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The Role of New Social Ties in Creating Meaningful Life

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The Role of New Social Ties in Creating Meaningful Life

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Abstract

This article suggests that communities and social ties support the feeling of being meaningful. The theoretical concepts discussed here are social capital, community, and new forms of social ties. The data consists of 969 answers from citizens of different ages from three cities. Despite the possibilities of new global social ties, Finns seem to be quite traditional when it comes to a meaningful life: the sources of communality are "old communities" such as work, work communities, families, and relatives. The self-determination theory (Deci & Ryan, 2000) fits well with Finns: it is important to recognize personal competence. Nevertheless, it is not enough to be competent: people need to be related to others but also have enough autonomy among others. After covid-19 and the period of enforced remote work, we need new ways to build communality and relatedness in creating and maintaining traditional and new social ties.

Introduction

Connectivity and relatedness are in key positions while we start to discuss meaningful life. Research results from 2013 until today show that the Nordic countries have all been in the top ten every time the World Happiness Report (WHR) published its annual ranking of countries. Nordic citizens experience a high sense of autonomy and freedom as well as a high level of social trust towards each other, which play an important role in determining life satisfaction (Martela et al., 2020).

The context of this study, Finland, needs some explanations. Philosopher and active societal influencer Tommi Uschanov (2012) claims that the meaning of being a Finn could be described as "being alone in a good way". Its meaning seems to be more positive compared to the expression "to be on one's own". There are some studies of the Finnish culture that explain it as uniformity, unsubtlety, similarity, and scantiness (Alapuro, 1988; Mäkelä, 1985; Tarasti, 1988). It is said that Finns understand each other with few words (Uschanov, 2012). Does this study reveal some points on what it means to be a Finn: are Finns really so quiet and live as alone as some stories tell?

Professor of Social Psychology Klaus Helkama (2015) studied Finnish values and noticed that there is something stable in them: Finns respect application and hard work. The ten universal values are power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security (Schwartz 1992) but Helkama (2015) added "work" to the list because it makes a big deal in the Finnish context. According to Helkama (2015), Finns are very work-oriented and work plays a bigger role in forming people's identity than in Hungary, Norway, and the United States.

Decent work is seen as a fundamental right to human well-being (ILO, 2008). Tragically, there are not often possibilities for meaningful work that could support human flourishing, as far as international research is concerned (Veltman, 2016). Another world is still possible, claims Sultana (2021), and so do we. As far as Finns are concerned, work has played a significant role in daily life since the myths of "suo, kuokka ja Jussi": *In the beginning, there were a swamp, hoe, and Jussi (*Linna, 1960).

The aim of this article is to study how communality and especially new social ties are connected to living a meaningful life. Our approach is to study what makes a life worth living: where are the possibilities of feeling communality and how are they connected to theoretical views of humans as social beings. The data consists of 969 answers from citizens of different ages in three Finnish cities.

We, the authors, are Finns and social psychologists. We share the idea that to become a full human being there is a need for significant others (Mead, 1962). The main concepts to discuss here are social capital, community, and new forms of social ties. We will start with the concepts, combine them with data perceptions, and conclude with impressions of meaningful daily life in the Finnish context, and the working life's role in it.

Social Capital – A Tool for Making the World a Better Place for All

Social capital is a concept that has been discussed a lot but is defined badly. It is used for explaining for example local learning outcomes (Hanifan, 1916) or there is an attempt to describe it by weak and strong connections that people have (Granovetter, 1973). French Sociologist Pierre Bourdieu (1986) connects social capital with economics: in order to make the best out of social networks there is a need for time and not everyone has it. It also goes vice versa: if persons have social capital, for example, plenty of networks, it is possible for them to add their economical capital (Bourdieu, 1986). American Sociologist James S. Coleman (1988b) claims that social capital differs from other forms of capital because it lies in social constructions, not in separate individuals, like human capital. Bourdieu (1986) and Coleman (1994) disagree on the benefits of social capital: Bourdieu's idea is that it is for privileged human beings, but Coleman says that also marginalized persons can benefit from it (Bourdieu, 1986; Coleman, 1994). Social capital is defined mostly by social settings: it is connected to interaction, trust, and networks between human beings. Social capital deals with relations and how different groups work. Interest in social capital means being interested in how people interact in families, neighbourhoods, and workgroups. People are seen as interactive society members, not only as citizens or consumers. (Bowles & Gintis 2002; Putnam 2000.)

A very common understanding of social capital shares Bourdieu's (1993) ideas: the amount of social capital of a single person depends on the wideness of networks but also on economic and cultural capital. Individual capital deals with personal skills but social capital deals with trust, social connections, shared norms, and relations between people and communities (Healy, 2004). Bourdieu (1988) claims that people want to build networks that are useful for them later. According to Coleman (1988a), social capital is a feature of communities.

It is said that nowadays it counts a lot who you know, not what you know (Fine, 2007). In building relationships, there is a norm of reciprocity: human beings have plenty of persons around who have some duties towards them

and at the same time, they have duties concerning others. The best resources for social capital are relations where members interact with each other, not only for each other (Coleman, 1994; Gouldner, 1960; Lictermann, 2006).

The concept of social capital is also criticized about the missing definition (see e.g. Portes, 1998) and because it has not had anything new to add to the discussion lately: belonging to a group has always been seen as valuable for human beings and communities. It is also said that because the definition is missing, all interactions can be understood as social capital (Fine, 2007; Portes, 1998; Portes, 2000). The visions of social capital are also seen one-eyed: for example, according to Professor of Public Policy Robert D. Putnam (2000), social capital is a good thing, and its collapse is a bad thing. Putnam is said to be very conservative when thinking about the sources for social capital: he only sees the traditional ties, such as families and neighbours, but there are new forms of social ties (Chambers, 2006), which we will discuss later. Some researchers believe that by adding social capital even very big problems could be solved, for example for Putnam (2000) social capital and increasing it is a possibility to solve almost all problems: it facilitates wellbeing, education, economic status, health, happiness and citizen activation (Putnam, 2000). Professor of Education John Field (2003) says that the force of social behaviour is overstressing: he claims that persons who are good at networking are better at gaining health services. Therefore, they have better health because they are able to seek health services among their networks and human resources (Field, 2003). It has been suggested that we should talk about the optimization of collective resources, not their maximization (Woolcock, 1998). There is a need to discuss even these dark sides of social capital, for example, preference of the personal group and stereotypical disrespect for others or reinforcement of inequality in which case contacts of all group members are not of the same value (Field, 2003; Portes, 1998). Social capital is meant to make society a better place to live. But there will always be persons who are not members of any group or network and the reality of groups is also a lot more mixed than any theories can explain (Farrar, 2001; Day, 2006).

Community as a Source for a Meaningful Life

In the “good old days”, there were communities that we could call “Gemeinschafts”. They were the one and only form of community: family relations and village communities were the original ways to form a community. The community meant a long-lasting connection and working together toward shared aims (Tönnies, 1955). Then something changed in society. New needs and ways, like rationality and in artificiality, to be in the community arose (Tönnies, 1955). It was a time for “Gesellschafts” (Tönnies, 1955) which had their origin in individual needs for being together. Such a “new” society is very unpredictable and thus there is a question of how long a time we can plan for communality when the time is described as a “cornucopia of choices” and as discontinuities (Day, 2006).

Communality has been discussed mostly as positive, but it may also cause social exclusion when individuals are seeking communities that would serve themselves best (Bauman, 2001; Day, 2006). The community can be seen as a reaction to the prevailing uncertainty. Temporariness in society has released individuals from restrictions: it enables personal choices but also causes anxiety for a personal place in society because people turn more and more to contexts where they feel at home (Bauman 2001; Day, 2006).

In the social-psychological view, community and belonging to a group have connections to the personal identity-forming project. The easiest way to define identity has been the age, gender, professional status, culture, race, nationality, or language but in many cases, identities overlap (Rummens, 2003). Identity is always in process and there is always some imaginary in its unity; it remains in the process and develops all the time (Hall, 1999). Identity also contains a distinctive aspect: some people want to describe themselves by what they are not. Disidentification from the "others", from the outgroup, is an essential element in forming a strong ingroup (Kärreman & Spices, 2007). Identity, especially religious and ethnic identity, has been the root of describing who I am. Nowadays identity is becoming the main, or sometimes the only, source of meaning in this period where nothing is stable (Castells, 2011).

According to Philosopher of Psychology, Social Psychologist Rom Harré (1983), social and personal identity projects are ongoing at the same time. The social identity project means that people need to adapt as much as possible to the social heritage of their community. After that, they must try to convince others of their dignity and suitability. Through the personal identity project, human beings develop their privacy and uniqueness inside the social identity. This means that people do not only adopt social features from others but try to differentiate their personalities from others (Harré, 1983). Mead (1962) has a very social view of human beings' identity development. Persons try to find their identity in interaction with others, by observing others and adjusting their behaviour accordingly (Mead, 1962).

New Forms of Social Ties

There is a significant change in the structure and volume of social interaction related to technological development. New technologies have been feared to cause loneliness, although there is no unambiguous evidence of this (Saari, 2016).

It is said that in Western countries the traditional sources of collective identity like family, nationality, and ethnicity are worn out and do not offer significant social connections or feelings of safety. The phenomena that Putnam (2000) is talking about - not having time for relationships because of TVs, cars, less spare time, and the ageing of the collective generation - are said to be only a feature of the individualized lifestyle and individualized relationships (Beck, 2000; Field, 2003; Putnam, 2000). Putnam (2000) also stands for face-to-face interaction and does not pay attention to virtual or online communities. The family and community, without a doubt, are the main sources of social capital (Putnam, 2000). Other researchers, such as Field (2003), see online interaction tools as compensatory or complementary sources for forming new communities (Field, 2003). New identities and virtual communities are built by using mobile phones and the Internet. The changes in people's social relationships lead to new forms of social connections based on movements and networking in the information society (Chambers, 2006). New researches show that television is not the reason for not making communities work: teenagers interviewed in the US did not even understand the possibility to watch television on someone else's schedule (Castells, 2011). Social media is a double-edged sword when it comes to loneliness. On the one hand, social media promotes the phenomenon of "alone together" and, on the other hand, asymmetrical interaction predisposes to loneliness (Saari, 2016).

Professor of Media and Cultural Studies Deborah Chambers (2006) suggests that instead of communality we could start to think of the concept of friendship. The focus would be not on the community, but on individuals. There is a trend that people would like to describe themselves by their relationships, not by their heritage or old community traditions such as class or nation (Chambers, 2006). When we think of human beings surviving uncertain situations in the changing world, the concept of friendship would sound safe and nice. Among friends, I can be what I am, and I can count on friends – so far. The idea of friendship substituting the "old forms" of communality is not universally accepted: women's lifestyle choices expressed by the desire for freedom in relationships are seen as threats to society, their destinies as wives and caretakers (Chambers, 2006).

What are friends and friendships? Urban dictionary (2019) defines a friend as a person who loves you and whom you love and who is a loyal partner; the word has its origin in the verbs love and honour. Philosophical Researcher Neera Kapur Badhwar (1987) defines friendship "as a practical and emotional relationship of mutual and equal goodwill, affection and pleasure". Friends are described to be various and multiple, a group that is not a well-defined social group (Hänninen & Lötjönen, 2020), a link to weak social ties (Granovetter, 1973). There is also discussion in the Finnish society if a good friendship could replace physical activity and if a `good amount of social life` could do the same well-being effect as spinning or running. According to Professor Marko Elovainio from the Finnish Institute for Health and Welfare, if there is no one to whom your life is meaningful, you are in a weak spot (Puttonen, 2013). Sociologist, Professor Juho Saari (2010) notes that Finland is changing toward a "friendship society". Outside their family (parents and siblings), Finns usually rely on friends for loans, mental health, relationships, and some other matters instead of other relatives.

This leads us back to the concept of social capital: people purposefully form networks that are useful for them now or later (Bourdieu, 1986). Social ties also increase mental well-being (Puttonen, 2013). Being a part of a community benefits its individual members by creating what they are. Chambers (2006) calls this reciprocal individualization: self-identity but also mutual relations are the focus.

We earlier raised the meaning of networks in forming personal identity. In this era of discontinuity, the personal identity can be a project identity or network-based identity. Project identities arise when people notice that their dominant identities are not anymore working or significant in changed situations. For example, in studies of teachers' competencies in the reformed Finnish vocational education, it was recognized that teachers need 53 different skills while working with students, working life partners, and colleagues (Tapani & Salonen, 2019). Using these skills in different contexts means different identities for teachers: instead of the traditional identity of the teacher in the classroom, the new situations evoke the need to form an identity as a reformer of working practices, a counsellor, and sometimes a person who produces employees to the labour market (Kukkonen, 2018). The demand for new identities can originate from the individual who reflects the needs of the environment and the generalized other (Mead, 1962). In these situations, there is a need to challenge prevailing, obvious mental constructs. This is done by individuals who want to join and make changes in things of high value to them (Castells, 2001; Heikkinen & Huttunen, 2002). Castells (2001) claims that a human being becomes a true self only by joining a collective and thus finding a source for personal identity is vital for development. Identities and their sources are embedded in historical contexts: they are constructions that are built on the historical, cultural, and

geographical memory (Castells, 2001). The self and self-identity are liberated from rules and regulations of the past through changes: personal activities can be facilitated by accessing information, in the Internet or other ways of online communication which make individuals responsible authors of their life (Chambers, 2006).

