broken, practices shift and change. With the pivot to virtual fitness precipitated by the COVID-19 pandemic in 2020, investigation into how the practice of fitness has changed is necessary. Fitness mediated by technology, a material element, is a practice in transition. The following research question was developed in order to guide the study: how does the practice of fitness change as instructors transition to a virtual delivery model? This chapter will overview how an examination was conducted to explore how through the intersection of materials, competences, and meanings, the practice of fitness has changed; this was done through an exploratory study with a phenomenological approach. Qualitative one-on-one, semi-structured interviews with six fitness instructors and trainers based in and around Edmonton, Alberta were conducted in order to explore their experiences of transitioning to virtual fitness classes during the pandemic. This approach provided a useful perspective to help better understand the immediate impact of the pandemic on the practice of group fitness as well as to offer insight into possible longer term transitions for the practice of fitness training.

Design

The intention of this research was to look at the lived experiences of group fitness instructors and trainers who had to adapt their practice to a virtual model of instruction due to the

restrictions brought on by the COVID-19 pandemic. As this study sought to gather data based on the individual experiences of fitness professionals, a phenomenological approach using one-on-one, structured interviews was employed as the project's methodology. Phenomenology "is an approach that focuses on how life is experienced. It is not primarily concerned with explaining the causes of things but tries, instead, to provide a description of how things are experienced at first hand by those involved" (Denscombe, 2010, p. 94). Therefore, this study was exploratory in nature, aiming to understand based on individual experiences how the practice of fitness changed over the course of 2020; this qualitative approach was deemed appropriate as using one-on-one, semi-structured interviews resulted in richer data that captured first and foremost the human experience (Denscombe, 2010, p. 94).

Likewise, phenomenology offers a descriptive, reflective, interpretive, and engaged mode of inquiry (Morse and Field, 1996, p. 124). This method allowed the researcher to transform the lived experiences of the participants, fitness trainers and instructors, into a textual expression (Morse and Field, 1996, p.124). Similarly, to fully describe how the participants experienced the changed practice of fitness, using this exploratory, qualitative approach the researcher had to bracket out as much of her own lived experience as possible (Creswell, 2017, p. 61). Chan et al. (2013) describe bracketing as "a methodological device of phenomenological inquiry that requires deliberate putting aside one's own beliefs about the phenomenon under investigation or what one already knows about the subject prior to and throughout the phenomenological investigation" (p. 1). Some strategies employed, as suggested by Chan et al. (2013), to maintain the concept of bracketing included, reflexive note-taking to identify areas of bias prior to completing data collection, the use of a semi-structured interview approach with open-ended questions to not influence responses and gather the richest data possible, and returning the

interview transcripts and findings to participants for review to ensure the data was not misinterpreted before completing the data analysis (p. 5).

Participants

Purposive sampling operates on the basis where the researcher deliberately chooses specific people to participate, because they are likely to produce the most valuable data based on pre-existing knowledge or qualities that are relevant to the topic (Denscombe, 2010, p. 35). Using purposive sampling, the study identified its sample population: group fitness instructors and trainers with a professional designation or credential; at least two years experience instructing group fitness classes; residing in and around the Edmonton, Alberta area; instructing aerobic/cardio classes and/or strength-based/HIIT classes; instructing face-to-face prior to April 2020 and subsequently transitioned to a remote mode of virtual instruction.

In choosing a sample size of six, the researcher followed recommendations from Creswell and Morse. Where Creswell suggests between a minimum of five and a maximum of 25 participants, Morse suggests around six participants (Creswell, 2017; Morse 1994); a sample size of six participants was selected, and allowed for variety in participant experience, yet was still a manageable number to work with. Likewise, small-scale projects are typical in phenomenological research (Denscombe, 2010, p. 102). Further, Quinney et al. (2016) details three additional selection criteria for participants in a phenomenological study: the participants must have lived the experience being researched, agree to share those experiences, and can commit to the time required for the research (p.2).

The six participants who took part in the research interviews met the proposed criteria. All six interviewees had more than two years experience in group fitness instruction, with five-ten years experience. Although six was a manageable number of participants, it proved

challenging at moments to promptly confirm a date/time to complete interviews on the proposed schedule; had the number of participants been only four, the interview/data collection process likely would have been completed sooner. Therefore, future considerations for interview research is to plan for the data collection to take longer than anticipated where the need to meet varying schedules exists.

Setting

The study took place in the Edmonton, Alberta area, and was conducted online through virtual one-on-one, semi-structured interviews over Zoom and were recorded. Interviews for this study were conducted virtually due to gathering restrictions in place to curb the spread of COVID-19. Hanna and Mwale (2017) affirm that virtual interviews offer an alternative means for collecting data using the internet to overcome inherent challenges and limitations of face-to-face data collection (p. 258), and outline the following best practices when conducting virtual interviews: develop a research question and aims; identify your participant group; design an interview question guide; create a Zoom (or platform of choice) account; familiarize yourself with the platform; prepare for data collection and capture (download any other necessary recording software); practice before conducting a proper interview (Hanna and Mwale, 2017, p.267).

Correspondingly, the authors stipulate that virtual interviews may in fact lead to additional benefits over in-person interviews due to the medium's ability to exist in both private and public spaces (Hanna and Mwale, 2017, p. 260). By interviewing over Zoom, the research participants did not need to invite the researcher into their personal space or vice-versa; therefore, this eliminated some feelings of uncomfortability and intimidation by allowing the interviewees to be in a space familiar to them that still maintained their individual privacy

(Hanna and Mwale, 2017, p. 260).

One disadvantage of conducting virtual interviews was familiarizing oneself with the Zoom technology and the necessary features in advance of the interviews. Prior to hosting the first virtual interview, the researcher realized that she was unable to record over Zoom on a Chromebook operating system, prompting the need to use her other laptop. This was an easy issue to fix, however, by not preparing there would have been the issue of not being able to record the scheduled interview, and then the need to postpone and reschedule after resolving the technical issues. This would have delayed the data collection process even further. Although virtual interviews offer an excellent alternative to face-to-face interviews, additional hurdles exist when dealing with technology.

Following Quinney et al.'s (2016) framework for phenomenological research, location and setting not only employs pragmatic considerations- a quiet, distraction-free space, for example- but more powerful implications as well, specifically when considering the concept of felt-space (p. 3); "The physicality of our situation or 'space' can affect behaviour and responses at both conscious and subconscious levels" (Quinney et al., 2016, p. 3). Therefore, it was important for the interviews to take place in a neutral setting; having participants avoid interviewing virtually from their workplace, and preferably at home where they are most comfortable. All six participants in this study interviewed virtually from home.

Instrument

In choosing the questions for the one-on-one interviews, the researcher identified the need to address the following research question: how does the practice of fitness change as instructors transition to a virtual delivery model? In order to gain relevant, rich data that enabled the researcher to conclude how the practice of fitness has changed, the interview questions

needed to correlate to connections made between the three elements that constitute a practice in transition: materials, competences, and meanings (Shove et al., 2012). The one-on-one structured interviews lasted between 20 and 60 minutes per participant. Each participant was asked pre-determined questions that were structured into three sets, or categories, where each set of questions addressed an element pertaining to a social practice.

Following recommendations from Creswell (2017), the researcher also started each interview with two broad, general questions in order to gather data that led to a textural description and structural description of the experiences, and provided an understanding of the common experiences of the participants (p. 61). These questions were to uncover what had the participants experienced overall, and what situations or contexts typically influenced their experiences. This starting point also provided participants an opportunity to reveal the scope of their lived experience according to their areas of self-identified importance or priority (Quinney et al., 2016, p. 5).

Therefore, the researcher drafted two broad, pre-interview primer questions, and seven formal interview questions fitting into three categories; with specific questions for each category aligning with the main theoretical concepts that will help to address the research question. The first set of questions addressed the first element of practice, *competences*; the second set of questions addressed the second element, *material*; and the final set of questions addressed the third element, *meaning* (Shove et al., 2012). The unique aspects of the virtual fitness experience in each of these elements, or categories, were identified as indicators or characteristics, and questions were formulated to get an understanding of how each of their respective characteristics such as instructor skills or training, equipment, client contact, and feedback etc… which are all considerations in the virtual fitness environment, impacted the actual practice and overall fitness

experience.

Further, phenomenological researchers state the importance of interviews for eliciting meaning compared to descriptions (Bevan, 2014, p. 137). Therefore, when designing interview questions, the questions are typically broad and open-ended to allow sufficient opportunity for the subject to express their view extensively (Bevan, 2014, p. 137). Likewise, it is advised that questions be asked in the language and vocabulary of the individuals being interviewed and avoid theoretical terms; the researcher should also prepare to listen actively as this will lead to areas for clarification and probing (Bevan, 2014, p. 137). This advice was used in consideration when designing the research questions for this study. The following interview guide, displayed on the next page, was developed, which is also based on the virtual interview recommendations of Hanna and Mwale (2017, p. 263). The questions flow in a logical order with a beginning, a middle, and an end where potential probe questions are mapped out as well (Hanna and Mwale, 2017, p. 264). With these questions the researcher was interested in gathering a comprehensive understanding of each fitness instructor's lived experience with virtual training and instruction. Please see appendix 1 for the full interview guide used during the data collection process.