Technology-based forms of communality are means to rebuilding communalities and community connections, for example smartphones today have more power than computers, claims Callagher (2018). There are some studies concerning the new ways of interaction. For example, Kaban (2021) shows the possibilities and restrictions of social media tools in school-family communication. Smartphone addiction has been studied in the sense of leisure satisfaction and leisure boredom (Serdal et al., 2022). Technology can be a good servant but a bad master: there are also some opinions of how is changes life easier but at the same time, more isolated. For example, youngsters are involved on their devices and communication is a lot of technology-to-person instead of face-to-face contact (Brownstein, 2015).

Freedom and possibilities for choice also make living uncertain. Friendships can be ended at any time if one or both parties believe the relationship is no longer beneficial. In these new times, if individuals fail in aspects of their lives, in education, work or love, they can only blame themselves, not the structures. An important question is how much new social ties legalize self-centeredness or nonchalance and how well they pay attention to otherness (Chambers, 2006). It is a question of alone or together; a self-oriented life or a life for and with the others.

Work as a Source of a Meaningful Life

Studying working life and human experiences of it is significant because some researchers show that it is more important to experience work more meaningful than prosperity and happiness are (King & Napa, 1998; Lancaster & Stillman, 2010). It is possible that in the future the relevance of work is stressed even more because the World Economic Forum claims that the workplaces of tomorrow will offer experiences of dignity and possibilities for individual growth and development (WEF, 2018).

According to the self-worth perspective, an inspiring environment affords possibilities for feelings of being acceptable and respected (Covington, 1992). The feeling of being valued as oneself is a base for self-confidence and the meaning of life. If people do not have the feeling of dignity, they have weaker possibilities for respect for other people (Himanen, 2012). Everything that adds the experience of autonomy and competence, for example, positive feedback, the experience of success, and the support of the community, maintains the positive extension (Deci et al., 1999; Deci & Ryan, 2000). In their self-determination theory (SDT), Psychologists Edward Deci and Richard Ryan (2000) share the understanding that humans have psychological needs for competence, autonomy, and relatedness. Even if these features are said to be innate and of a psychological origin, all elements of SDT deal with social points of view. Competence refers to individuals' unique talents in a group which benefit all group members; they fit well with the idea of relatedness that has its origin back in the hunting society: there was more cooperation than hunting alone (see e.g. Packer & Ruttan, 1988). Since then, it has become an important value in resource sharing and mutual protection, ensuring the more effective transmission of group knowledge to the individual and a more cohesive social organization. Autonomy plays a big role in steering personal life: it offers

the possibility to regulate actions and prioritize processes toward more effective self-maintenance (Deci & Ryan, 2000). Some research on working life shows that meaningful work produces added value for the whole society (Blom & Hautaniemi, 2009). Vice versa, if employees feel that there are minor possibilities for steering their work, it easily leads to early retirement (Lahelma et al., 2012). A study on Finnish teaching staff shows that it is important to work according to personal capabilities and feel a connectedness to larger environments and society (Tapani et al., 2022).

Method

As material for the research, we used a questionnaire that was delivered online in three Finnish cities, Tampere, Lahti, and Kuopio. Tampere has 238,140 inhabitants and close to half a million inhabitants in the Tampere Region, which comprises Tampere and its neighbouring municipalities (Information on Tampere, 2020). Lahti has 120,000 residents and is a center for a region of 200,000 people (Lahti info, 2020). The population of Kuopio is approximately 119,300 and about 600,000 people live in the city's catchment area (A brief introduction, n.d.). The cities were chosen because they all are the centers of their regions and are willing to add commonality among their inhabitants by involving them in developing the city together.

The title of the questionnaire was “survey of experiences of dignity and meaningfulness”. In this article, our material consists of answers to a question on the questionnaire:

- Describe the matters and situations in which you feel or have felt that your life is meaningful and that you are valuable.

The request for answering the survey was presented via Internet pages of the cities, in several face-to-face meetings and seminars. The questionnaire was open for three months in autumn 2019, from September until the end of November. The whole data consists of 969 answers from 15-64- year-old citizens. The answers of different age groups are presented in Table 1.

Table 1. Age Groups and Answers to the Questionnaire in Total

Age	N
15–24	67
25–34	182
35–44	222
45–54	215
55–64	203
65–74	69
75+	11
Total	969

In the age group division, we did not separate students or retired persons. The overall aim was to see what components make life worth living.

As a method, data-driven content analysis was applied (inductive content analysis) to the research (Elo & Kyngäs, 2008). First, the data was reviewed multiple times. Separate expressions of meaningful life experiences were identified in order to identify the differences and connections between the studies (Silverman, 1993). Similar words or sentences were collected under related themes. Among the experiences of a meaningful life, we separated expressions of work, workmates, or work communities. The coding process according to Anselm Strauss and Juliet Corbin (1990) was applied: in open coding we named and categorized the phenomenon through close examination of the material (Strauss & Corbin, 1990). The units linked with the experience of meaningful life were the words or sentences in the respondents' answers. After this, we reduced the themes (Schreier, 2012; Mayring, 2002). We attempted to identify specific features: the context in which the phenomenon of a meaningful life is embedded and the conditions that give rise to it. Finally, the selective coding integrated categories to a grounded theory (Strauss & Corbin, 1990) – in this case, the constructions of a meaningful life in the Finnish context and the role of work in it. We were aware of existing theories and pre-knowledge during the research process although a data-driven approach was applied.

Results

As a result, we could identify dozens of original phrases, eight generic categories, and four main categories concerning meaningful life. We present them in Table 2. All the elements of meaningful life based on the data are shown here.

Table 2. Experiences of a Meaningful Life from Subcategories to Main Categories

Subcategory (original phrases)	Generic category (main themes of a meaningful life)	Main category
My work in the social sector My work as a nurse My work in family care My work with substances abusers and persons with mental problems My work in the cultural sector My work as a special needs teacher Youth work I work as a teacher and the work in teaching and upbringing is meaningful for students' future	Professional identity makes being meaningful	Work and related communities as sources of meaningfulness and dignity
I can use real life experiences when I lecture for students and can affect their professional identity My work fits well with my personal values I have been able to work with societally meaningful things	Doing valuable things in job	

Subcategory (original phrases)	Generic category (main themes of a meaningful life)	Main category
I feel well at my working place and my work makes an adequate living I can affect the future society via my work Meaningful encounterings at my work Me and my colleagues can solve problems I feel I do meaningful things when patients are satisfied My work helps others I can use my strengths at work and help others by using these skills		
When I finally got a full-time salaried job, I felt meaningfulness again. I feel more important for the world when getting paid for my work. Rationally I do understand that by volunteering I made great things for culture. Having a permanent job	Work defines self-approval	
If I can help somebody and do something good. If it is not possible by helping others concretely, it is possible by paying taxes.	Unselfishness	Volunteering and helping make life worth living
Work and hobbies are meaningful things when you can also give something to others through them. Volunteering and communal work are important especially when paid work does not give the experience of meaningfulness Volunteering and acting societally give meaning to my life.	Volunteering and freetime communities	
My meaning as a part of the community is clear: when I have meaningful and at times, developing roles in my work and freetime, I can feel important in some communities. When I get acknowledgement at home, work or from friends. All the situations when people praise me, in one way or another.	The feeling of necessity	
Children Wonderful and healthy children	Traditional social ties	Connections in daily life as a base for dignity

Subcategory (original phrases)	Generic category (main themes of a meaningful life)	Main category
When my children were born and following how they grew up		
Family		
Work and family		
Family that is closely connected		
Being a parent		
Being a mother		
Being a spouse		
Being a grandparent		
Being a mother and a partner		
Being a grandchild and a child		
Being a workmate		
Having a loving spouse		
Having a good and satisfactory sex life		
Grandchildren		
Friends		
Being able to spend time with my mother who is getting old		
Family relations with my husband, friends, sister, parents, and workmates		
Love		
Being happy in my couple relationship		
Having a husband		
I feel I am trusted, and people like to be with me		
I am a needed supporter for my close people and others		
Being healthy		
Being able to do physical exercises		
Taking care of my own and my spouse’s health		
Daily life and work are meaningful		
Gardening at my cottage in the summertime		

Subcategory (original phrases)	Generic category (main themes of a meaningful life)	Main category
Our life is something bigger than just navel-gazing. I claim that a meaningful life has to do with love and love from the "upstairs". Experiences of nature and a tidy and nicely built environment where history is present are valuable experiences for me.	Seeing human life as a part of the nature	Oneself as an agent in the universe
Fulfilling oneself	Creation and satisfaction	
The experiences of trust and respect between people and that daily life is going smoothly and safely are valuable. I am happy that in my hometown and in Finland the infrastructure works and we have trust in authorities and citizens.		

Next, we will have a look at how the results relate to the theoretical framework. We concluded that the main points of social capital are that it is embedded in social ties, owned by communities and networks, trust, memberships, and multifold interaction are needed to reach it. The keywords of social capital are communities and reciprocal interaction. At the core of communities lies the idea of communities as a reaction to uncertainty. The members of the community have something in common and belonging has a role in forming their identity, also based on the aspects of ingroup - outgroup thinking. In the ingroup, the identity is formed through expectations of the group, but personal traits of the identity can be shown through aspirations of differentiation. In these unpredictable times, identity plays a huge role in being. Virtual communities, friendships, and network-based identities are mentioned as new forms of social ties. These new forms of social ties challenge the prevailing, obvious mental constructs. Freedom and possibilities of choice also make living uncertain. An important question is how much the new social ties legalize self-centredness or nonchalance and how well they pay attention to otherness. In Table 3, we will view how these theoretical settings fit into the Finnish contexts.

Finally, we will continue with the notes concerning work in Table 2 and 3. The question was what makes life worth living and especially, what meaningful life is and what role work play in it. In table 2, we can notice that work plays a huge part in making life worth living. Work and related communities are found as sources of meaningfulness. Volunteering gives meaning to life, too (category: Volunteering and helping make life worth living). Volunteering is somewhat problematic: in some answers, it is said that volunteering gives life meaning. In other cases, paid work gives real meaning; some respondents even note that they feel full citizenship when they pay taxes.

Table 3. Main Categories of Experiences of Meaningful Life connected with the Theoretical Framework

Main category	Connection to social capital	Connection to communities	Connection to new social ties
Work and related communities as sources of meaningfulness	My role is important for the whole community and society	I am an important part of the work community	Not mentioned
Volunteering and helping make life worth living	By helping others I also get meaningfulness and more social capital in my life	My role as a helper is important in my community	Traditional views
Connections in daily life as a base for dignity	Daily life with fellow people is very meaningful	Traditional communities play a big role	Friendships are mentioned, main points are still traditional
Oneself as an agent in the universe	I feel safe, connected and can be creative	Universal views on communities	Mental ways of belonging

Looking at the theory connection on work's role, we can notice that there are connections to social capital and communities while considering work as an important part of human life. Work, especially paid work or permanent work, adds the feeling of participation.

"*My contribution is important to the whole community and society"*

and relatedness

"*I am an important part of the work community"*.

Via volunteering, it is also possible to add social capital

"*By helping others, I also get meaningfulness, more social capital to my life*"

and belonging to a community where their role is recognized.

"My role as a helper is important in my community".

New social ties do not play a big role: belonging to work communities and helping relatives or those in need are more important. Interestingly, workmates are not defined as friends here, although it is possible that some respondents also help workmates.

We can summarize by saying that traditional communities play a big role in living a meaningful life. The fellow people and their well-being are something that keeps the Finns going. New social ties and connections are not much mentioned in the data. Work communities but also family life, children, grandchildren, relatives, and work are important sources of meaningfulness. The results show that for meaningfulness it is important that people's role in the community is visible and recognized.

Conclusion: Social Ties connected with Meaningful Life and Work

The aim of this article was to study, what makes a life worth living: where are the possibilities of feeling dignity, and how does this relate to theoretical views of humans as social beings.

By an overall look at the results, we can notice that social ties are remarkable in making life meaningful. We could identify dozens of phrases describing meaningful situations and experiences, eight generic categories, and four main categories. A life worth living is created by work and related communities, by volunteering, living a good daily life, and the feeling of being a part of something bigger. The communities and social ties that support feelings of being meaningful are work communities, hobbies, and volunteering communities, especially those where a person can help others, and the traditional family and friendship communities.