RQ: How does the practice of fitness change as instructors transition to a virtual delivery model?		
Pre-Interview Questions		
General Primer : Tell me how you got started in fitness instruction and training?		
General Primer: In your own words, what have you experienced in terms of remote virtual fitness instruction during COVID?		
Concepts/Categories:	**Identifiable Indicators/ Characteristics:**	**Questions:**
Competences	Instructor skills, technique, feedback, training, and education	a) Have there been moments where you feel your training as an instructor has been challenged by going online? (probe: how?) b) Tell me what feedback looks like while instructing virtually? What were some of the challenges?
Material	Technology, things, the physical, objects, such as equipment	a) What was your experience with virtual fitness prior to COVID-19? b) Tell me about what it was like to plan a workout immediately after going online? Did you find it challenging? (probe: not knowing what equipment people may have access to at home)
Meaning	Symbols, emotions, ideas, aspirations, and motivations	a) Tell me a little about how important it was for you to be able to connect with clients during this time? (probe: compared to simply leading a workout? What did this mean to you?) b) Has the meaning or motive for instructing a fitness class changed for you by instructing remotely? c) What about for your clients, did you hear from them what it means to their motivation or fitness to be working out online? (probe: was human/social interaction more important?)

Procedures

Once ethics approval for the research project was granted, the researcher contacted

potential participants via email to see if they were first, interested, and second, available to

participate in a virtual one-on-one interview. Potential participants were identified through the

researcher's connections to the Edmonton fitness community. Edmonton has a healthy-sized

fitness community, where numerous boutique fitness and independent studios are located

city-wide, with many instructors and trainers often employed at more than one studio simultaneously, offering group fitness or personal training services to clients.

After receiving expressed interest from the initial email introduction to participate in the research project, the formal information and consent forms were forwarded via email to each participant to read over, sign, and date. Please see appendices for copies of the information and consent forms. Upon receiving the completed information and consent forms, six interviews were then scheduled based on the research participant's availability. This process took longer than anticipated, and the overall data collection process took longer than the initial allotted two weeks. However, once an official date and time was confirmed, the researcher sent an email calendar invite to each participant, which contained the scheduled date, time, and unique link to a Zoom meeting where the interview would take place; interviews were conducted through the weeks of April 20th to May 19th. All six interviews lasted between 20 to 60 minutes, with 60 minutes being allotted for each interview, and all six discussions were recorded with participant consent. Likewise, each participant was assigned a pseudonym, Participant 1/2/3 etc…, in order to respect the privacy and anonymity of all interviewees.

At the start of each interview, the researcher reiterated the contents of the information and consent forms, specifically the statements detailing the terms around privacy, confidentiality, and the participants right to withdraw participation at any time during the study. Reiterating this information helped frame the context of the researcher's objectives, as well as gave an additional opportunity for the participant to ask any questions or requests for clarification. The researcher also noted that starting the interview with two general primer questions allowed the participants a chance to settle and ease into the interview. This technique is borrowed from Denscombe (2010), where he suggests starting interviews with an "easy" question as good practice, because it allows

the participant an opportunity to share something where they likely already have a

well-formulated view or response in the forefront of their mind (p. 185). Overall, the interviews

went very well with minor technological hiccups. Participants were willing to openly discuss all

the topics proposed in the research questions, and great discussions were able to happen. Only

one participant did not go into as much detail as the other five, she did not seem hesitant, but did

not elaborate on points unless prompted or probed further. Please see appendices 2 and 3 for the

letter to interested participants and the research interview information and consent forms.

Analysis

Consent was granted from each participant to record the virtual one-on-one interviews,

after each interview was completed, the audio files from Zoom were downloaded and saved in a

password protected folder on the researcher's laptop; the interviews were then transcribed. Prior

to transcribing, McLellan et al. (2003, p. 65) recommend developing transcriptions rules using

the following principles:

1. *Preserve the morphologic naturalness of transcription.* Keep word forms and
   punctuation as close to speech presentation and what is typically acceptable in
   written text.

2. *Preserve the naturalness of the transcript structure.* Keep text structured by clear,
   speech markers.

3. *The transcript should be an exact reproduction.* Give a verbatim account, and do
   not prematurely reduce text.

4. *The transcription rules should be universal.* Make transcripts suitable for both
   researcher and digital use.

5. *The transcription rules should be complete.* Transcribers should require only these

rules to prepare transcripts. Everyday language competence rather than specific knowledge should be required.

6. *The transcription rules should be independent*. Transcription standards should be independent of transcribers as well as understandable and applicable by researchers or third parties.

7. *The transcription rules should be intellectually elegant*. Keep rules limited in number, simple, and easy to learn.

Following McLellan et al's (2003) best practices, producing the interview transcriptions took several hours. The six interview recordings were each reviewed three times in order to successfully transcribe all of the participants' words and utterances verbatim.

Essential to phenomenological research, especially during data analysis, is the concept of bracketing as it is a device that demonstrates validity. Denscombe (2010) explains that "the researcher's role is not to act as editor for the way people explain their experiences. Nor is it to impose some artificial order on the thoughts of those being studied by trying to remedy any apparent logical inconsistencies" meaning that by changing or editing participants' words, the researcher is imposing or inserting their thoughts and experiences inappropriately, which could create bias or inaccurate findings (Denscombe, 2010, p. 98).

Overall, the data was analyzed through a process involving five stages as described by Denscombe (2010, p. 240).

1. *Data preparation:* Transcribing the interview data.

2. *Initial exploration of the data:* Identifying obvious and recurring themes, adding notes to the data, generating ideas.

3. *Analysis of the data:* Coding the data by grouping the codes into units of meaning,

categories, and themes; comparing the categories and themes.

4. *Presentation and display of the data:* Presenting the data in a written and visual summary interpretation of the findings, using text, tables, and figures where necessary.

5. *Validation of the data:* Comparison of data with alternate explanations and triangulation.

Similarly, the researcher incorporated a phenomenological analysis process of bracketing and phenomenological reduction as described by Groenwald (2004, p. 50); where the researcher brackets out all personal views and preconceptions, and rather, is open to the phenomenon in its own meaning (Groenwald, 2004, p. 50). This was accomplished through a few strategies; first, transcendental phenomenology, a descriptive rather than interpretive approach, was applied; second, using open-ended interview questions to gather rich data; third, taking time away from the collected data by not directly jumping into the analysis was another strategy employed; and fourth, the interview transcripts and findings were returned to participants for review, also known as member checking, to ensure the data was not misinterpreted before completing the data analysis (Chan et al., 2013, p. 5). Transcendental phenomenological analysis, where researcher bias is removed, was appropriate for this study as the aim was to gain a descriptive narrative of the phenomenon from the participants perspective, compared to a hermeneutic, or interpretive, analysis of the interview data (Chan et al., 2013, p. 5). Taking a break from the data after completing transcriptions, but prior to beginning the analysis, allowed time for any biases or preconceived findings to subside and not dilute the findings of the data; this was coupled with the reflexive note-taking technique completed ahead of data collection where perceived thoughts and biases were identified in advance. Likewise, it was at this time that after the transcripts were returned to the participants, they had one week to review, give additional comments, and/or decide if they wished to withdraw their participation from the study. If there were no objections,

their interview transcriptions were included in the data analysis.

Summary

The chosen research design for this study allowed the theories and ideas presented in the literature review to take form, and the chosen instrument, one-on-one interviews, gave the opportunity for the lived experiences of the participants to be heard. The findings and discussion are presented in the following chapter, offering further insight and reflection into the data gathered during this research study. The results of the next chapter offer insight into the future of fitness and how virtually mediated fitness indicates a social practice in transition, while addressing the initial research question: how does the practice of fitness change as instructors transition to a virtual delivery model?

Research Findings and Discussion

Introduction

The COVID-19 pandemic in 2020 triggered a swift move to virtual fitness as gyms and fitness studios were forced to close. This change necessitated an investigation into how the practice of fitness has changed as fitness instructors and trainers went virtual. Following a phenomenological approach, qualitative one-on-one semi-structured interviews were conducted virtually with six group fitness trainers who transitioned from instructing in-person group classes to virtual group classes over the course of the 2020 pandemic. Using a social practice theoretical framework, these interviews sought to gather insight into the individual instructor's experiences to determine how the practice of fitness, now mediated by technology, has transformed.