It was easy to connect meaningful life with social capital: we could identify the feeling of being an important part of different communities. It was also important to be a part of society and special groups (e.g. work teams). The personal contribution was realized by helping others and volunteering – these actions added social networks and, in that way, social capital. Fellow people were important. To belong, to be a part of communities added the feeling of security and made it possible to be creative in personal choices. It is noteworthy that social connections play a huge role in the feelings of meaningfulness. In myths and legends but also in scientific descriptions (see e.g. Uschanov, 2012), Finns are said to be not so well connected with others, living quite alone and not being so communicative. According to our results, we can notice that there are communality features also in the Finnish mindset. Maybe it is just a part of the mindset that there is no need to make any noise about this, and as Uschanov (2012) mentioned, short expressions are all right for Finns. The same applies to communities: helping or working with others makes people feel being important parts of the communities. Traditional views are remarkable but there are also signs of connections to universal communities, being part of something "bigger" and noticing personal roles in them. Most communities are traditional, connected with families, relatives, and work communities. The concept of family is not defined here but we share the idea of it being diverse. The new or more open social ties can be noticed in the data in comments on mental belonging to bigger entities. The signs of the new social described by Chambers (2006) do not play a big role in the Finnish ways of living a meaningful life. This is an interesting note because the Finns are said to be a lot depending on their smart phones and other devices: in one study, it was noticed that even on summertime there were 133 net using times per day per person (Koistinen, 2018) and that there is therapy available for even elementary school-aged children to get rid of smartphone addiction (Piirainen, 2018).

The most surprising result of this research was not that the *new* social ties do not exist but that work, and work communities still play such a big role in living a meaningful life in the Finnish context. Finns seem to be quite traditional when comes to the sources of a meaningful life, despite the global possibilities of connecting worldwide. Work, especially paid work, defines personal identity and meaningfulness in the community and society. Sharing personal expertise and helping others is also a remarkable source of a life worth living. This all comes back to humans being very social in their nature (Mead, 1962): there is a need for being a member of a significant group. However, it is not enough: there is also a need for the group to accept their competence and for

making personal choices, being autonomic among others. A meaningful life is a combination of social ties but also self-determination (Deci & Ryan, 2000) and it seems to be also strictly connected with universal values (Schwartz, 1992) with the Finnish twist (work) (Helkama, 2015). There is a need to have a special status in society (paid work connected with power, connection to competency). There is a need to be respected by others (helping others adds the feeling of achievement, and connection to relatedness) and work offers a special place for it. Helping others and feelings of respect add value to working life and other parts of social life (eudaimonic, see Ryff et al., 2021). Having individual possibilities to create new things with others adds to the variety of life (stimulation; connection to autonomy). Independent choices and being alone in a good way, "alone with connections to others", offer a possibility of freedom (self-determination). Respecting nature and seeing personal role as a part of something bigger (universalism) are important. Meaningful life in the Finnish context cannot be described without meaningful others: there is an urgent need to feel that the loved ones also feel well (benevolence). Finns seem to respect the traditional habits, such as hard-working, volunteering and helping each other as sources of a good life (tradition). Especially grandparents and relatives, like children and spouses, were taken into account in daily life (conformity). It is important to be healthy, have hobbies, and have good relations with each other (security). In Finnish traditionalism, work played a big role in meaningful life: paid work was a base for a good living. This shows some signs of commitment to work. To work is meaningful for the wholeness of life and seems to form one base for individual`s well-being. To commit to work can serve as a source for daily well-being, by filling the basic psychological needs, for example being a valuable member of the community (Deci & Ryan, 2000). Same kind of result is found among academicians: a positive significant relationship was encountered between the psychological well-being levels of the academicians and their organizational commitment levels (Yalçın et al., 2021*)*.

In the conclusion of this research, we can state that meaningful life is built on the individual's work, including competence, autonomy, and relatedness (SDT, Deci & Ryan, 2000). However, working or living alone is not enough. In order to feel that life is meaningful, we need other people and the community to bring security, traditions, conformity, benevolence, and universalism which make life worth living. And that brings us back to where we started, Mead`s (1962) theory: to become a full human being there is a need for significant others. Workmates and managers play a huge role in feeling that personal work is important for the whole organization and for colleagues. It is important to remember this when considering organizational renewals and remote work. Employees need feedback, they need to be seen by colleagues and by managers. It is not fair even for Finns to leave them to work alone. This data confirms that meaningfulness and feelings of belonging at work are significant factors for well-being in whole life.

Experiences of relatedness during enforced remote work (covid-19) show that lack of communality has have many consequences: rates of loneliness have been high, and it has increased stress and exhaustion (Groarke et. al., 2022; Lunde et al., 2022). Because of this, we need new ways to build relatedness (Tapani et al., 2022).

Among teaching staff, it was noticed that dignity increases if personal work is visibly connected with the wholeness of the organization and if staff can work on their strengths (Salonen & Tapani, 2020). Meaningful life and meaningful working life seem to go hand in hand: if persons are recognized and respected at work, it adds to

their dignity in whole life. This is not enough. There is still a need for loved ones to do well. Finns seem to be somehow eudaemonic of their nature: they cannot be happy with their achievements alone. They need acceptance of their competencies, but they want to take care of others, too. Using Mead´s (1962) words, significant others count. Even at workplaces. Even among the silent and icemen Finns.

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The Effect of Educational Games on Success in Teaching Mathematics: Reading and Writing Natural Numbers

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The Effect of Educational Games on Success in Teaching Mathematics: Reading and Writing Natural Numbers

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Abstract

In this study, the effect of educational games, which are included in the alternative learning activities prepared by the researchers, on the learning environment will be investigated. In other words, the effect of educational games on the elimination of difficulties experienced by students in reading and writing natural numbers and the formation of permanent learning in students will be investigated. In the research, a quasi-experimental model with pretest-posttest control group was used. The population of the research consists of 5th grade secondary school students studying in one of the Eastern provinces of Turkey. The sample of the study consisted of 75 students studying in two branches of the 5th grade of a primary school located in the city center of the same province in the 2021-2022 academic year. According to the results of the research, while the permanence of the success in learning activities with educational games was ensured, the success achieved with the traditional teaching method was not permanent. In this context, as a result of the research, it has been seen that educational games are a successful activity in providing learning and making it permanent.

Introduction

The concept of number was formed as a result of studies carried out to identify and express the multiplicity or objects that exist in nature and somehow enter our lives (Albayrak, İpek, & Işık, 2006; Negen, & Sarnecka, 2012; Wynn, 1990). They are the numbers that are widely used in the relations between people in daily life and are the first to be taught to students in primary education. In the decimal system based on the digits "0, 1, 2, … 9", multiplicities are grouped in multiples of ten. That is, the expansion of each number in the numeration system to the base-10 can be written as powers of 10 (Hacısalihoğlu, Hacıyev, & Kalantarov, 2000; van de Walle, Karp, & Mr-Williams, 2016). In the numeration system to the base-10, the use of the concept of place value and the use of 10 symbols (0, 1, 2, …9) defined as “digits” to express any number are the features that make this system usable and powerful (Baturo, 1997).

The place value is defined as the value that the digits take according to their position in the number (Arslan & Ubuz, 2014; Kari & Anderson, 2003). Place value is an abstract concept that is important for many arithmetic operations such as mental calculation, reading and writing natural numbers, as well as for other branches of

mathematics, especially algebra (Burns, 1994; Kari, & Anderson, 2003; Richardson, 2003). In addition, the concept of place value is a basic concept for students to acquire many skills such as basic arithmetic operations related to mathematics such as addition, subtraction, multiplication, operations that require decimal or decimal fractions (Merenluoto & Lehtinen, 2004; Siegler et al., 2013).

The concept of place value develops in a process covering primary and secondary school periods and is expected to be understood by students exactly in these periods (Gelman & Gallistel, 1978; Mix & Sandhofer, 2007). Although this concept is seen as a simple concept in general terms, as a result of the studies, it is seen that students have difficulties even in basic arithmetic operations because they cannot fully grasp the concept of place value in the primary and secondary school periods (Albayrak, Yazıcı, & Şimşek, 2019; Chambris, 2008; Dinç Artut, & Tarım, 2006; Garlikov, 2000; Thomas, 1996; Thomas, 2000; Thompson, 2003; Thompson & Bramald, 2002; Wynn, 1992). As a matter of fact, Vareles and Becker (1997), in their study with students who had sufficient prior knowledge about the concept of place value, determined that 96.5% of students confused place value with the concept of number value.

As a result of the concept of place value, there is a decreasing or increasing relationship, in terms of place value, to powers of 10, with the digits to the right or left of a digit in any number, if any. In more general terms, if a digit in the number moves one digit to the left, its value increases 10 times, or if a digit in the number moves one digit to the right, its value decreases 10 times. Figure 1 shows this relationship in the numeration system to the base-10 (Arslan & Ubuz, 2014).

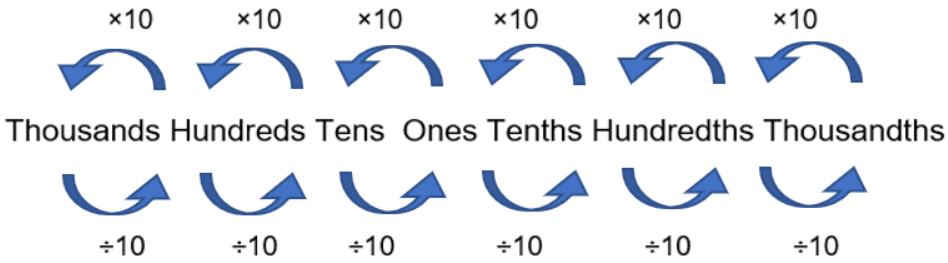

Figure 1. Multiplication relation in Numeration System to the Base-10

As seen in Figure 1, the majority of the students have difficulties in establishing the relationship between the digits, distinguishing the digit and number values, or grouping the numbers according to the place values. Therefore, students cannot write a verbally spoken number with numbers mathematically (Albayrak, Yazıcı, & Şimşek, 2019). We can see in the study of Thomas (1996), how much difficulties are experienced by students while expressing a verbally given number mathematically. Thomas (1996) determined that 40% of 6th grade students still cannot tell the place of "tens of thousands" in place value. Also, in addition to this study, Kamii and Joseph (1988) asked students about the place value of the digit in the tens place of a two-digit number and determined that nearly half of these students could not answer this question correctly.

In the first level of primary education, when students cannot learn meaningfully about the concept of place value, they have problems in reading and writing natural numbers in the following years (Sarnecka, 2021; van de Walle,

Karp, & Bay-Williams, 2016). For this purpose, during the teaching of the concept of place value, it is necessary to enrich the learning environments and to use concrete materials that will provide permanent learning for students. For effective teaching, teachers need to address the concept of number by using different teaching methods such as grouping, analyzing, using step tables and number blocks, and making sense of the combination of values in numbers and the diversity of values in numbers (Sarnecka & Wright, 2013; van de Walle, Karp, & Bay-Williams, 2016). For this purpose, it is necessary for teachers to focus on activities that will enable all students to actively participate in the lesson, rather than in-class practices that cause memorization of information, in terms of permanence of what has been learned and meaningful learning (Shuell, 1990; Vallori, 2014). One of the activities to be used in this sense is educational games. Educational games include activities that allow students to repeat this information in a comfortable environment where they enjoy learning and take part in it (De Freitas, 2018; Giannakos, 2013; Pivec & Kearney, 2007).

Games have existed in every period of humanity. Toy remains and game depictions found in excavations all over the world support the fact that games have been a part of human life since ancient times (Halmatov, 2017; Kapp, 2012). Play is a phenomenon that supports the mental development of primary school students, allows students to express themselves, and is always present in human behavior (Bodrova, Germeroth, & Leong, 2013; Park, 2019). The child learns many behaviors, knowledge, skills and attitudes necessary for his life in the game environment (Koçyiğit, Tuğluk, & Kök, 2007). Play helps children develop their ability to create, experience and communicate (Boyer, 1997; Hirsh-Pasek, Golinkoff, & Eyer, 2004). Game can be expressed as the most effective and productive learning process of language, emotional and social development (Broadhead, & Burt, 2012; Russo, 2009; Yazıcıoğlu & Çavuş-Güngören, 2019). According to Karabacak (1996), there are many benefits of using the game technique in the teaching process. We can summarize these benefits as follows: Increasing students' interest in lessons by regulating their short attention spans, making the lessons more lively and cheerful by saving them from being boring, making the learned information more permanent. According to Chateau, educational games create a framework and give the child seriousness and endurance. For this reason, play should be embedded in school activities (Chateau, 1979). Therefore, both children's skills should be developed and the quality of education should be increased through games. On the other hand, it is known that students have difficulties in reading large natural numbers (Albayrak, Yazıcı, & Şimşek, 2019). In this sense, in this study, the effect of educational games, which are included in the alternative learning activities prepared by the researchers, on the learning environment will be investigated. In other words, the effect of educational games on the elimination of difficulties experienced by students in reading and writing natural numbers and the formation of permanent learning in students will be investigated. In this context, the research problems were determined as follows:

1. Is there a significant difference between the learning environment enriched with educational games and the traditional learning environment on the academic success of primary school students in reading and writing natural numbers?
2. Is there a significant difference between the learning environment enriched with educational games and the traditional learning environment on the permanence of the knowledge that primary school students have learned about reading and writing natural numbers?

Method

Research Design

The research is based on the quantitative paradigm. In the research, a quasi-experimental model with pretest-posttest control group was used. The difference that distinguishes the quasi-experimental design from the experimental design is that instead of randomly selecting the participants one by one, one group from the equivalent groups is randomly assigned as the experimental group and the other as the control group (Creswell, 2014; McMillan & Sally, 2014). In the research, a pre-test was applied to the experimental and control groups to determine that they were equivalent before the application, and then activities were carried out for the experimental group with the help of educational games and the control group with the traditional method for reading and writing natural numbers. After the application, a post-test was applied to compare the achievements of the groups, and after three months after the post-test, the retention test was applied to compare the permanence of the information learned by the students.

Research Group

The population of the research consists of 5th grade secondary school students studying in one of the Eastern provinces of Turkey. The sample of the study consisted of 75 students studying in two branches of the 5th grade of a primary school located in the city center of the same province in the 2021-2022 academic year. One of the groups contains 37 students and the other 38 students.

Sampling was done by cluster sampling method. In this method, instead of selecting the members of the sample, the groups are selected as a whole (McMillan & Sally, 2014). The participants included in the research were informed about the research before the research and the condition of voluntariness in participation was taken into consideration. At this stage, the participants were also informed that the confidentiality of the collected data would be taken care of, that this data would not be shared with third parties and that they would only be used in the current scientific research by hiding personal data.

Data Collection Tool

In the study, the Number Reading and Writing Achievement Test [NRWAT] was developed by the researchers to measure the success of the students in reading and writing natural numbers. During the development phase, the resources related to the subject were scanned and the questions in the resources were examined and 10 questions were prepared on the subject. The prepared questions were first examined by 2 experts in the field and necessary arrangements were made as a result of their feedback. This process contributed to content validity of the test. Then, NRWAT was applied to 85 students as a pilot study.

In this application, the situations related to reading and understanding the questions were examined and the Cronbach Alpha reliability coefficient of NRWAT was calculated as 0.72. Using the data obtained from the pilot study, NRWAT was made ready for use. The test consisted of 10 questions and each question was evaluated over

10 points.

Darts Game and Application Process

The material to be used in the game activity applied in this research is a dartboard with a different number in each part. The dartboard has the innermost number 9. The number 1 is on the outside. Therefore, getting the number 9 is less likely, while getting the number 1 is more likely. Shooting outside the dartboard corresponds to the number 0. An example of a dart board that can be used in the game is given in Figure 2.

Figure 2. Sample Dartboard

The aim of the game is to put the numbers won from the dartboard on the place value chart so that the largest 12-digit number can be obtained. Before starting the game, an empty place value chart should be drawn on the board with ones, thousands, millions and billions of divisions. At the beginning of the game, a shot can be made to determine which student will start first.

The student who gets the higher number starts the game first. Each student then takes turns making a shot at the dartboard. He writes the number that comes at the end of the shot to the desired digit in the step table. Here students need to develop a strategy during the game to get the largest number. For example, a strategy might be to write the number 9 to the far left, and to try to leave the leftmost digit blank unless the number 9 appears. The necessity of playing strategically makes the game more playable and meaningful. In Figure 3, an example place value table that emerged in a game played with two students is given. The game can also be played with more people. For this, it will be sufficient to increase the rows of the place value table.

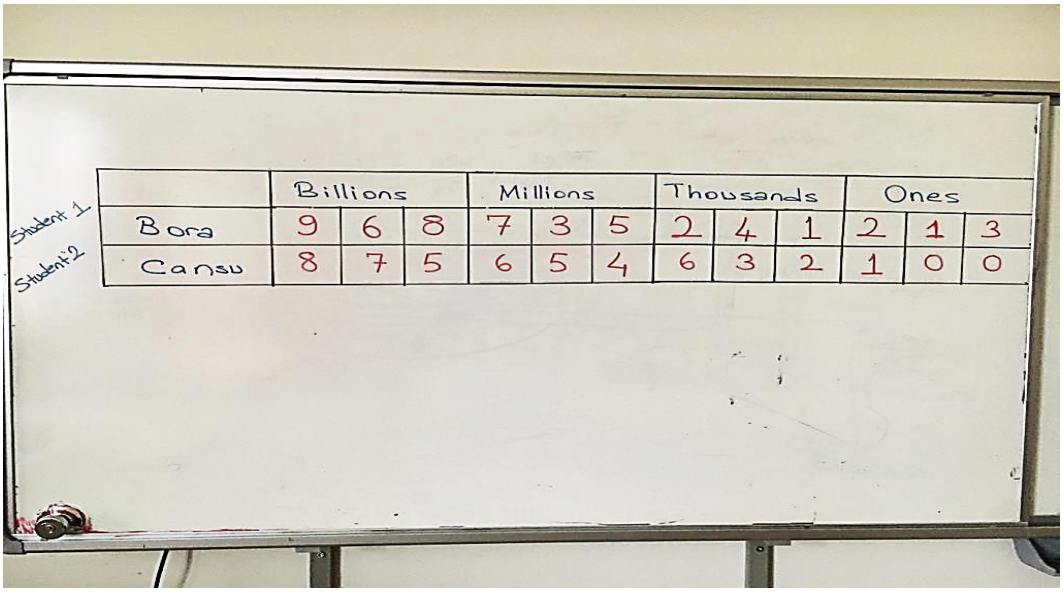

Figure 3. Sample Place Value Table

At the end of the game, the numbers created are read together with the class. In this way, the active participation of all students in the class is ensured in the process of orally reading the numbers given in writing. In the game, a dice that can be obtained with a regular dodecahedron can be used instead of a dartboard. In this case, while numbers from 0 to 9 are written on 10 sides of the dodecahedron, "smiling face" and "sullen face" smiles can be added to the other two faces. Of these smileys, the smiling face corresponds to the number 9, while the sullen face can represent the number 0. In Figure 4, an example of a dice obtained with a regular dodecahedron is given. It is thought that an activity that appeals to psychomotor skills will emerge when a dart board is used in the game. On the other hand, it is thought that the development of psychomotor skills will be less in the game played with dice. Therefore, it is recommended to use the dart board as much as possible for a more effective game.

Figure 4. Example of a Regular Dodecahedron

During the implementation process, routine teaching processes were followed in the experimental and control groups. Only in the experimental group, after the teaching of the subject, the dart game was played for 2 lesson hours. The active participation of the students was ensured by playing the game repeatedly. The numbers formed at the end of each game were read together with the class. NRWAT was applied to the experimental and control groups before and after the application, just before the pre-test subject was taught, right after the post-test subject was learned, and the retention test was administered 3 months after the subject was taught.

Data Analysis

The obtained data were analyzed with SPSS 22 package program. Independent sample t-test was used to determine whether there was a significant difference between the scores of the experimental and control groups for each of the pre-test, post-test and recall test scores. In addition, a single factor ANOVA test was used for repeated measures to examine whether the pre-test, post-test and recall test scores for each group differed significantly. Bonferroni Test, one of the Post-Hoc tests, was used for pairwise comparison of repeated measurements. It was checked that the data provided the assumptions of the relevant model.

Results

In this section, the effects of the designed educational game on the difficulties of secondary school students in reading and writing natural numbers are presented. Accordingly, the t-test results of NRWAT's pre-test, post-test and retention scores according to the experimental and control groups are presented in Table 1.

Table 1. T-test Results of NRWAT Scores According to the Experimental and Control Groups

	Group	N	$\overline{X}$	S	df	t	p
Pre-test	Experimental	37	49,19	12,11	73	1,78	.080
	Control	38	45,00	7,97			
Post-test	Experimental	37	86,76	11,56	73	11,94	.000
	Control	38	59,21	8,18			
Retention	Experimental	37	84,86	10,70	73	13,60	.000
	Control	38	49,21	11,94			

When the pre-test results are examined, the achievement score of the experimental group is ($\bar{X}$=49.19), while the achievement score of the control group is ($\bar{X}$=45.00). There is no significant difference between the pretest achievement scores of the experimental and control groups, t(73)=1.78, p>0.05. This finding can be interpreted as the pre-application levels of the experimental and control groups were equal. Post-test averages were found for the experimental group ($\bar{X}$=86.76) and for the control group $\bar{X}$=59.21), and it was seen that there was a significant difference between these two scores, t(73)=11 94, p<0.05. According to this finding, at the end of the application, the students in the experimental group were more successful than the control group. The achievement scores in the retention state were found to be ($\bar{X}$=84.86) for the experimental group and ($\bar{X}$=49.21) for the control group, and a significant difference was found between these scores t(73)=13.60, p<0.05. According to this finding, it can be said that the level of remembering the information learned by the experimental group students is higher than that of the control group.

The ANOVA results of the experimental group's pretest, posttest and recall test data applied using NWRAT are shown in Table 2.

Table 2. Experimental Group NRWAT ANOVA Results

Source of Variation	SS	sd	MS	F	p	Significant Difference
Between Subjects	*9958,56*	*36*	*276,63*			
Between Measures	*33147,75*	*2*	*16573,87*	*280,63*	*,000*	*2-1, 3-1*
Error	*4252,25*	*72*	*59,06*			
Total	*47358,56*	*110*				

1: Pretest 2: Posttest 3: Recall

When the ANOVA results for the NRWAT were examined, it was found that there was a significant difference between the pre-test scores ($\bar{X}$=49.21) and the post-test ($\bar{X}$=86.76) and recall ($\bar{X}$=84.86) test scores of the experimental group. It was observed that there was no significant difference between the post-test and recall test scores. Accordingly, it can be said that the success of the students increased and the permanence of this success was ensured with the education process applied in the experimental group.

The ANOVA results of the control group's pretest, posttest and recall test data applied using NWRAT are shown in Table 3.

Table 3. Control Group NRWAT ANOVA Results

Source of Variation	SS	sd	MS	F	p	Significant Difference
Between Subjects	*6485,09*	*37*	*175,27*			
Between Measures	*4049,12*	*2*	*2024,56*	*41,41*	*,000*	*2-1, 3-2*
Error	*3617,54*	*74*	*48,89*			
Total	*14151,75*	*113*				

1: Pretest 2: Posttest 3: Recall

According to the NRWAT ANOVA results of the control group, between the pre-test ($\bar{X}$ =45.00) scores and the post-test ($\bar{X}$=59.21) scores of the control group, and between the post-test scores and the recall ($\bar{X}$=49.21) test scores. significant difference was found. In addition, it is understood that there is no significant difference between the pre-test scores of the control group and the recall test scores. According to these findings, it is seen that there was an increase in academic achievement in the control group compared to the pre-training period, but this increase could not be sustained. When the research findings are examined as a whole, both the learning activities with educational games and the traditional teaching method significantly increased the success of the students in

reading and writing natural numbers. In addition, while the permanence of the success in learning activities with educational games was ensured, the success achieved with the traditional teaching method was not permanent.

Discussion and Conclusion

As a result of the research, it was seen that the teaching process using the dart game significantly increased the success of the students in reading and writing natural numbers. This result is similar to the results of the study conducted by Broadhead and Burt (2012) and Karabacak (1996) on the effect of learning environments enriched with games in the teaching process. Therefore, it can be said that the effect of educational games on success is higher than the traditional teaching method.

According to the results of the research, while the permanence of the success in learning activities with educational games was ensured, the success achieved with the traditional teaching method was not permanent. Thomas (1996) and Kamii and Joseph (1988) revealed students' deficiencies in permanent learning about place values. As a result of this research, it was revealed that the shortcomings of Thomas (1996) and Kamii and Joseph (1988) regarding permanent learning in students can be eliminated by using the dart game.

As a result of the research, it has been seen that educational games are a successful activity in providing learning and making it permanent. Dinç Artut and Tarım's (2006) finding about the necessity of using different teaching methods instead of traditional for effective teaching was supported by the results of this study. However, the findings of Yazıcıoğlu and Çavuş-Güngören (2019) regarding the contribution of educational games to the permanence of learning are similar to the results obtained in this study. Again, Saracaloğlu and Aldan Karademir's (2009) finding about the necessity of active participation of students in the lesson for permanent learning was supported by the results of this study, which was conducted in the context of the contribution of educational games to permanent learning.

As a result of the research, the following recommendations were made. In this study, the success of learning activities with games for reading and writing natural numbers was examined. In studies that may be the continuation of this study, it may be useful to examine the effect of similar activities on the success of teaching different mathematics subjects. On the other hand, the contribution of educational games to students' attitudes and beliefs towards mathematics is also worth investigating. In order for teachers and teacher candidates to use educational games in lessons and to create rich lesson environments, pre-service and in-service trainings can be given for the preparation and implementation of such activities.

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Academic Self-concept and its Relationship to Academic Achievement among University Students

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Academic Self-concept and its Relationship to Academic Achievement among University Students

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Abstract

This research sought to study the academic self-concept and the relationship between the academic self-concept and students' academic achievement among university Qatari students. Research of the academic self-concept is well documented in Western cultures, but the academic self-concept research is limited among Qatari students. A sample composed of 274 undergraduate university students was utilized in this study. Tools of data collection consisted of demographic characteristics such as gender and age; students' cumulative Grade Point Average (GPA) as academic achievement; and the Academic Self-concept Questionnaire (Byrne, 1996) to measure the academic self-concept, which was composed of 40 items, distributed in 4 subscales namely Maths, Verbal, Academic, and Problem Solving. The result of the study revealed a significant but weak relationship between the academic self-concept and the academic achievement.