This chapter presents firstly the data findings from the research interviews with six group fitness instructors. Responses to nine interview questions were summarized according to 20 themes, where each theme corresponds to one of the three elements of practice: competences, material, and meaning. These elements reveal where the theoretical framework of social practice theory (Shove et al., 2012) and the experiences of the group fitness instructors intersect. Secondly, the data analysis is presented to outline the steps taken during the data coding and analysis processes. Following the presentation of the coded data and analysis, a discussion of the key findings and interpretations takes place before they are summarized to articulate the significance and insights gained in relation to the research question.

Data Presentation

The following section presents the key findings of the phenomenon consistent with the research question and research design. Exploring the pivot to virtual group fitness as experienced by professional fitness instructors, this section will first outline the impetus for the research

participants' entry into the fitness industry setting the stage from which their experiences can be understood.

The six research participants, all with varying types of professional fitness education or certifications, have been working in this industry for the last five to ten years. Each participant indicated that their foray into fitness began with a desire to make a lifestyle change and/or to engage in personal development, from which they each discovered they have a passion for helping others discover fitness and seeing the results clients can achieve through fitness. All six participants were instructing group fitness classes in person up until the first mandated shutdown in March of 2020. From that point, four of the six participants transitioned to a virtual model through their place of employment; whereas the other two participants' employers did not offer virtual classes, they pivoted to their own platform and started an independent online business where they could train clients and run group fitness classes virtually. Table 1 depicts the fitness credentials of each participant as well as whether they were instructing virtually through their employer or as an independent business owner.

Participant	Education/Training	Employer or Independent
1 (EB)	Alberta Fitness Leadership Certification Association (AFLCA)- with a designation in Spin	Employer
2 (TR)	Personal Fitness Training Diploma (NAIT)	Employer
3 (SQ)	Personal Training Specialist/Fitness Instructor Specialist CANFIT	Employer
4 (JD)	Fitness Instructor Specialist CANFIT	Employer
5 (TH)	Personal Fitness Training Diploma (NAIT)	Independent
6 (AT)	Personal Fitness Training Diploma (NAIT)	Independent
Table 1		

To respond to the research question of how the practice of fitness changed as instructors transitioned to a virtual delivery model during the COVID-19 pandemic, each participant was asked a series of nine questions during their virtual interviews. With the exception of two general introductory questions, the subsequent seven questions were designed to correspond to the overarching concept of practice theory, specifically, exploring the three elements of which practices are made: competences, material, and meaning (Shove et al. 2012, p.14). Therefore, the findings derived from these interview questions demonstrate how competences, material, and meaning of a practice are mutually shaping (p.32). Figure 1 below, illustrates the link between these three elements and the practice of virtual fitness during the COVID-19 pandemic as determined by the research interviews.

Education, training, fitness know-how and levels, exercise form, feedback, cueing, adaptability and flexibility, class design and planning.

Competences

Material

Meaning

Equipment, exercise space, technology, instructor and client performance, hybrid studio space.

Accountability, motivation to exercise, feelings of burnout and job fulfillment, creativity, effects on mental health, threat to instructor livelihood, relationships, enjoyment of overall experience.
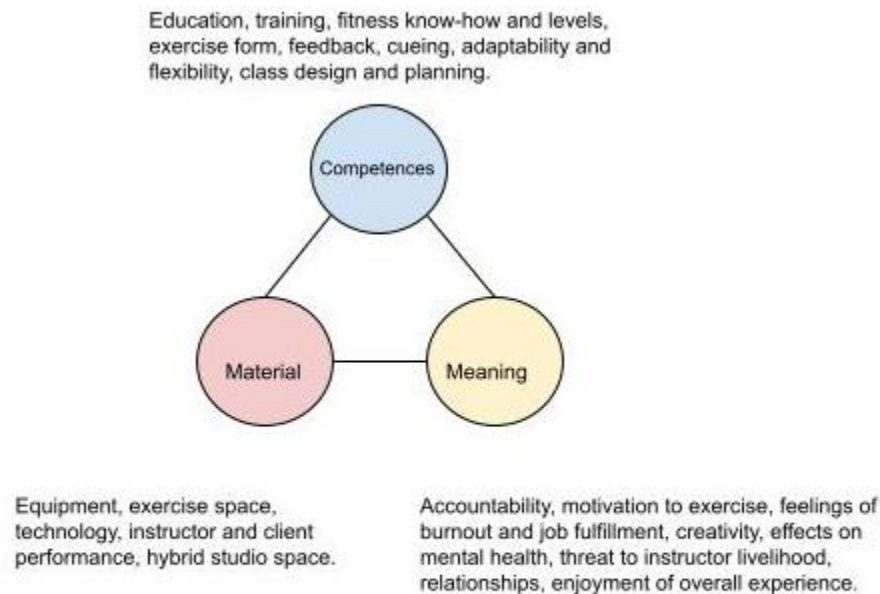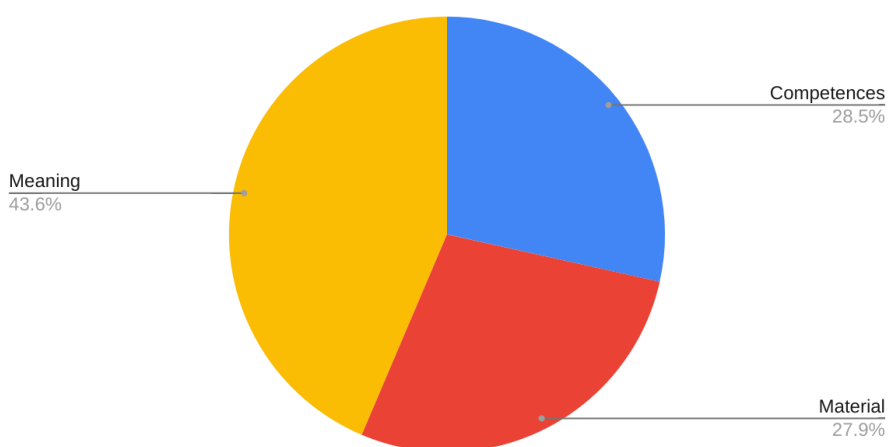
Figure 1 (adapted from Shove et al. 2012)

The interview findings of all six participants presented many consistencies overall. Through the data analysis and coding procedures, 20 emergent themes were identified; each theme corresponding to either a competence, a material component, or a meaning. Based on this structure, when the frequency of themes were distributed across the elements, themes related to meaning appeared predominantly. Figure 2 illustrates that themes related to meaning accounted for 43.6% of the interview discussions where 20 themes or findings were identified in total. Nine key findings of the interviews, where the frequency of appearances were each over 20, will be introduced before being demonstrated with key excerpts from the research interviews. These nine key findings represent the themes that appeared most frequently in interview discussions, providing insight into the skills, tangible components and shared meanings group fitness instructors identified as most important to what they have experienced while instructing virtually. These findings appear in descending order from greatest number of appearances to the least number of appearances. The frequency with which they appear denotes how important the themes appear in the research participants' interview transcripts.

Interview Findings Distributed by Elements of Practice

Figure 2

Competences
28.5%

Meaning
43.6%

Material
27.9%

Accountability & Motivation. Predominantly, the research participants interviewed feel strongly that accountability and motivation, a shared meaning, is the most important when it comes to practicing virtual fitness, both as a client and as an instructor. Appearing most frequently in the interview discussions, accountability and motivation are at the forefront of what occupies the minds of fitness professionals instructing virtually. Fitness instructors are passionate and motivated to help others achieve their fitness goals, so they consistently want to motivate and encourage clients and class participants to continue on their fitness journeys despite certain challenges. Motivation to exercise can be intrinsic or extrinsic, which is where accountability factors in. Having another individual to whom one is accountable or feels a responsibility to will often motivate someone to show up. Likewise, fitness instructors also feel accountable to and motivated by their clients.

However, pivoting to virtual fitness amidst the COVID-19 pandemic affected everyone in very different ways. Instructors no longer had their regular teaching schedules, or were possibly not teaching at all; and as they transitioned to online classes, many regular clients did not make the switch over. Participant 3 (SQ) noted that from her class of 30 regular class participants, there were about ten who have never tried her online class. It is easy to lose motivation and feel less accountable to an instructor when you no longer have regular face-to-face interactions or a commitment to see them. Of course, the research participants do not always know the specific reasons why a client has dropped-off, but they understand the added challenges associated with working out virtually.