Introduction

Student's self-concept about their academic abilities plays an important part in student's learning (Herrera, Al-Lal & Mohamed, 2020; Perret et al., 2019; Sewasew & Schroeders, 2019). As a result, a high self-concept is valued as a desirable outcome in many disciplines such as educational, social science, health, and personality psychology (Herrera, Al-Lal & Mohamed, 2020; Marsh & Martin, 2011; Peperkorn & Wegner, 2020). And consistent with this, self-concept is a valued outcome and variable in relation to emotional and cognitive outcomes, including academic achievement (Branden, 2003). Self-concept, broadly defined by Shavelson, Hubner and Stanton (1976), as a person's self-perceptions formed through experience with and interpretations of one's environment. This importance was reflected in many studies, such as those that examined the dynamics of academic achievement and different psychological constructs, including self-concept (e.g., Abu-Hilal, 2010; Herrera, Al-Lal & Mohamed, 2020; Jaiswal & Choudhuri, 2017; Kobal & Musek, 2001; Sewasew & Schroeders, 2019; Stocker et al., 2021; Susperreguy et al., 2018; Wolff et al., 2018). To this end, studies (Abu-Hilal et al., 2019; Abu-Hilal & Bahri, 2000; Eshteewe, 2016; Herrera, Al-Lal & Mohamed, 2020) indicated that students assess their self-value through the level of their academic achievement and performing better in academics.

Recognizing this role of self-concept, empirical data showed that for doing well academically, high self-concept is an important needed prerequisite (Chen et al., 2013; Herrera, Al-Lal & Mohamed, 2020; Marsh et al., 2005;

Sewasew & Schroeders, 2019; Susperreguy et al., 2018; Wolff et al., 2018). In particular, the academic self-concept is considered a significant construct that has prompted extensive research (Chen et al., 2013; Sewasew & Schroeders, 2019). According to Bandura (1993), self-concept is multidimensional and includes cognitive, affective, and behavioral aspects; and academic self-concept refers to one's perception of their academic competence. Based on their study of academic self-concept theory and research, Trautwein et al. (2006) indicated that the academic self-concept is perceived as a student's self-perception concerning specific academic domains or abilities, and Gresham (1995) defined the academic self-concept as how the individual feels about their ability to perform academic tasks. Moreover, Byrne and Shavelson (1986) defined the academic self-concept as involving a description and an evaluation of one's perceived academic competence. In general, a high academic self-concept can work to motivate one to improve their academic performance (Marsh, 2007), and researchers and educators agree that students' academic performance plays a part in producing quality graduates (Han, 2019; Herrera, Al-Lal & Mohamed, 2020; Paredes-Valverde, Quispe-Herrera & Garate-Quispe, 2020).

With regards to the relationship, in their research (DeDonno & Fagan, 2013; Marsh et al., 2005; Reynolds, 1988; Sewasew & Schroeders, 2019), showed a positive relationship between the academic self-concept and the academic achievement. It was also concluded (Haque & Khan, 1998; Jaiswal & Choudhuri, 2017) that the academic self-concept and the academic achievement were strongly correlated. Although, Trusty, Watts and House (1996) concluded that there is a negative relationship between the social self-concept and the academic achievement. Furthermore, Muijs (1997) concluded that the academic self-concept and the academic achievement were best predictors of one another. In this regard, researchers (Ghazvini, 2011; Guo et al., 2016; Hannover and Zander, 2020; Marsh & Martin, 2011; Sen Akcay & Senemoğlu, 2021; Wu et al., 2021) stated that academic self-concept predicts academic achievement.

Theoretically, the academic self-concept is more closely related to the academic achievement than is general self-concept; and is therefore a better predictor of academic achievement (Marsh, 1990). Research by Byrne (1986) presented that self-concept, and the academic self-concept can be considered two separate constructs; the academic achievement may impact one's self-concept, but it is most directly related to the academic self-concept. With respect to what comes first – the academic self-concept or the academic achievement, research supports reciprocal effects that the academic self-concept both affects and is affected by the academic achievement (Marsh, 2007; Marsh & Craven, 2006; Marsh & Scalas, 2010; McInerney et al., 2012).

Literature review shows a relationship between the academic self-concept and the academic achievement, which is well established outside Qatar. It is needed in the Qatar context of university Qatari students to assess the academic self-concept and its relationship with the academic achievement specially for educators to use in their attempt to understand the academic achievement level of Qatari students. This is important because the results of the present study may provide useful knowledge that can possibly help educators improve students' academic achievement and self-concept. In the light of the above empirical evidence and rationale, the aim of this research is twofold, first to study the academic self-concept among university Qatari students, second, to study the relationship between the academic self-concept and the academic achievement of these students.

Method

Subjects

A sample of 274 students participated in this study. In this sample, 82 (29.9%) were men and 192 (70.1%) were women, similar to the student population in the university. Age ranged from 18 to 37 years, with an average age of 21.6 (*SD* = 2.15). As for year in the university, 53 (19.3%) students were freshmen, 58 (21.2%) were sophomores, 62 (22.6%) were juniors, and 101 (36.9%) were seniors. These students were enrolled in three credit hour core curriculum baccalaureate courses as general requirements for university students. The language of instruction, "Arabic," is their mother tongue. Most (182; 66.4%) of the sample were Qataris and the others (33.6%) were mainly from the 22 Arab nationalities, with all participants' first language being Arabic, while English was their second language. The sample comprised of students in seven different Colleges at the university, 1.5% of the students were from Pharmacy, 3.6% were from Law, 8.1% were from Sharia and Islamic Studies, 11.7% were from Engineering, 14.2% were from Education, 19.7% were from Business and Economics, and 41.2% were from Arts and Sciences. Qatar University consists of nine colleges, including the College of Health Sciences and the College of Medicine that were established after the data collection of this study. The College of Arts and Sciences is the largest college via its number of programs and student population at Qatar University, including approximately one-third of the student body. The average cumulative GPA score for this sample was 2.82 on a 4.0 scale (*SD* = 0.51, minimum = 1.46, maximum = 4.00, range = 2.54), based on their grades at the time of data collection.

Measure

A questionnaire sheet composed of demographic characteristics was used to collect personal data about students, including gender, age, nationality, college, year in the university, and GPA. The academic achievement was measured by self-reported cumulative Grade Point Average (GPA) at the time of the data collection. GPA was used as the criterion measure of the academic achievement in this study. The Academic Self-concept Questionnaire of the Self Description Questionnaire III (SDQIII) (Byrne, 1996) was utilized to measure the academic self-concept in this study and served as the predictor variable. The questionnaire was attached with the demographic information sheet. It consisted of four subscales, which are, Maths, verbal, academic, and problem solving. Only these four subscales of SDQIII making the Academic Self-concept Questionnaire were used as the study was restricted to only the academic self-concept. The remaining subscales of SDQIII (e.g., physical ability, physical appearance, parent relations) were not used. The academic self-concept questionnaire contains 40 items total, which gives a total academic self-concept score. Each of the four subscales of the academic self-concept contains 10 items. The added score of all ten items of a particular subscale of the academic self-concept provides the score for that particular subscale of the academic self-concept. 20 items were negatively phrased. A high score on the academic self-concept questionnaire indicates a higher academic self-concept, while a low score shows low academic self-concept. The four subscales used in this study were translated into Arabic language. Back translation was done by two researchers. Responses were delimitated to 8-point scale ranging from "definitely false" to "definitely true" description of the academic self-concept for the positive and negative items. A brief description of the study's purpose was provided, and informed consent was granted from each participant.

Anonymity and confidentiality measures were taken in the data coding process. Participants' names were not required. This study was quantitative in nature and descriptive statistics and correlation and regression analysis using SPSS were applied to attain the aims of the study.

Results

The internal consistency reliability was measured to identify the extent to which the items of the Academic Self-concept Questionnaire measure the same concept and correlate with each other. Reliability of the questionnaire was obtained using Cronbach alpha test, and it was found to be .87 for the total academic self-concept measure, which is acceptable in social science research. Henson (2001) indicated that a value of .65 may be rather low as a reliability above .70 is typically acceptable (Streiner, 2003). Reliability coefficients of the questionnaire four subscales vary from 0.68 to 0.89, which were moderate to high measuring each specific subscale of the academic self-concept. Previous research with the Academic Self-concept Questionnaire of SDQIII documented that the internal consistency of the scale and the different subscales generally ranges from the lower to middle 0.80s. The descriptive results and alpha values of the academic self-concept and the questionnaire subscales are presented in Table 1.

Table 1. Subscale Mean and Standard Deviation Scores, and Values of Coefficient Alpha for the Academic Self-concept Questionnaire (n = 274).

Subscale	*Mean*	*SD*	*Alpha*
Maths	5.19	1.51	0.89
Verbal	5.70	0.96	0.72
Academic	5.52	1.08	0.81
Problem Solving	5.65	0.94	0.68
Academic Self-concept (SDQIII)	5.52	0.76	0.87

The negatively stated items were reverse scored in the mean calculations. The academic self-concept mean of 5.52 is only slightly above the midpoint of 4.5 on an 8-point scale, indication that students' academic self-concept is fairly typical. The mean scores obtained were similar to those reported in earlier studies with this measure (Jaiswal & Choudhuri, 2017; Lau, 1990; Marsh, 1989). Analysis by gender revealed women (mean = 5.54, SD = 0.77) had slightly higher academic self-concept than men (mean = 5.44, SD = 0.73), the calculated t-value (t = 1.00, df = 272, p = .321) was not significant. In terms of the academic self-concept subscales scores, there were no significant differences between men and women. This is similar to other studies (Haque & Khan, 1998; Hirsch & Rapkin, 1987; Schulte & Wegner, 2021) that found no significant difference in the academic self-concept with respect to gender. However, other research found gender differences in the academic self-concept (Herrera, Al-Lal & Mohamed, 2020; Jaiswal & Choudhuri, 2017; Skaalvik & Rankin, 1990). For example, Kling et. al. (1999) noted that male students had a higher academic self-concept than female students. Eshteewe (2016) found statistically significant differences in self-concept in favor of female students.

The descriptive results of the academic self-concept questionnaire items of the study are presented in Table 2. It

is noted that the negatively stated items were reverse scored in the above overall mean calculations but not reversed in the item mean calculations below. Thus, items in this table are presented as they appeared in the survey. The table indicated that, the high mean score was for item "I have good reading comprehension" (mean = 6.71) followed by "Relative to most people, my verbal skills are quite good" (mean = 6.19), and both items were in Verbal. While the lowest mean score was for item in Academic "In school I had more trouble learning to read than most other students" (mean = 2.17) in Verbal followed by "I would have no interest in being an inventor" (mean = 2.75) in Problem Solving.

Table 2. Item Mean and Standard Deviation Scores of Academic Self-concept (n = 274).

Item	Measure	*Mean*	*Std Dev*
	Maths		
1	I find many mathematical problems interesting and challenging	5.35	2.11
2*	I have hesitated to take courses that involve mathematics	4.51	2.50
3	I have generally done better in mathematics courses than other courses	4.50	2.25
4*	Mathematics makes me feel inadequate	3.41	2.10
5	I am quite good at mathematics	5.70	1.83
6*	I have trouble understanding anything that is based upon mathematics	3.62	2.11
7	I have always done well in mathematics classes	5.44	1.87
8*	I never do well on tests that require mathematical reasoning	3.78	2.04
9	At school, my friends always came to me for help in mathematics	4.99	2.19
10*	I have never been very excited about mathematics	3.75	2.42
	Verbal		
11*	I have trouble expressing myself when trying to write something	3.39	2.04
12	I can write effectively	5.98	1.78
13*	I have a poor vocabulary	3.12	1.82
14	I am an avid reader	4.99	2.05
15*	I do not do well on tests that require a lot of verbal reasoning ability	3.54	2.02
16	Relative to most people, my verbal skills are quite good	6.19	1.63
17*	I often have to read things several times before I understand them	5.59	1.85
18	I am good at expressing myself	5.96	1.78
19*	In school I had more trouble learning to read than most other students	2.17	1.67
20	I have good reading comprehension	6.71	1.34
	Academic		
21	I enjoy doing work for most academic subjects	5.72	1.73
22*	I hate studying for many academic subjects	3.77	1.94
23	I like most academic subjects	5.30	1.77
24*	I have trouble with most academic subjects	3.59	1.79
25	I am good at most academic subjects	5.67	1.56
26*	I am not particularly interested in most academic subjects	3.90	1.90
27	I learn quickly in most academic subjects	5.51	1.57

Item	Measure	*Mean*	*Std Dev*
28*	I hate most academic subjects	3.40	1.82
29	I get good marks in most academic subjects	5.90	1.55
30*	I could never achieve academic honours, even if I worked harder	3.27	2.22
	Problem Solving		
31*	I am never able to think up answers to problems that haven't already been figured out	2.86	1.88
32	I am good at combining ideas in ways that others have not tried	5.89	1.58
33*	I wish I had more imagination and originality	5.97	2.02
34	I enjoy working out new ways of solving problems	6.16	1.76
35*	I am not much good at problem solving	2.96	1.76
36	I have a lot of intellectual curiosity	5.32	1.92
37*	I am not very original in my ideas thoughts and actions	3.27	1.88
38	I am an imaginative person	5.93	1.85
39*	I would have no interest in being an inventor	2.75	2.16
40	I can often see better ways of doing routine tasks	6.00	1.76

*Negatively stated items (2, 4, 6, 8, 10, 11, 13, 15, 17, 19, 22, 24, 26, 28, 30, 31, 33, 35, 37, 39) were not reverse scored in this table.