"You know, working out is hard, and I would argue to say that working out at home is harder. Especially if you're working from home, parenting from home, you know, homeschooling from

home, working out from home, everything from home, it's backburning." (Participant 2 (TR),

2021, 19:48)

Of course, the effects of participating in virtual fitness, and the other external stressors, are not only limited to clients. Instructors are also experiencing a different sensation of motivation and accountability to their clients. The six research participants agreed that as fitness professionals, getting people access to fitness, whether it's in a studio or on a screen, is still motivating for them. Despite that some interviewees expressed how being on screen can be outside their comfort zone or requires more physical energy, they still feel accountable to motivate clients, it just looks and feels different. When asked if the meaning or motive for instructing fitness classes had changed by having to teach remotely, Participant 1 (EB) stated:

"I think it's actually increased my desire to show up for people. I probably struggle with am I

showing up in the same way, because again, you don't get those personal connections, you can't

see folks, but it's really made me realize this is the only way to instruct and motivate people."

*(*Participant 1 (EB)*, 2021, 10:31)*

Connection & Relationships. Fitness instruction and training is a profession that relies on interpersonal connections and relationships. Instructors work hands-on with their clients, sometimes multiple times a week. Naturally, conversations happen before, during, and after class and relationships form; fitness instructors also have a vested interest in building a rapport with their clients as they want them to continue training in their classes.

The switch to virtual classes has eliminated the natural conversations that occur between instructors and clients. Many participants indicated during their interviews that they sign on to Zoom early to allow extra time for clients to ask questions, but that this is by no means a replacement for in-person interaction, and most do not take up the opportunity to talk on camera

before class. Similarly, all interview participants indicated that the majority of clients who attended their virtual classes were individuals with whom they had a pre-existing relationship, so this did help the transition, however, the virtual format does not allow for much interaction. Participant 4 (JD) expressed her feelings on the lack of connection she has experienced.

> *"I really miss being able to form relationships, that's quite difficult through remote learning...I've had a few people pop on that I've never taught before, and there's no opportunity for me to form any kind of relationship with them. So they, you know, hop on, but they quit coming and so that's been difficult." (Participant 4 (JD), 2021, 3:15)*

Previous studies indicate that the interaction that occurs before, during, and after a fitness class result in higher feelings of groupness and entitativity[1] ("Entitativity," n.d.), even leading to reduced perceptions of pain and effort (Evans et al., 2019, p. 727), thus indicating that those moments of interpersonal connection, which naturally occur at the fitness studio build relationships and create an overall more positive experience. The fact that all six instructors interviewed expressed that they miss the ability to connect and communicate with clients only further solidifies this point. Whether it is signing on to their virtual class early, leaving the Zoom room open post-class, and verbally inviting two-way communication, they still feel that they cannot get an authentic connection with their clients. Participant 5 (TH) remarked on her experience as follows:

> *"It's just kind of impersonal… it doesn't feel as personal...but the clients haven't said that at all to me, that's mostly my perspective. I'm very social and outgoing, and I want to be around people"* *(*Participant 5 (TH)*, 2021, 6:08).*

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[1] Entitativity *n.* the extent to which a group or collective is considered by others to be a real entity having unity, coherence, and internal organization rather than a set of independent individuals. In general, groups whose members share a common fate, are similar to one another, and are located close together are more likely to be considered a group rather than a mere aggregation.

Livelihood. Immediately at the start of the COVID-19 pandemic, gyms and many other businesses were shuttered, forced to close for an indeterminate amount of time. This left many people suddenly without jobs and a source of income; fitness instructors found themselves in this category. The uncertainty around the virus and the mandated shutdown left fitness professionals in the lurch for weeks, questioning how and when they would be able to return to work, if at all. After a few weeks in limbo, many studios launched virtual classes realizing the shutdown and public health restrictions were going to be in place for months. However, not all gyms and studios went virtual, and the trainers operating classes out of those gyms were left without any options for returning to work. This is what happened to two of the research participants interviewed for this project. Ultimately, they decided to start their own independent online businesses so that they could start running their own group fitness classes, training clients, and earning an income. When recalling her experience early on in the COVID-19 pandemic, Participant 5 (TH) stated:

> *"I mean it was rough for a few months or so...sometimes where I thought, oh my god, maybe I should switch careers, this is not right" (Participant 5 (TH), 2021, 26:10).*

This gradual return to work helped, but still presented challenges as the independently-employed interviewees remarked that they felt they could not charge as much for virtual classes as they could for in-person classes. Part of what clients pay for is the experience of being in the gym or studio, having access to equipment and weights, and having the instructor physically present to cue and correct client form; so without those key features, the value of a virtual class significantly decreases.

Likewise, those who were able to return to work virtually through their employer encountered new challenges related to income as well. Fitness instructors are typically paid a

base or hourly class wage, plus bonuses for full class participation. However, most research

participants were now teaching fewer classes than they were pre-pandemic, having their hours

cut nearly in half. Similarly, most interviewees had their studios recording their workouts, which

were then made available to clients who could not attend the live virtual class. This created

tension as instructors were concerned about how these recordings were being distributed.

Participant 4 (JD) explained that it was unclear how many times recordings were being accessed

and for how long they could be accessed for, because each time someone viewed an instructors'

recording of a workout it was unpaid. She disclosed during her interview that she was not

compensated differently based on the distribution of her recorded workouts. She then stated:

> *"So, are you sending this recording out to people for a whole month and you only paid me once*
> *for it? ... I think it's going to have to force facilities to look at how they pay instructors. I know*
> *some instructors have had a bit of an issue with the fact that our classes are recorded"*
> *(Participant 4 (JD), 2021, 26:51).*

Having workouts recorded live, and then made available for access anytime afterwards

also creates less incentive for clients to attend the live workouts if they know they can access the

recording at their own convenience. Some instructors explained that at times they instructed live

on Zoom with no clients present because it needed to be recorded, and having to perform for an

empty audience is more emotionally draining.

Business Operations. During the government mandated COVID-19 shutdowns, many

businesses suffered financially, the fitness industry in particular. As select studios and gyms

pivoted to a virtual model of class delivery, their business operations and business models

adapted as well. As discussed above, gyms and studios also do not feel that they can charge the

same for virtual classes as they normally would for in-person classes, therefore immediately

impacting revenues. Many research participants noted that they experimented with different platforms and mediums for running virtual classes, including Instagram Live, video recordings, and Zoom; with Zoom proving to be the predominant choice for operating virtual classes.

Participant 2 (TR) remarked that in her experience, it was a race to get up and running; it was a matter of competition with every other studio who was also going virtual. From her perspective, the need to stay connected with clients and make sure that they do not forget about your business also meant at times sacrificing quality in order to get online. However, she also commented the advantages to going virtual included being able to scale the business to new levels and reach a wider audience across Canada. Although she did not quantify by how much the studio's audience expanded, she did say that in the early days of the pandemic, they had people participating in online workouts from all across the country.

> *"One of the things that kind of works against you also works for you. It's not like you're trying to convince people to come virtually when there are alternative options. Like, at that time there were zero alternative options for people, so that again worked in our favour to expand our audience"* (Participant 2 (TR), 2021, 12:13).

Other considerations disclosed by research participants, which affected the transition to virtual from a business perspective included: learning what you need to operate a platform to have it be accessible, convenient, and meet client demand; redesigning the inner workings of a website; managing and upgrading cloud space in order to have enough storage space for video recordings; producing/editing quality video recordings; and learning to properly run a microphone and music through the same video feed to produce a quality product.

All participants stated that they had to be nimble, and learn as things were evolving. Participant 1 (EB) explained:

> *"As you shift how you offer fitness is the biggest learning and is something you can't avoid. We joke that it's our sixth version of our business model, because you also have to react to what your clients want… you're a business and you have to find the balance of what's actually going to create revenue and be value-add to your members as well as your instructors" (Participant 1 (EB), 2021, 13:53).*

However, despite the learnings and adaptability employed by the research participants to keep business operating as best they could during the shutdowns, each interviewee noted in the discussions that not all of their existing clients transitioned over to virtual, indicating that the virtual model is not a one-size-fits all solution.

> *"The members who make decisions to spend money in our brick and mortar business, aren't necessarily the same clientele who are going to make decisions to purchase with an e-commerce business" (Participant 2 (TR), 2021, 5:31).*

Nevertheless, most research participants were able to recognize the business opportunities virtual training provides, including casting a wider net for attracting new clients outside their city, and the ability to instruct or train clients from anywhere in the world. There were two participants who described having clients join virtually from across Canada, and another participant remarked on her plans to move out of Canada in the coming year, and how she will continue to train and instruct her group of clients online who still reside in and around Edmonton.

Job Fulfillment & Burnout. As noted above, the themes related to meaning were most predominant in the research interviews. Feelings of lack of job fulfillment and burnout appeared frequently among those themes. Fitness professionals are passionate about their careers, but with

the transition to virtual, they are feeling less fulfilled in their jobs and experiencing sensations of burnout.