To find the relationship between the academic self-concept and the academic achievement, bivariate product moment correlation "*r*" was computed. The correlation between the academic self-concept and the students' academic achievement was $r = 0.261$ supported by a significant *p*-value of < 0.01, which is descriptively interpreted as "low correlation". It implies that the students' academic self-concept was positively related to their academic achievement although the relationship was not strong. Maths ($r = 0.235$, *p*-value < 0.01), academic ($r = 0.258$, *p*-value < 0.01), and problem solving ($r = 0.119$, *p*-value < 0.05) were significantly related to students' academic achievement, however, they are regarded as "low correlation". These correlation results suggest that the academic self-concept is useful in understanding students' academic achievement. Verbal was not significantly correlated ($r = 0.049$) with students' academic achievement, which entails that it was not a significant factor to consider when measuring the academic achievement of the students. To determine the extent to which the academic self-concept contributes on the prediction of the academic achievement, linear regression analysis (method = enter) was used. The result indicated that the regression analysis was statistically significant ($F = 7.85$, $p < .01$, $R^2 = .091$). The academic self-concept accounted for 9.1% of the variance in participants GPA. This finding suggests that students' academic achievement was better when they had a good level of academic self-concept.

Discussion and Conclusion

The results of this study revealed that university Qatari students have a fairly typical academic self-concept. The findings were similar to the findings of earlier studies (Jaiswal & Choudhuri, 2017; Lau, 1990; Marsh, 1989). It was reported (Blazar & Kraft, 2017; Hyvärinen, et al., 2022; Vasalampi et al., 2020) that teacher-related factors,

such as teachers' positive and constructive feedback towards performance, pedagogical choices and teaching-learning models, teacher and peer encouragement, and teachers' courage are prime activities that support and enhance students' self-concept. Also, students' exploring self-fulfillment habits; enthusiasm; disciplined actions, parental engagement in students' learning, overall realistic goals are factors that support students' self-concept (Darling-Hammond et al., 2020; Hyvärinen, et al., 2022; Yong, 1994). The importance of academic self-concept is well sought, with some studies implying that high academic performance positively influences students' academic self-concept, and vice versa (e.g., Marsh & Craven, 2006; Peperkorn & Wegner, 2020). It was further indicated that gifted students display high academic self-concept due to an improved performance at school (McCoach & Siegle, 2003; Van der Meulen et al., 2014). In addition, increased academic performance can lead to a higher academic self-concept, which in turn can result in more motivation to learn (Freund-Braier, 2009). However, it is noted that high but balanced academic self-concept is desired. There are studies which found that individuals with unrealistic self-concepts showed unpleasant behavior towards social interaction partners, like having the tendency to interrupt conversations (see Colvin, Block & Funder, 1995; Peperkorn & Wegner, 2020).

The results in this study showed a significant relationship between the academic self-concept and the academic achievement of university Qatari students, although the relationship was not strong. This is supported by the findings of Marsh (2004) and Joyce and Yates (2007) that showed a significant relationship between the academic self-concept and the academic achievement in their studies. The results of this study also showed that academic self-concept is a significant predictor of academic achievement. Similarly, it was found that academic self-concept is one of the variables affecting academic achievement in a high school physics course using regression analysis (Sen Akcay & Senemoğlu, 2021). Also, according to Hannover and Zander (2020), many studies found that self-concept predicts academic achievement. The present study supports the understanding that students' self-concept regarding their capabilities and academic competence are important and influential of their educational achievement. The results further suggest that the academic self-concept is a potential construct for educators as it may fill a gap in their understanding of student achievement. As with any study there are some limitations. In this study students were asked to self-report their perceptions related to self-concept. Students' actual perceptions were not measured, and no other reports of perceptions were obtained. This may have affected the study's outcome. Although most researchers would agree that self-report is the best way to assess self-concept, there are concerns in self-report measures to consider (Bosson, 2006). Future research may want to consider longitudinal studies. A longitudinal study could examine the effects of improving simultaneously both the academic self-concept and the academic achievement in ensuring positive development of students' academic outcomes. Conducting studies about the academic self-concept with other variables such as motivation and studies to investigate the variables influencing academic self-concept are also needed.

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Examination of the Social Skills Levels of Students Participating in Recreative Activities

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Examination of the Social Skills Levels of Students Participating in Recreative Activities

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Abstract

People are social beings and therefore they interact with each other in society. While interacting, their social skill level is also very important in terms of expressing themselves. The aim of this study is to determine the social skill levels of secondary school students who participate in recreational activities. The population of the study consists of students studying at secondary school in the central district of Çorum province. The sample consists of 361 students participating in recreational activities determined by simple random sampling method. The data collection tool consists of two parts. In the first part, the "Personal Information Form" was used by the researcher to determine the demographic information of the students. In the second part, there is the "Social Skills Assessment Scale for Children", which was developed by Matson, Rotatory and Hessel in 1983 and adapted into Turkish by Bacanlı and Erdoğan in 2003. The Social Skills Assessment Scale for Children is a 5-point Likert-type scale consisting of 47 items and two sub-dimensions. Its sub-dimensions are 'positive social behavior' and 'negative social behavior'. Considering the results of the analysis, no significant difference was found between the students' gender, licensed sports status, and the educational status of their parents and their social skill levels. There was a significant difference in the "Negative Social Behavior" sub-dimension according to the age and class variables. While it was seen that the age and class variable of the students participating in recreational activities affected their social skill levels, it was concluded that the status of doing licensed sports, gender and parental education did not have an effect. In the light of this information, it can be concluded that the level of social skills in secondary school students does not change according to demographic characteristics in general.

Introduction

The activities that individuals do in their leisure time contribute positively to their physical and mental development. It can be said that participation in leisure time activities helps the individual to express himself or herself better in social life and to develop socially. When social skills are examined in general terms, they are the attitudes and behaviors exhibited by people in order to gain a place in society by behaving in accordance with their social environment. The communication of individuals with improved social skills is higher than other

individuals. Social skill acquisition is a lifelong phenomenon. Every individual has to interact with his environment. In order for individuals living together in society to continue their lives in a healthy way, they need to establish the right relationships (Samancı & Uçan, 2017). Social skills, regardless of age, for every individual in the society in all social environments; Behavior patterns that affect the lives of individuals positively, enable them to establish positive communication, be successful and happy, be it school, play environment, business world (Stanley, 2010). 85% of the work will be done in the fields of personal happiness and 99% of the work will be done in the way of personal happiness (Giblin, 1995).

Over the past few years, the importance given to sports activities and organizations has been increasing in a tremendous way. Sports activities that used to be done by the wealthy in developed countries have become an activity that all segments of society are interested in, and even actively and passively participate in such activities. As a result, he emphasized that there is a high level of participation in sports in childhood. The purpose of individuals who turn to sports activities that drag the masses after them varies in a wide range from having fun, resting and having a good time, protecting their health, gaining a social environment (Alesi et al., 2016; Becker et al., 2018; Rob, 2015).

Physical activity has a very important place for children's bodies to function at their highest capacity and for them to acquire concepts and skills. Therefore, it is very important for middle school students to gain regular physical activity habits and support their development (Robbins, Pis, Pender, Kazanis 2004; Dishman et al., 2005; Moore, Yın, Hanes, Duda, Gutin, & Barbeau 2009; Carraro , Young and Robazza 2008). It is stated that participation in sports activities is important in the modernization and development of societies (Balyan et al., 2017). Today, one of the easiest ways to develop individuals physically, emotionally and socially, to expand group work, to ensure mutual solidarity and to gain community membership is sports. In addition to being a whole of physical activities, sport expresses a concept that helps people socialize by giving individuals a sense of personal and social identity and group membership (Küçük and Koç, 2016). It is seen that children who regularly do sports lead an active physical life in their future ages. From this point of view, it can be said that childhood physical activity education is important in increasing the quality of social life (Kaya, 2016). It is stated that participation in sports activities is important in the modernization and development of societies (Balyan et al., 2017). Today, one of the easiest ways to develop individuals physically, emotionally and socially, to expand group work, to ensure mutual solidarity and to gain community membership is sports. In addition to being a whole of physical activities, sport expresses a concept that helps people socialize by giving individuals a sense of personal and social identity and group membership (Küçük and Koç, 2016). It is seen that children who regularly do sports lead an active physical life in their future ages. From this point of view, it can be said that childhood physical activity education is important in increasing the quality of social life (Kaya, 2016; MacDonald et al., 2016).

Self-actualization has a prominent place in the socialization process. Socialization is the process of gaining the personality of young people (Akdeniz et al., 2016; Özkan, 2022). The socialization of young people takes place in relation with many socialization factors such as friendship, family, environmental relations, media tools, culture, art, sports and music (Suryaratri, Komalasari & Medellu, 2022). Recreative activities enable young people to be together, to belong to the group, to influence each other, and to benefit more from the activities due to their

age characteristics (Kibici, 2022). Youth institutions that offer structured and institutionalized leisure activities contribute more to the socialization of young people than non-institutionalized activities (Havitz, Kaczynski & Mannell, 2013; Marwanto, & Satryono, 2021; World Leisure and Recreation Association, 2001). It is claimed that while making positive use of leisure time is beneficial in strengthening social cohesion, it can protect especially young people and children from harmful habits (Broadhurst, 2001). It is seen that schools play a more functional role in the organization of recreational activities, which have an important place in the social lives of individuals and societies. Students make use of their spare time and participate in recreational activities in a semi-organized manner within the scope of the opportunities offered by the schools during their education. While the recreation programs prepared by the schools and the related infrastructure opportunities increase the communication between young people, they also satisfy other reasons for participation (Tükel & Temel, 2020).

Communication and social skills in sports are a subject that has been studied for a long time. Studies within the framework of communication and sports are increasing today. Team and team success in the working environment is based on good harmony and communication. Such communication in teams and learning groups also influences individual learning. Joudrey and Wallace (2009) conducted a study that statistically demonstrated the importance of recreational sports activity, especially in children. It has been observed that children show psychological symptoms in their passive leisure experiences, whereas children who participate in active recreational sports exhibit positive social behaviors. In this context, recreational sports can provide an important opportunity to improve social and communication skills in school life (Lazaridis et al., 2021; Temel & Tukel, 2021).

Participation in recreational sports is a means of socialization as well as channeling the body energy that increases in adolescence in the most appropriate way. In recreational sports, students experience an intense interaction process between their schoolmates, their family members, and other peers, especially their teachers (Weinberg & Gould, 2003). Today, the rapid increase in urbanization and the narrowing of the movement area of people cause various problems in people physically, spiritually and socially. Individuals, especially young people, whose movement space is narrowed, are starting to live virtual life in social media by isolating themselves more from the society. At this point, it is considered that sports and physical activity will play an important role in the development of an individual's communication and social skills (Berglund, Eriksson, & Westerlund, 2005).

The most dynamic segment of societies is youth. Young people are not economically and socially independent both in family and social life. Here, one of the effective tools to solve these problems is sports. Sport is an important tool for raising healthy generations and thus creating contemporary societies. While sport contributes especially to children and young people to acquire physically and mentally healthy, socially developed personalities, on the other hand, it contributes greatly to the growth of children and young people as physically constructive, creative, productive, personality, gentlemen, prudent, tolerant, moral, decent behavior, self-confident, and good human relations (Nonis, 2015).

Change has been a condition that people have been inevitably exposed to since all ages (Şahin & Çolakoğlu, 2022). During the learning process of children, they increase their social development levels by participating in recreational activities as well as academic development. Increasing the level of social development may contribute

to the development and change of some skills in children in the process. Among the skills that enable the child to be accepted by his friends, behaviors such as being able to participate in the group appropriately, obeying social rules, and communicating effectively can be listed (Putallaz et al., 1981). There are many factors that improve social skills. Social skills, which have a complex structure, are of great importance in children's social interactions with their peers. Due to this complexity of social skills, some children do not develop enough in social skills. This, in turn, reduces the interaction of children with their peers. In other words, children's interactions with their peers may be less and short-lived (Avcıoğlu, 2007; Sünbül, 2008).

Today, the rapid increase in urbanization and the narrowing of the movement area of people cause various problems in people physically, spiritually and socially (Charbonneau & Camiré, 2020). Individuals, especially children, whose movement space is narrowed, is starting to live virtual life in social media by isolating themselves more from the society. At this point, it is thought that sports and physical activity will play an important role in the development of communication and social skills of the individual. In addition, when the studies conducted in Turkey are examined, it is possible to come across many studies on the level of social skills. However, there are not many studies in the literature on participation in recreational sports and whether it affects the level of social skills. In this context, the social skills of secondary school students and their participation in recreational activities were examined with a relational approach.