> *"I get less enjoyment out of the class itself. I don't leave the class as happy as I used to...I felt, especially this month, I could use a break from it, where that's not something I would typically feel" (Participant 4 (JD), 2021, 19:36).*

One of the main reasons fitness instructors are feeling less fulfilled or burned out, is the lack of "energy" exchange between clients and instructors. With classes mediated by a screen, the research participants noted that they miss being in the room with clients who are sweating and working hard, making the experience now more emotionally onerous. One participant described trying to balance out this absence of "energy" with positive self-talk:

> *"I used to love walking into the gym, you know? The people, just so busy and full of energy, so even if you're having a bad day and you walk in, all of a sudden you're in this little bubble with energy and it brings you right up. Now you walk in, there's no one there, you're like... I can do this, I can do this, I can bring my own energy" (Participant 3 (SQ), 2021, 25:40).*

Likewise, many described the experience of teaching virtually as not only more emotionally draining, but also more physically demanding. All participants commented that instructing remotely requires them to work out for the entire class alongside their participants, whereas when teaching in-person this was not the case. Previously, instructors would briefly demonstrate the necessary exercise or series of exercises, then as clients would join in, the instructor would walk around the room correcting form, adjusting positions, and motivating. Whereas online, they all remarked that if they stopped demonstrating the exercise, or performing the exercise, clients would also stop. Therefore, online, they felt they needed to do the entire workout alongside clients to keep them going. Performing the workout, talking, and cueing is

tiring; instructors are expending a lot more physical energy, but are not receiving the "energy" back from clients that typically motivates them.

> *"It's taxing physically and probably more emotionally than if you were actually in the traditional group setting… So, the desire is higher [to motivate], the return is lower" (Participant 1 (EB), 2021, 11:09).*

Feedback & Cues. Feedback and cueing is extremely important in fitness instruction. Not only is it expected as a means of understanding the sequence of exercises, but it is an integral part of a workout that assists class participants in correcting form and motivating them to push through. One interviewee described how she adapted her feedback and cueing style after going virtual as follows:

> *"I got a lot more descriptive with how I would instruct things. I even had for a little while a blind woman attending my virtual class. So it was interesting, because I basically had to describe everything a lot more clearly, which I realized I had needed to do over video anyway, because you can't go over and physically manipulate somebody" (Participant 6 (AT), 2021, 2:27).*

Additionally, all research participants explained that they are talking more and cueing more compared to pre-pandemic in-person classes; and that it is challenging because through the virtual medium, clients do not always know feedback or cues are directed towards them. Also, using the Zoom platform, all clients during a class need to be muted, so they cannot offer feedback in the moment, respond, or ask questions to the instructor, which the research participants identified as an added challenge. Any feedback then can only come in at the end of class, so the instructor does not have the opportunity to make changes or adjustments in the moment. During the interviews, research participants were asked to describe what feedback or cueing looks like in their virtual classes, and Participant 3 (SQ) recounted the challenge of cueing in her class over the Zoom platform:

"The one big challenge is, you know, I've always put it in my head that you never want to call

anybody out. You never say, 'hey Gina, you're doing it wrong,' you don't ever do that. But now

you're looking at this one person in this little box, they're doing something wrong and you can't

walk up to them and nicely show them form. I find myself saying, 'hey, guys, don't lean over too

much' and the person's not getting it. They're not listening to me. They don't think I'm talking to

them" (Participant 3 (SQ), 2021, 6:35).

Career Training. Each research participant was asked to describe in their own words what they first experienced during the transition to virtual instruction. Each participant disclosed that they had no previous experience or very limited experience with virtual fitness. Likewise, they each had experienced a significant learning curve, whether it was learning to use new technology and how to run an online business, discovering the need to exercise alongside clients the entire class, and adapting their approach to planning workouts. All participants have formal training, education, or certifications in fitness, so understand not only body mechanics, but the components required for an effective workout.

All research participants remarked that early on in the transition to virtual classes, they realized that some exercises or forms of interval training do not work over an online medium. This required instructors to adapt and adjust their teaching methods and class design process. When asked if they felt their career training or education was challenged by going online, most participants agreed that they felt prepared and had enough training or experience to evolve their methods.

"In my particular training [CANFIT], class design wasn't a huge focus, so it was never

something I was trained on. It always had to come from within, so I feel I have enough training

for doing it"(Participant 4 (JD), 2021, 5:55).

Comparatively, the biggest adjustments and learnings came from outside of their fitness certifications and involved adapting to the technology. None of the interviewees had previously been recorded, or used Zoom or another video platform for instructing. Coupled with the quick pivot to online fitness early on in the pandemic, it was a period of rapid learning to produce a quality product.

> *"It was a big learning curve for sure. It was never like, 'I really want to get into the fitness industry to be successful with remote and virtual training.' So, it's really made you have to be creative and have to learn really quickly"* (Participant 2 (TR), 2021, 4:25).

Experience. Overall, the six research participants concurred that transitioning to virtual fitness was a learning experience, but that it was not as bad as they had initially thought. It still offered them a means to motivate and connect with clients, earn an income, and get creative with their workouts. Likewise, the research participants explained that a lot of their clients were also enjoying being able to train virtually. Many clients expressed that they enjoyed the convenience of not having to drive to the gym, especially for early morning or winter workouts. Therefore, many people had a positive experience transitioning from in-person to virtual group fitness classes.

> *"I'm getting positive feedback about how [some] are really enjoying this… they're liking the Zoom, and I'd say it's 50/50. 50% like it and 50% would come back and do it in-person"* (Participant 3 (SQ), 2021, 11:03).

Of course, as discussed above, all of the research participants stated that they were not as satisfied in their jobs as they were pre-pandemic; however, when asked for additional reflections on their experience, they all agreed that if going forward they could teach a combination of both in-person and online classes they would feel more satisfied. This is a sentiment that likely could

be generalized across other professions and the experience of working or teaching remotely.

Similarly, some participants remarked that they felt the fitness industry was due for a change and

COVID-19 forced those changes to happen; the gyms closing also allowed some of them to

branch out on their own entrepreneurial journey by starting online businesses.

> *"I know that there are a lot of people who are very disappointed or upset by the restrictions in*
> *gyms, and I can understand that, but I feel like it's been very positive in a lot of ways. It's been an*
> *interesting way to kind of be challenged and forced to expand and grow" (Participant 6 (AT),*
> *2021, 14:30).*

Client Form. Lastly, the remaining key finding of this study relates to body awareness,

or client form. Proper form in exercise is not only necessary to have an effective workout and see

physical results, but it also prevents injury. A recurring theme across the interviews was the

concern that instructors feel for the safety of their clients. All six research participants

consistently expressed that one of the main disadvantages to virtual instruction is that they

cannot see if clients are executing proper form; either because most clients do not turn on their

cameras, or that the view on the screen is not adequate. Participant 3 (SQ) explained:

> *"The downfall is, I'm telling them to squat, I don't know if they're lifting their toes. Who knows…*
> *I don't know what they're doing… I can't help them and they could be doing something to the*
> *point where they could be hurting themselves" (Participant 3 (SQ), 2021, 5:30).*

Additionally, related to client form is the need for exercise modifications or regressions.

This is something that instructors would normally be able to adjust hands-on when they see a

client is in need of a simpler or more advanced exercise modification. However, most clients left

their cameras off, making it difficult for instructors to spot the need for physical adjustments.

Therefore, the research participants explained that when they planned their workouts they needed

to account for modifications and ensure that they demonstrated all options; first, to help

guarantee that clients of all fitness levels would get an effective workout, and second, that those prone to injury had the options to modify exercises for safety. Participant 4 (JD) recalled her concerns:

> *"Safety is super important to me, and being able to make sure that participants can not only get in better shape, but do it safely. I do demonstrate different ways of doing it, modifications and stuff, but I can't actually make sure that they are doing it correctly"* (Participant 4 (JD), 2021, 3:41).
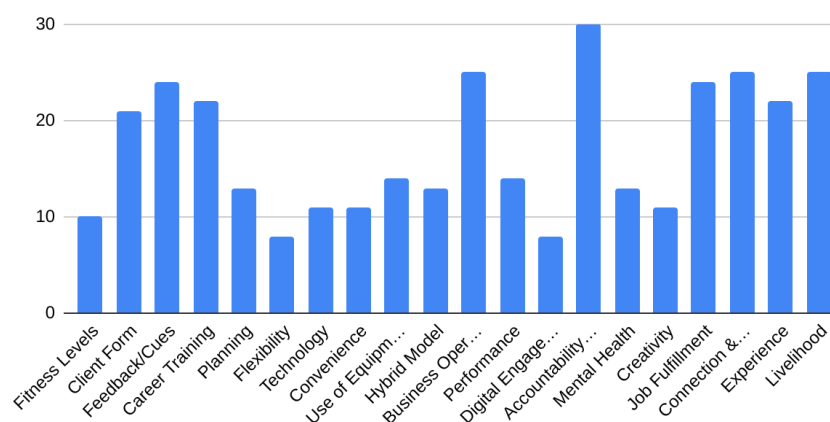
Data Analysis

The use of phenomenological interviewing extended the opportunity to gain insight into the experiences of fitness professionals instructing group classes virtually due to the COVID-19 pandemic. The interview data was analyzed through an iterative process. Hard copy transcripts were analyzed for codes, phrases or keywords, representing how the participants referenced their experiences in their own words. The transcripts were reviewed and coded multiple times to identify 20 different themes. The identified themes were then grouped into three categories viewed through the theoretical framework of social practice theory: competencies, material, and meaning. The frequency of which these 20 themes appeared throughout the interview discussions are illustrated below in Figure 3. Englander (2012) suggests that "the research process be methodologically articulated in such a manner that data collection and data analysis are both seen as part of a single, unified, process with the same underlying theory of science" (p. 15). Therefore, if following a descriptive phenomenological approach, both the data collection and data analysis need to follow descriptive phenomenology to maintain accuracy (Englander, 2012, p. 15).

Frequency of Distribution of Themes

Figure 3

Analysis Procedure. A textual analysis was conducted of the transcribed interviews to discover themes, issues, and phrases common across all six interviews. Using an iterative process, the transcribed interviews were reviewed five times until no new realizations were discovered in the data. The first review of the transcripts was to get a sense of the whole description; as stated by Giorgi (2012), "the phenomenological approach is holistic and so no further steps can be taken until the researcher has an understanding of what the data are like" (p.5). During the second review, the transcripts were reread from the beginning, and sought key phrases, descriptions and themes for possible excerpts in support of the findings. Marking and noting across the hard copy documents in different coloured pens to differentiate between various themes or meanings. The third review saw the raw data transformed from seemingly arbitrary descriptions, to data points relevant to the phenomenon. Identified phrases, excerpts, and descriptions were transferred to an Excel spreadsheet to prepare for deeper investigation during the fourth review; "looking for themes common to most or all of the interviews as well as individual variations" (Groenewald, 2004, p. 51). At this stage, all data points were assigned a formal theme in the Excel spreadsheet and were subsequently colour-coded; again, this was also

an iterative process and themes were merged together where commonalities and connections

existed (20 themes were identified in total), taking care not to cluster common themes if

significant differences existed (Groenewald, 2004, p.51). During a fifth review, once themes

were assigned to each identified code, they were reclassified into one of three larger categories,

which directly linked the data to the theoretical framework of social practice theory. This

structure was essential to help glean further insight in the phenomenon, and to clarify and

interpret the original raw research data (Giorgi, 2012, p.6). Table 2 displayed below represents

the final 20 themes discovered from the analysis and the frequency of which they appeared

across all six discussions. Please see appendix 4 for an excerpt from the Excel spreadsheet used

to organize and classify the interview codes.

Concepts	Codes/Themes	Frequency
Competences 98	Fitness Levels	10
	Client Form	21
	Feedback/Cues	24
	Career Training	22
	Planning	13
	Flexibility	8
Material 96	Technology	11
	Convenience	11
	Use of Equipment & Space	14
	Hybrid Model	13
	Business Operations	25
	Performance	14
	Digital Engagement	8
Meaning 150	Accountability & Motivation	30
	Mental Health	13
	Creativity	11
	Job Fulfillment	24
	Connection & Relationships	25
	Experience	22
	Livelihood	25
Table 2		

Validity and Reliability. Denscombe (2010) affirms that "the credibility of research is something that needs to be demonstrated as part and parcel of the research process itself" (p. 297). Therefore, to ensure validity/reliability and to limit researcher-bias, one of the biggest criticisms of qualitative research, bracketing was employed during the data collection and

analysis stages. This was accomplished by employing a few strategies; first, adopting a descriptive rather than interpretive approach assisted in affecting the findings; second, reflexive journaling identifying any preliminary biases prior to jumping into the analysis or discussion of findings was another useful action; third, the interview transcripts and findings were returned to participants for review and to provide any additional comments to ensure the data was not misinterpreted before completing the data analysis (Chan et al., 2013, p. 5); and lastly, by listening intently, recording accurately and candidly during interviews, including all data in the final report. Likewise, interpretive validity was also employed. Johnson (1997) describes interpretive validity as "accurately portraying the meaning attached by participants to what is being studied by the researcher" (p. 285), therefore, throughout the findings section of this report the research participants' thoughts, feelings, and experiences are portrayed through direct quotes. These low inference descriptors help the reader experience the research participants' actual language and personal meaning (Johnson, 1997, p. 285).

Discussion

During the phenomenological interview analysis of the experiences of the six group fitness instructors, overlaying Shove et al. 's (2012) three elements of social practice theory it was evident that themes related to meaning were most prevalently discussed across all participants' interviews. Themes related to material and competences were also widely discussed, but these themes appeared less frequently when compared to themes related to meaning. The research question for this study sought to examine how the practice of group fitness has changed by the introduction of technology as a means of instruction, a transition precipitated by the COVID-19 pandemic. The findings of this study, in response to the research question, suggest that what it means to be a fitness instructor may be changing as a result of

disruptions caused by the pandemic. Shove et al. (2012) describes the elements of practice as not only interdependent, but mutually shaping (p. 32). This supports the notion that by introducing a new material element (technology-virtual instruction), the element of meaning also experiences a transformation. This interdependence is demonstrated below in figure 4.
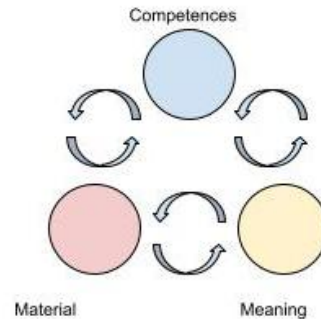

Figure 4 (adapted from Shove et al. 2012)

Despite this evidence, can group fitness be seen as a practice in transition? Is pre-pandemic fitness transformed permanently? What Shove et al. (2012) concludes is that the persistence of relevant elements makes it possible to reinstate practices to some degree (p. 154). This suggests that in circumstances where elements endure in dormant form, the links between elements have not disappeared and the possibility to reinstate a practice exists (Shove et al., 2012, p. 154). This aligns with the findings of this study. What the interviews describe is that although the element of meaning has experienced significant change, the elements of material and competences persist; inferring that the practice of group fitness will likely return to normal in the future despite transforming over the course of the pandemic.

An examination of the experiences of six group fitness instructors voiced that what it means to be a fitness instructor did change as a result of the disruption caused by the pandemic.

The findings imply that the longer group fitness can only be accessed virtually could potentially impact the practice long-term, especially in terms of instructor or trainer satisfaction and retention; all expressed that they were not as happy with their practice as it existed online, however, the idea that in-person fitness would resume as normal always remained in the background, so this likely assisted instructors in continuing with fitness instruction despite the challenges they experienced. The exploration of this transition long term should be a consideration for future researchers. All six research participants expressed that they cannot build relationships or connect with clients as they did previously, and this is something they missed. Similarly, five out of six participants reflected on experiencing feelings of burnout and lack of job satisfaction throughout their time instructing virtually; because they do not feel they get the same feeling from teaching as they previously did due to a lack of "energy" exchange between instructor and clients in the studio. This potentially suggests that virtual group classes would not be a sustainable option over time for instructors. The idea of resuming classes in-person always remained, as a dormant state, in the background of the minds of instructors. Many expressed that a hybrid model of instruction would likely be ok for them, but they all would prefer to return to in-person classes. Again, the long term effects of virtual instruction is an important consideration for future researchers to explore. However, all six participants detailed that they are still just as motivated to instruct and continue to instruct, because they are committed to and passionate about leading clients on their fitness journeys. The following excerpt from Participant 1 (EB)'s interview accurately describes these shared sentiments:

> *"The biggest thing I learned was just, like, what I used to get from fitness immediately during*
> *teaching, and after, like seeing people push themselves, it doesn't come organically anymore. So*
> *even as an instructor, setting your expectations of what I can impact, what I can control, and how*

to offer the best experience and help people on their fitness journey" (Participant 1 (EB), 2021,

15:22).