Method

The aim of our study is to examine the social skill levels of secondary school students participating in recreational activities according to various variables. Our study was carried out according to the scanning model used to describe a situation that has happened in the past or is still going on today (Karasar, 2020). Social skills of students were considered as the dependent variable, and social skill levels of secondary school students were analyzed according to some independent variables (grade level, gender, age, father's education level, mother's education level and sports status) that were supposed to be effective on this variable throughout the study. The universe of the research consisted of secondary school students in Çorum. The sample of the study consists of 361 students, who were selected with the appropriate sampling method and willingly participated in the survey, chosen from secondary schools in the central district of Çorum province. In our study, a scale form consisting of two parts was used in the data collection process. In the first part, "Personal Information Form" prepared by the researcher to determine the demographic information of the students, and in the second part, "Social Skills Assessment Scale for Children", which was developed by Matson, Rotatory and Hessel in 1983 and adapted into Turkish by Bacanlı and Erdoğan in 2003, was used. The 47-item scale has two factors. Factor 1 is 'Negative Behaviors' and Factor 2 is 'Positive Behaviors'. Regarding the distribution of the data, the "Kolmogorow-Smirnov" test, which is the normality test, was performed and it was found that the data were normally distributed (Yurt, 2011). The distribution and percentages of the students participating in the research were determined by "Descriptive Statistics". T test and Anova tests were used to investigate whether there was a significant difference between the social skill levels of the participants regarding the sub-dimensions of the "Social Skills Assessment Scale for Children".

Results

When the distribution of the students according to the gender variable was examined, it was determined that 48.5% (n=175) were male and 51.5% (186) were female (see Table 1). As a result of examining the age variable, 40.4% (n=146) were 11 years old, 55.7% (n=201) were 12 years old, and 3.9% (n=14) were 13 years old. Considering the distribution of the participants according to the class variable, 24.4% (n=88) were in the 5th grade, 34.1% (n=123) were in the 6th grade, and 33.2% (n=120) were in the 7th grade and 8.3% (n=30) were 8th Grade.

Considering the distribution of the students according to the mother's education level variable, 33.5% (n=121) primary school, 25.2% (n=91) secondary school, 27.7% (n=100) high school and 13%, It was revealed that 6 of them (n=49) were undergraduate graduates. Considering the distribution of the students according to the variable of father's educational status, 19.9% (n=72) were primary school, 20.8% (n=75) secondary school, 30.2% (n=109) high school and 29%, It is seen that 1 (n=105) of them had a bachelor's degree. In the variable of sports status, 45.2% (n=163) of the students who do sports, 54.8% (n=198) and those who do not.

Table 1. Socio-demographic Distribution of Students

		n	%
Gender	Female	186	51.5
	Male	175	48.5
Age	11	146	40.4
	12	201	55.7
	13	14	3.9
Grade	5th grade	88	24.4
	6th grade	123	34.1
	7th grade	120	33.2
	8th grade	30	8.3
Mother's Education Status	Primary School	121	33.5
	Secondary School	91	25.2
	High School	100	27.7
	University	49	13.6
Father's Educational Status	Primary School	72	19.9
	Secondary School	75	20.8
	High School	109	30.2
	University	105	29.1
Sports Status	Yes	163	45.2
	No	198	54.8

When the social skill levels of the students were examined according to their gender characteristics, no significant difference was found between the groups in the positive and negative sub-dimensions ($p>0.05$) (see Table 2).

Table 2. Independent Group t-Test Results of Social Skills Evaluation Scale Scores by Gender Variable

Gender	Groups	*N*	$\overline{X}$	*ss*	t test		
					t	df	p
Positive	Female	186	95.01	12.47	1.64	359	0.61
	Male	175	92.91	11.81	1.64		
Negative	Female	186	41.92	13.60	-1.66	359	0.25
	Male	175	44.38	14.50	-1.60		

When the social skill levels of the students were examined according to the age variable, no significant difference was found between the groups in the positive sub-dimensions (p>0.05) (see Table 3). It was concluded that there was a significant difference in negative social skill levels according to age characteristics (p<0.05). The source of the difference is that the mean age of 11 is significantly lower than the mean age of 12.

Table 3. One-Way Analysis of Variance Results of Social Skills Rating Scale Scores by Age Variable

						ANOVA Results				
	Group	*N*	$\overline{X}$	*ss*	Var. K.	*KT*	*Sd*	*KO*	*F*	p
Positive	Age 11	146	93.555	.380	Between groups	49.49	2	24.744	0.17	.847
	Age 12	201	94.28	12.91	In-group	53406.50	358	149.180		
	Age 13	14	94.50	.95	Total	53455.99	360			
Negative	Age 11	146	39.84	10.44	Between groups	2848.29	2	1424.14	7.44	0.01
	Age 12	201	45.61	15.86	In-group	68504.83	358	191.35		
	Age 13	14	41.50	13.62	Total	71353.11	360			

When the social skill levels of the students were examined according to the class variable, no significant difference was found between the groups in the positive sub-dimensions (p>0.05) (see Table 4). It was concluded that there was a significant difference in negative social skill levels according to class characteristics (p<0.05). The source of the difference is that the 5th grade average is significantly lower than the 8th grade average.

Table 4. One-Way Analysis of Variance Results of Social Skills Rating Scale Scores by Grade Variable

						ANOVA Results				
	Group	*N*	$\overline{X}$	*ss*	Var.K.	*KT*	*Sd*	*KO*	*F*	p
Positive	5th grade	88	91.83	11.81	Between groups	686.12	3	228.71	1.547	0.20
	6th grade	123	94.64	11.01	In-group	52769.87	357	147.82		
	7th grade	120	95.22	13.20	Total	53455.99	360			
	8th grade	30	92.80	12.32						
Negative	5th grade	88	39.59	11.43	Between groups	2544.67	3	848.22	4.401	0.00
	6th grade	123	42.57	11.30	In-group	68808.45	357	192.74		
	7th grade	120	44.7417	16.03	Total	71353.11	360			
	8th grade	30	49.1667	19.73						

When the social skill levels of the students were examined according to the characteristics of the mother's educational status, no significant difference was found between the groups in the positive and negative sub-dimensions (p>0.05) (see Table 5).

Table 5. One-Way Analysis of Variance (ANOVA) Results of Social Skills Evaluation Scale Scores According to Mother's Educational Status Variable

						ANOVA Results				
	Group	*N*	$\overline{X}$	*ss*	Var. K.	*KT*	*Sd*	*KO*	*F*	p
Positive	Primary School	121	93.55	12.24	Between groups	64.57	3	21.523	0.14	0.93
	Secondary School	91	93.86	11.99	In-group	53391.42	357	149.556		
	High School	100	94.62	11.88	Total	53455.99	360			
	University	49	94.06	13.31						
Negative	Primary School	121	44.19	12.57	Between groups	814.91	3	271.64	1.38	0.25
	Secondary School	91	40.78	11.67	In-group	70538.20	357	197.59		
	High School	100	43.01	15.28	Total	71353.11	360			
	University	49	45.02	18.37						

When the social skill levels of the students were examined according to the characteristics of the father's educational status, no significant difference was found between the groups in the positive and negative sub-dimensions (p>0.05) (see Table 6).

Table 6. One-Way Analysis of Variance (ANOVA) Results of Social Skills Evaluation Scale Scores According to the Variable of Father's Educational Status

						ANOVA Results				
	Group	*N*	$\overline{X}$	*ss*	Var. K.	*KT*	*Sd*	*KO*	*F*	p
Positive	Primary School	72	92.3	10.99	Between groups	499.22	3	166.41	1.12	0.34
	Secondary School	75	92.85	15.07	In-group	52956.77	357	148.34		
	High School	109	94.59	11.75	Total	53455.99	360			
	University	105	95.30	11.04						
Negative	Primary School	72	45.36	13.71	Between groups	531.55	3	177.18	0.89	0.45
	Secondary School	75	41.96	12.68	In-group	70821.56	357	198.38		
	High School	109	42.33	12.98	Total	71353.11	360			
	University	105	43.22	16.23						

When the social skill levels of the students were examined according to the licensed sporting variable, no significant difference was found between the groups in the positive and negative sub-dimensions (p>0.05) (see Table 7).

Table 7. Independent Group t-Test Results of Social Skills Evaluation Scale Scores According to the Variable Doing Sports

Sports Status	Groups	*N*	$\overline{X}$	*ss*	t test		
					t	df	*p*
Positive	Yes	163	41.62	13.90	0.68	359	0.46
	No	198	44.35	14.134	0.67		
Negative	Yes	163	95.13	12.40	-1.84	359	0.42
	No	198	93.06	11.95	-1.84		

Discussion and Conclusion

At the end of our study, no significant difference was found between the students' gender, licensed sports status, and the educational status of their parents and their social skill levels. There was a significant difference in the "Negative Social Behavior" sub-dimension according to the age and class variables. When the social skill levels of the students were examined according to their gender characteristics, it was concluded that there was no significant difference between the groups. This finding shows that students' social skill levels are not related to gender characteristics. When the literature was examined, Duman and Kuru (2010) found that the gender characteristics of the students were not an effective factor in their social level in a study conducted on Turkish students living in Germany as a different sample group. Arslanoğlu (2010) concluded that the social skill levels of the students who do and do not do sports vary according to the gender characteristics of the students, and this change is in favor of female students in a positive way. In Balyan's (2009) study, students' positive social skills differ according to gender. The positive social skill levels of girls are higher than that of boys. This is in line with previous literature that males and females perform differently in teamwork and collaborative learning settings (Banihashem et al., 2021; Noroozi et al., 2020, 2022). When we look at the difference between the genders; concluded that boys have higher negative social skills than girls. In the study of Güçlü and Yentür (2008), it was concluded that there is a significant difference in favor of female students in terms of gender variable. These findings do not show parallelism with the findings of this study. It can be said that this difference is due to the fact that the students in the studies are in different age ranges or the place they live in is different.

When the positive social skill levels of the students were examined according to their age characteristics, it was concluded that there was no significant difference between the groups. It was concluded that there was a significant difference in negative social skill levels according to age characteristics. The source of the difference is that the mean age of 11 is significantly lower than the mean age of 12. Kırılmazkaya (2010) stated that the age variable did not make a difference in the Social Skills scores of the Primary School Science and Classroom Teacher Candidates, and in the Social Skills scores of the Akpınar (2010) Sports Federation employees. These studies do not show parallelism with our research. The reason for this may be thought to be due to the difference in the age range of the research groups.

When the positive social skill levels of the students were examined according to their class characteristics, it was concluded that there was no significant difference between the groups. It was concluded that there was a significant difference in negative social skill levels according to class characteristics. The source of the difference

is that the 5th grade average is significantly lower than the 8th grade average. This finding shows that students' grade levels are an effective variable on their social skill levels. As the grade levels of the students increase, their social skill levels also increase. Balyan (2009) found in his research that students' positive social skill levels do not differ according to class, school type and class situation. According to the class variable, it can be concluded that there are also results contrary to our research. When the social skills assessment scale was examined according to the education levels of the parents, it was concluded that the educational status of the parents did not affect the social skills level. When the literature is examined, Kızıltan (1984) found that as the education level of the parents increases, the level of adjustment in the child increases and there is a significant difference between the education level of the parents and the level of personal adjustment, social adjustment and general adjustment of the student (Ciriş, 2004). The research does not support the research findings in this aspect. This difference is thought to be due to the age difference of the study group. When the social skill levels of the students are examined according to whether they have a license for a sports branch and whether they participate in a sports competition with this license, it has been concluded that the licensed participation in sports competitions has no effect on their social skill levels. These findings show that the licensed participation of students in sports competitions has no effect on their social skill levels. In parallel with our research, Ciriş (2004) also concluded that sports status has no effect on social skill level. There was no significant difference between students' social skill levels according to gender, licensed sports status, and educational status of parents ($p>0.05$). There was a significant difference in the "Negative Social Behavior" sub-dimension according to age and class variables ($p<0.05$). As a result, it can be said that it is very important for students to be directed to recreational activities in order to express themselves in social environments and adapt.

Notes

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Comparative Analysis of Senior High School Learners' Academic Performance in Traditional Face-to-Face and Online Distance Learning Modalities

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Comparative Analysis of Senior High School Learners' Academic Performance in Traditional Face-to-Face and Online Distance Learning Modalities

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Abstract

With the current stance of the educational system in the COVID-19 pandemic period, it is imperative for any academic institution to have a nuanced perspective of the academic performance of its learners. This ensures that the educational system remains attuned to the institution's vision and mission amid the global health crisis. Although a considerable study had been conducted in an online distance learning setup during the pre-pandemic period, there is a dearth of literature comparing the academic performance of senior high school (SHS) learners in traditional face-to-face and online distance learning modalities. Hence, this study compared the academic performance of SHS learners in the traditional face-to-face and online distance learning modalities. The average final grades of 1,913 enrolled in the traditional face-to-face, and 1,449 enrolled in the online distance learning modality were used to determine which instructional modality improved learners' academic performance. Results revealed that the learners' academic performance in the traditional face-to-face and online distance learning modality was generally considered proficient. Furthermore, a statistically significant increase ($p<0.05$) in learners' academic performance in the online distance learning modality was observed. This study supports that online distance learning modality can improve the academic performance of SHS learners amid COVID-19 pandemic.