Comparatively, one standout difference between the interviews is that although all six participants expressed feelings of burnout and lack of job satisfaction, the two participants who created their own online fitness businesses in the last year and are working independently, on average, expressed less feelings of job dissatisfaction. Perhaps by having their own businesses and client base, these participants have more freedom to operate, interact with clients, and instruct to their own liking. Whereas the four research participants instructing virtually through their employer are confined to more operational processes and procedures dictated and overseen by management. The two participants working independently disclosed that they plan to continue working with their online businesses even when the gyms reopen; with one planning to move out of Canada yet continue working with her clients based in Alberta. This flexibility was one of positives she highlighted of remote fitness instruction. Likewise, the other independently employed participant remarked how she felt the fitness industry was due for a big change, then COVID happened and forced this massive shift in fitness delivery, so she anticipates virtual is here to stay longer term in some form. Especially because, as she commented, more people may be motivated to get healthy or place individual health as a higher priority after experiencing this major global health crisis. The other four participants working for studios all commented that virtual options will likely remain in place even as their gyms reopen. Some of the reasons given for this included: that many clients enjoy the option of virtual classes; some clients will still be hesitant to return to the gym including older clients or immunocompromised clients; as well as the negative impact and perceptions that the government restrictions and the media have had around the safety of gyms during the pandemic. With the possibility of a 'hybrid' model studio

being the new normal, there will be ongoing implications for instructors and staff. For instance, one participant highlighted concerns around how instructors are compensated for their recorded workouts. If gyms and studios continue to offer online classes/recordings as well as in-person classes, this will have longer term implications for the fitness industry moving forward. PErhaps with more fitness professionals choosing to work independently, so that they can be compensated per workout compared to gyms sharing their workouts over and over without additional pay. Additionally, with more virtual options available, such as the two participants operating their own platforms, and so many people investing in home workout equipment over the last year, many gyms will likely see a drop in clients returning since they have cheaper online options to use at home.

When it comes to examining the experience of group fitness instructors, the researcher, although not an instructor, is a longstanding member of the same group fitness community. Therefore, the notion of how insider/outsider perspective may have impacted the findings and interpretations of the data is of interest. Where there are costs and benefits to each status (insider and outsider), Dwyer and Buckle (2009) argue that presenting these concepts as dualistic is overly simplistic and restrictive (p. 60). Rather, they stipulate that qualitative researchers often occupy the space between, holding the position of both insider and outsider (Dwyer and Buckle, 2009, p. 60). For the purposes of this study, the researcher acknowledged that not all experiences can be shared by everyone, and that multiple layers and a complexity exist to the experiences shared by research participants (Dwyer and Buckle, 2009, p. 60); while identifying with some of the experiences shared during the interviews, other content was not relatable, thus illustrating that the researcher in this project occupied the space between, and not exclusively as an insider or outsider.

Social practice theory is a helpful lens to investigate the how, when, where, why and with whom we perform group fitness; however, there were limitations to this research project. The practice of virtual group fitness in the context of this study is still a relatively new practice, therefore, the full, long term evolution or transition of the practice has not been seen yet. Virtual fitness was viewed as a temporary alternative to gyms and studios during the pandemic. Likewise, there were no alternative options for in-person group fitness at the time of this research, so a true comparison between the preferences and experiences of practicing in-person group fitness and virtual fitness does not exist. Consequently, further generalizations may be difficult to make because of the limited life of virtual group fitness experienced by the research participants. Despite the limitations, the value of this study lies in the fact that it aimed to analyze the lived experiences of group fitness instructors teaching virtually, and that it might shed insight on how the experiences unique to online fitness will help in fitness class design, delivery, business operations, and better support both instructors and clients.

Summary

Social practice theory helps inform how societies and the everyday behaviours people engage in change or stay the same (Shove et al., 2012, p. 1). This research project explored how the practice of group fitness transformed as it pivoted to a virtual delivery model, examined through a phenomenological analysis of the lived experiences of six professional fitness instructors. One-on-one virtual interviews were conducted, and the findings indicated that in the context of the theoretical framework, social practice theory, what it means to be a fitness instructor is changing due to the introduction of technology. The personal experiences of the research participants concluded that through a virtual medium, instructors and clients overall had a positive experience, but felt more job dissatisfaction and burnout, significant changes to

business operations, an inability to connect and build relationships with clients, concerns with client form and cueing, and experienced threats to their livelihood; however, they still felt equipped, and just as accountable to clients to motivate and lead individuals on their fitness journeys. The three elements of social practice theory, which encompass a practice, are interdependent. Where a significant change to the material element in the research project was experienced, meaning was most affected, thus transforming at least temporarily what it means to be a group fitness instructor.

Conclusion

The intent of this study was to explore the experience of group fitness instructors in order to understand and answer the research question: how does the practice of fitness change as instructors transition to a virtual delivery model?

The findings of this study indicate that the disruption of technology has changed, at least temporarily, what it means to be a group fitness instructor. Overlaid by a social practice theory framework, several factors relating to the meanings, materials, and competences of the fitness practice were greatly influenced during this transition such as accountability and motivation; connections and relationships; instructor livelihood; business operations; job fulfillment and burnout; feedback and cues; career training; experience; and client form.

This research study embarked upon an exploration of how the transition to virtual delivery model of fitness instruction changes the overall practice of fitness. Key findings illustrate that certain elements of the practice of group fitness have changed, at least temporarily. Accountability and motivation remain as important factors for both clients and instructors. Virtual instruction, although not ideal, still offers clients a means to feel accountable and continue exercising, and it also offers instructors a way to motivate their clients as they still feel accountable and passionate to inspire people along on their fitness journeys. Connection and relationships have been significantly affected. Instructors feel that although a virtual space exists to meet with their class participants, they cannot create an organic connection, even with individuals where a relationship existed pre-pandemic. Instructor livelihood has also suffered a great deal throughout this transition. Mandated shutdowns of fitness facilities forced many fitness professionals into unemployment for a period of time, and those who were able to return to work virtually were concerned over how they were being compensated the same for teaching

one in-person workout, when that virtual workout was actually being recorded and repurposed for clients many times over, without instructors being paid for additional views. Business operations of fitness studios also experienced a significant transition. The adoption of new technologies meant adapting business models to suit the needs of the moment, but some saw the potential to grow their businesses with virtual instruction providing a channel to reach new audiences outside of Edmonton. Feelings of burnout and job dissatisfaction were prevalent across all research interviews; stemming from the lack of organic one-on-one connection and "energy" exchange between clients and instructors resulted in more feelings of mental and physical exhaustion. Likewise, the ability to give verbal feedback and cues during instruction suffered significantly, coupled with the inability to physically correct client form caused major concern for class participants' ability to injure themselves. Finally, career training was a recurring theme, where all instructors interviewed felt that they possessed the necessary training and skills to adapt workouts to a virtual model; and that although the overall experience was somewhat positive, solely instructing virtually is not desirable long term.

A matter of interest that warrants further investigation into these findings, a consideration for future research, is how these results are affected in the longer term. The COVID-19 pandemic forced the inadvertent experiment of virtual fitness delivery to occur, but the idea of returning to in-person fitness in the near future always remained in the background as a dormant state. With all participants remarking that they believe virtual fitness options are here to stay in some form or another, with many gyms likely to adopt a 'hybrid' model and continue to offer both in-person and virtual services for the foreseeable future, the long term implications of virtual group fitness delivery have yet to be discovered and should be explored in future studies.

Reflecting on the study design, there were not many significant differences between the six research participants interviewed. Perhaps a comparative study of the experiences of other fitness professionals, and not limited to only group fitness instructors, but including a small group of personal trainers, and a small selection of trainers who only instruct virtually (i.e. those who stream workouts on YouTube) would help offer a more in-depth understanding of the experience of virtual fitness and how technology changes the practice of fitness itself.

Social practice theory, when applied to this study, provided the ability to explore the individual experiences of fitness instructors while gaining insight into the overall practice of fitness. By exploring the competences, material, and meanings associated with virtual fitness, a comprehensive view of the individual elements that change or persist while group fitness experiences a significant interruption helps to inform on the future state, or renewal of the practice.

Precipitated by the COVID-19 pandemic, the fitness industry faced an incredibly challenging year, and uncertainty still remains around how gyms, studios, and fitness professionals will ultimately recover. Virtual fitness delivery is a service increasing in popularity with a variety of options for accessing workouts either online or by purchasing smart equipment. Virtual fitness delivery also served as a lifeline for many throughout the COVID-19 pandemic, acting as a mental health coping tool by allowing people to continue to exercise and keep a routine as well as a means of income for fitness professionals and businesses. However, despite these positive aspects and the increase in available virtual options, questions remain about the long term possibility for technology to permanently change how we practice fitness.

This research study has attempted to explore, at least in the short term, how technology is changing the practice of fitness. The Canadian fitness industry is highly profitable with annual

revenues near $4 billion (Statistics Canada, 2018), the potential long term disruption of this industry by technology has the ability to significantly affect not only businesses, but the livelihood of individuals. Therefore, the value of this study that explores and seeks to answer the research question, 'how does the practice of fitness change as instructors transition to a virtual delivery model?', lies in the fact that it will help shed insight on how the experiences unique to online fitness will help inform fitness class design, delivery, business operations, and how to better support both instructors and clients moving forward as the overall fitness industry experiences a mass disruption.

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Appendix 1
INTERVIEW GUIDE

Participant:

Date and Time of Interview:

Place of Interview: Zoom

Study Title: The Future of Fitness: Virtually Mediated Fitness and Social Practice in Transition

(Pro#00108610)

RQ: How does the practice of fitness change as instructors transition to a virtual delivery model?		
Pre-Interview Questions		
General Primer : Tell me how you got started in fitness instruction and training?		
General Primer: In your own words, what have you experienced in terms of remote virtual fitness instruction during COVID?		
Theoretical Concepts/Categories:	**Identifiable Indicators/ Characteristics:**	**Questions and Probes:**
Competences	Instructor skills, technique, feedback, and training	a) Have there been moments where you feel your training as an instructor has been challenged by going online? (probe: how?) b) Tell me what feedback looks like while instructing virtually? What were some of the challenges?
Material	Technologies, things, objects such as equipment	a) What was your experience with virtual fitness prior to COVID-19? b) Tell me about what it was like to plan a workout immediately after going online? Did you find it challenging? (probe: not knowing what equipment people may have access to at home)
Meaning	Symbols, ideas, aspirations, and motivations	a) Tell me a little about how important it was for you to be able to connect with clients during this time? (probe: compared to simply leading a workout? What did this mean to you?) b) Has the meaning or motive for instructing a fitness class changed for you by instructing remotely? c) What about for your clients, did you hear from them what it means to their motivation or fitness to be working out online? (probe: was human/social interaction more important?)

Appendix 2

INITIAL CONTACT TO PARTICIPANTS

Dear _____,

Thank you for expressing your interest in participating in my research study, The Future of Fitness: Virtually Mediated Fitness and Social Practice in Transition (Pro#00108610). The purpose of this study is to explore how due to the health restrictions introduced as a result of the COVID-19 pandemic, fitness professionals have been instructing group fitness clients remotely via a virtual channel. Virtually mediated fitness brings new challenges and opportunities, and my research will explore how the experience of virtual fitness, as experienced by fitness instructors and trainers, is changing the overall practice of fitness.

Your participation in this study is completely voluntary, and will include participating in a one-on-one virtual interview with myself. These interviews will be audio and video recorded. Your identity, place of work, and contact information will be kept entirely confidential, and you will have the opportunity to review your interview transcripts or withdraw from this study if you change your mind.

If you are still interested in participating, I will forward along the formal information and consent forms that include more details for you to review, follow-up with any questions you may have, sign and return to me. Thank you in advance and I look forward to you participating.

Best regards,

Sheena Fitzpatrick

fitzpat1@ualberta.ca

780-686-4115

Appendix 3

INFORMATION LETTER and CONSENT FORM

Study Title: The Future of Fitness: Virtually Mediated Fitness and Social Practice in Transition

(Pro#00108610)

Research Investigator: *Sheena Fitzpatrick, Graduate Student*	**Supervisor:** *Dr. Gordon Gow, Associate Professor*
University of Alberta	*Director, Master of Arts in Communications and Technology*
Email: *fitzpat1@ualberta.ca*	**Email:** *ggow@ualberta.ca*
Phone: *780-686-4115*	**Phone:** *780-710-4673*

Background: You are being invited to participate in this research study because of your professional

experience working in the fitness industry. You must be or have been employed in a professional capacity of

instructing or training fitness clients virtually during the COVID-19 shutdown, which began in 2020. Before you

make a decision, the researcher will go over this form with you. You are encouraged to ask questions if you

feel anything needs to be made clearer. You will be given a copy of this form for your records.

The results of this study will be used in support of my graduating capstone project for my Master of Arts in

Communications and Technology (MACT) degree program at the University of Alberta.

Purpose: Group fitness instruction and personal training is typically performed in-person, however, due to

restrictions introduced as a result of the COVID-19 pandemic, fitness professionals have been instructing

clients remotely via a virtual channel. Mediated fitness brings new challenges and opportunities, and my

research explores how the experience of virtual fitness, as experienced by fitness instructors and trainers,

changes the overall practice of fitness.

Study Procedures: You will be invited to participate in the study if you've instructed or trained fitness clients in

a professional capacity both in-person and virtually. You will participate with me in an individual, one-on-one,

online Zoom/Google Meet interview of approximately 60 minutes in length. You will be invited to answer 8 questions ranging from general information on how you got started in the fitness profession to specific information on your recent experiences instructing classes virtually. The Zoom/Google Meet interviews will be audio/video recorded from which a transcript will be prepared and observations noted. You will be invited to review the transcript to check accuracy and any omissions. Your privacy and confidentiality are assured through anonymized data, password-protected and encrypted computer files. Upon completion of this study, all audio/video recordings and transcripts will be destroyed.

Benefits: You are not expected to receive any direct benefits from this study. It is hoped that upon the completion of this research study, the fitness community will gain some valuable insights into how virtually mediated fitness is changing and impacting the industry.

Risk: There are no expected risks to you for the participation in this study; however, not all risks can be identified at the outset, and participating in this research study may cause psychological or emotional stress while discussing situations and experiences that have caused you discomfort. If any other risks are identified during the course of this research study, then you will be notified immediately. You will be allowed to skip questions, take a break, or not answer anything you do not feel comfortable answering. Mental health resources where you can seek additional mental health assistance if necessary will be provided to you.

Voluntary Participation: You are under no obligation to participate in this research study. Your participation is completely voluntary. You are not obliged to answer any of the specific questions in the interview even if participating in the study. You can opt out from this research study without penalty any time up to one week after the transcription of the interview has been completed; you will be given the opportunity to review the transcript and will have one week to have any collected data withdrawn and not included. If you opt out of the study, then all correspondence between yourself and the researcher will be destroyed, all video/audio recordings will be destroyed, plus all transcripts and noted observations will be destroyed.

Confidentiality and Anonymity: Your privacy, confidentiality, and anonymity are assured. Only myself and my capstone supervisor will have access to this research study's records and results. You will not be personally identified in any transcripts, published dissertations, articles, presentations, teaching materials, or online postings. Where appropriate, a pseudonym will be used. The safeguards in place to protect your privacy, confidentiality, and anonymity are password-protected files stored on encrypted hard drives and network storage devices. At your request, you may receive a copy of the completed research study. It is possible that this research study may be used for a future unspecified research study. If so, it will have to be approved by a Research Ethics Board (REB).

Contact Information: If you have any further questions regarding this study, please do not hesitate to contact:

Research Investigator: Sheena Fitzpatrick, Graduate Student	*Supervisor: Dr. Gordon Gow, Associate Professor*
University of Alberta	*Director, Master of Arts in Communications and Technology, University of Alberta*
Email: fitzpat1@ualberta.ca	*Email: ggow@ualberta.ca*
Phone: 780-686-4115	*Phone: 780-710-4673*

The plan for this study has been reviewed by a Research Ethics Board at the University of Alberta. If you have questions about your rights or how research should be conducted, you can call (780) 492-2615. This office is independent of the researchers.

Consent Statement: I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above and will receive a copy of this consent form. I will receive a copy of this consent form after I sign it.

_____   _____

Participant's Name (printed) and Signature   **Date**

_____   _____

Name (printed) and Signature of Person Obtaining Consent   **Date**

Appendix 4

CODING SHEET

Codes	Keywords
personal fitness training diploma through NAIT	Training/Experience
finding the passion for helping people and instructing	Enjoyment
starting to really understand how challenging it is for the mass population to und	Fitness Levels
getting into the Big Box gym world...being the no.1 choice for fitness	Business Operations
(in Big Box) my passion for business started to develop	Livelihood
i trained in the evening.... made the jump to full time training	Livelihood
Boutique fitness last 3-5 years started to take the market...A) price point B) the e	Business Operations
(going virtual) it's been a learning curve for sure	Flexibility
never the goal to get into fitness industry to be successful at virtual or remote	Burnout
made you have to be creative and go quickly	Creativity
learning what you actually need to operate a platform- have it be accessible, cor	Business Operations
members who spend money in brick&mortar aren't necessarul the same who sp	Business Operations
inner workings of designing a website and so much cloud storage to store video	Technology
quality of videos. how to get music and mic to come through .. all those things w	Technology
challenge lies in making it accessible to all fitness levels	Fitness Levels
can't look someone in the eye and cue them verbally or walk over to them	Feedback/Cues
everyone's level of kinesthetic awareness or proprioception is different	Client Form
don't know where you're starting with.. someone like you...or someone who's ne	Fitness Levels
Biggest challenge is providing an effective workout for all levels when you can't l	Fitness Levels
being able to provide a regression or progressiv version of movement - but you (	Fitness Levels
don't want to intimidate someone, give something too hard and makes them sec	Performance
feedback we have received is that it is too challenging	Feedback/Cues
a fine line of being able to create an offering for as many people as possible	Fitness Levels
technical feedback; getting mic and music volume correct	Technology
we've had a lot of different versions a lot of different devices	Technology
its been a bit of trial by fire	Flexibility
a lot of instructors do it from the energy exchange-giving the room all your energ	Accountability/Motivation