Introduction

The world has faced an unprecedented health crisis due to the COVID-19 virus. The global health crisis profoundly affected the educational system's foundations, requiring a shift from the traditional face-to-face to online distance learning modality (Dukes, 2020; Huang, 2020; Masoud & Bohra, 2020; Mahaffey, 2020; Van der Spoel et al., 2020). Even before the crisis, the world had already seen significant changes in the educational landscape due to technology's ever-expanding influence. One such trend is the widespread utilization of online distance learning across various educational settings, whether formal and informal, academic and non-academic, and residential and remote (Mehrvarz et al., 2021). In contrast to traditional face-to-face learning, online distance learning empowers the delivery of instruction globally through a single internet connection. Various academic

institutions are increasingly adopting e-learning technologies to deliver instruction interactively, seamlessly exchange materials, enhance engagement (Banihashem et al., 2022; Elaish et al., 2019; Latifi et al., 2020, 2021; Zwart et al., 2020), collaboration and argumentation (Taghizadeh Kerman et al., 2022; Noroozi, 2018, 2022; Noroozi et al., 2012, , 2020; Valero Haro et al., 2019; 2022). Although the academic community has long recognized the advantages of online distance learning (Badali et al., 2022; Cavanaugh et al., 2009; Kebritchi et al., 2017; Barrot, 2021; Cano, 2022), it does have certain shortcomings, including restricted communal synergies (Rasheed et al., 2020).

The Department of Education Region XII defines online distance learning as an instructional modality in which the teacher serves as the facilitator and actively engages learners by using a variety of technology-based instructional materials that can be accessed even when teachers and learners are geographically separated. The internet promotes learner-teacher and learner-to-learner interaction in this type of modality. It also enables live synchronous sessions, which need learners to have a reliable internet connection and interact with the teachers and peers in real-time. Through the utilization of a Learning Management System or other similar technology, learners may access learning materials, submit homework, and participate in classes in an online distance setup (Llego, 2020).

On the other hand, traditional face-to-face learning is characterized as an instructional modality in which both learners and teachers are physically present in the classroom that empowers active involvement, immediate feedback, and socio-emotional growth (Paul & Jefferson, 2019). Salcedo (2019) asserted that the teacher typically controls classroom dynamics in a traditional face-to-face learning modality. While traditional face-to-face and online distance learning modalities vary in several aspects, Paul and Jefferson (2020) remarked that they share numerous characteristics, including the need for learners to attend classes, learn instructional materials, and complete class projects. Similarly, teachers are responsible for developing subject curricula, maximizing instructional quality, responding to learners' inquiries, motivating learners to learn, and grading homework.

While some studies promote online distance learning modality (Kaplan & Haenlein, 2016; Watts, 2016; Nortvig et al., 2018; Pulham & Graham, 2018), researchers tend to cast doubt on its efficacy. Cost-benefit analysis, learner experience, and academic achievement are all being carefully studied to determine if online distance learning is viable for traditional face-to-face learning (Saritas, 2005). According to Driscoll et al. (2012), the body of literature on the efficacy of online distance learning is extensive and diverse. For example, in the Philippines, the quality of online distance learning has been questioned after surveying teachers and learners from different parts of the country. Bernardo (2021) reports that only 47% of learners in online classrooms express confidence in their learning, while only 42% of parents express confidence in their children's education in an online learning setup. The preponderance concerns limited internet access, insufficient learning resources, overloaded instructional activities, poor peer communication, and ambiguous learning materials (Rotas & Cahapay, 2020; Bernardo, 2021; Muthuprasad et al., 2021; Ashraf, 2020). These deficiencies may compromise learner retention, satisfaction, and performance.

The Notre Dame of Marbel University-Integrated Basic Education Department Senior High School (NDMU-

IBED SHS), a sectarian school, is only one of the academic institutions in the Philippines impacted by the abrupt change in the educational landscape. COVID-19's abruptness, ambiguity, and instability made the institution haste to handle the shifting educational context. As a result, it has implemented crisis measures to alleviate the pandemic's detrimental effect on its educational system. This response includes, but is not limited to, curriculum modifications, the provision of technical resources, calendar adjustments, and modifications in the instructional delivery and assessment designs. Consequently, these advancements prompted the institution to transition from traditional face-to-face to fully online distance learning. However, the present circumstance is peculiar, for it can potentially exacerbate the challenges faced by both teachers and learners in an online distance learning modality due to mobility restrictions and health regulations (Gonzales et al., 2020).

Given today's challenges, it is imperative for every academic institution to have a nuanced perspective of its learners' academic performance. This ensures that instructional delivery remains attuned with the institution's vision and mission amid the global health crisis. Additionally, the literature indicates that online distance learning offers several challenges for both teachers and learners (Arinto, 2016; Gillet-Swan, 2017; Baticulon et al., 2020). Such challenges are more apparent when it comes to collaborative learning activities (e.g. peer learning, peer feedback) in online settings (Latifi & Noroozi, 2021; Latifi et al., 2020, 2021; Noroozi et al., 2012) Although a considerable study was conducted in an online distance learning setup during the pre-pandemic period, its SHS level implementation had only received far less attention. Additionally, there is a lack of local literature comparing the academic performance of SHS learners in traditional face-to-face and online distance learning modalities. Hence, this study was conducted.

Objectives of the Study

This study aimed to compare the academic performance of SHS learners in traditional face-to-face and online distance learning modalities. Specifically, it sought to: (1) determine the demographic profiles of the SHS learners in the traditional face-to-face and online distance learning modalities in terms of strands and class ranks; (2) determine the academic performance of the SHS learners in traditional face-to-face and online distance learning modalities; and (3) determine if there is a significant difference in the academic performance of SHS learners in traditional face-to-face compared to online distance learning modality in terms of strands and class ranks.

Review of Related Literature

Qualities of Online Distance Learning Modality

The global crisis has prompted educational institutions worldwide to embrace online distance learning modality as a viable option. Teachers and learners have easy access to various teaching and learning resources from anywhere and at any time, and teaching and learning processes are even more flexible. However, even before the COVID-19 epidemic, online distance learning has been considered by learners to be a feasible and enticing option. Wladis et al. (2015) argued that flexibility, access, and varieties of additional face value advantages, i.e., such as time efficiency, have boosted the allure of online distance learning.

Richardson and Swan (2003) theorized that prospective online distance learners preferred to get a quality education without compromising spending time with family or even costs for traveling. Instead of being confined to a particular location at a specific time, online distance learners may communicate with teachers, address peers, access learning materials, and complete assigned homework from any Internet-connected location. These instances provide online learners with much-needed flexibility, making online distance learning more appealing (Lundberg et al., 2008). For instance, a learner could attend virtual classes after work hours, watch instructional videos and pre-recorded lectures. Literature suggested that greater learning time may lead to improved academic performance. Richardson and Swan (2003) posited that online learners could use the extra time to enhance their academic performance.

Similarly, online distance learning allows passive learners to articulate their ideas and reservations. Passive learners may feel comfortable participating in class discussions without being criticized since they are not in a traditional classroom environment. As a result, overall average grades may improve (Driscoll et al., 2012).

Qualities of Traditional Face-to-Face Learning Modality

The traditional face-to-face learning modality is an instructional method that has been improved over many centuries in terms of teaching style and structure. Xu and Jaggars (2016) highlighted many advantages not apparent in the online distance learning modality. Traditional face-to-face learning modality is considered a very dynamic learning modality. It delivers instructions in real-time, stimulates and engages learners to generate thought-provoking questions, and intensifies interactions. Similarly, it enables immediate feedbacking on the learners' performance and offers a more adaptable instructional delivery. According to Salcedo (2019), the traditional face-to-face learning modality is advantageous to online distance learning because it does not restrict learners' queries to snippets. It gives an avenue to an in-depth discussion and interaction between the teacher and learners. It also offers dynamic learning qualities not seen in the online distance learning modality (Kemp & Grieve, 2014).

Similarly, some learners are resistant to change and have a poor impression of online distance learning due to technological barriers. These learners may be technophobes, and they prefer to learn in a classroom setting rather than absorbing information at a computer. Others may prefer one-on-one interaction, pre-and-post-class discussions, collaborative learning, and spontaneous interactions (Rovai & Jordan, 2004), for they may see the internet as a barrier to learning. If learners are not comfortable with the instructional medium, they may avoid classroom activities; grades may decline, educational interest may wane, and eventually affect their academic performance in general. On the other hand, learners may ultimately get used to online distance learning. Learners may be required to take internet-based subjects as more academic institutions adopt computer-based instruction. Although this is true, it does not negate the reality that some learners enjoy traditional face-to-face interaction.

Likewise, one of the qualities of traditional face-to-face learning is that it is not significantly dependent on technology. In an online distance learning setup, the learner is heavily reliant on having unrestricted Internet access. Online distance learners may be unable to interact, submit homework, or access learning materials if

technical difficulties arise. This issue may impede learners' performance and may deter the learning process. Likewise, research has shown that learners who dislike the teacher, the structure, or the interaction are more likely to drop the class (Kuzmanovic et al., 2019). Online learners work individually and rely nearly entirely on self-motivation and self-direction; hence, they may be more tempted to disengage from class if they do not see immediate results.

Nonetheless, the class setting of the traditional face-to-face learning modality gives additional motivation, encouragement, and guidance to the learners. Even if a learner wishes to withdraw within the first few weeks of class, the teacher and other learners may prevent them from doing so. Teachers conducting face-to-face instructional delivery may change the structure and teaching style of the class to increase learner retention (Kemp & Grieve, 2014).

Learner-Related Online Learning Factors

In the traditional face-to-face learning modality, much about the learner traits, learning styles, and learning methods is often assumed (Kuzmanovic et al., 2019). Learner characteristics, abilities, and needs must be considered in designing instructional materials, media use in instruction, design for interaction, and evaluation and feedback in online distance learning (Ong et al., 2021; Chen, 2021; Bower, 2017; Kuzmanovic et al. 2019). On the other hand, factoring in learner characteristics is especially difficult in online distance learning since there is a wide range of learners and learning contexts (Muthuprasad, et al., 2021).

Online learning is a teaching-learning process strategy that focuses more on learners and leads to learning experiences in synchronous or asynchronous circumstances utilizing devices and internet connections (Kuzmanovic et al. 2019; Dhawan, 2020; Atim et al., 2021), is centered on the concern for access. By broadening the reach of online learning while confining it to those learners who have access to the internet, the access to technology simultaneously facilitates and constrains the purpose. Likewise, learner autonomy is at the core of several seminal theories (Anderson et al., 2005; Garrison, 2009). Among which are Moore's theory of transactional distance, Wedemeyer's theory of independent study, and Holmberg's theory of guided didactic conversation (Anderson et al., 2005; Garrison, 2009). For instance, in the transactional distance theory, which is generally regarded as one of the foundational theories in online learning (Simonson et al., 2012), Moore (2012) posited the separation between teacher and learners creates transactional distance, which is a psychological and communicative gap that must be bridged. This transactional distance is a space of possible misunderstanding between the teacher's and learner's inputs. Hence, teachers must reflect on how the design of learning activities affects online distance learners' ability to practice self-directed learning (Simonson et al., 2012; Bower, 2017). It should allow learners to interpret the subject for themselves as they engage with various learning tools, acquire and use information literacy skills, and make sense of concepts shared during discussions.

Meanwhile, in every learning situation, particularly online learning, it is vital to promote interaction (Anderson et al., 2005; Simonson et al., 2012; Bower, 2017). Interaction is a specific and essential component of the educational process since it enhances learner motivation and performance (Anderson, 2003). Moore (2012) posited that

interactions can be generally classified into three types: (a) learner-content, (b) learner-learner, and (c) learner-teacher interaction. In the learner-content interaction, the learning process of the learners is facilitated by learning materials designed according to the principles of guided didactic conversation. Meanwhile, in the learner-teacher interaction, learners receive feedback from the teacher on how well they are learning. At the same time, the learner-learner interaction allows learners to engage in social interaction among their peers, which increases motivation and allows for the social construction of knowledge (Simonson et al., 2012). According to Simonson et al., 2012, these types of interactions are particularly effective in elevating learners' academic performance if they are properly incorporated in creating online learning instructional material.

Method

Locale of the Study

The study was conducted in the Notre Dame of Marbel University-Integrated Basic Education Department Senior High School (NDMU-IBED SHS). NDMU-IBED SHS is a Catholic educational institution managed by the Marist Brothers, or FMS (Fratres Maristae a Scholis), a French-based Catholic religious order located in Koronadal City, Philippines. The institution provides Academic Track programs for SHS such as Accountancy and Business Management (ABM), Humanities and Social Sciences (HUMSS), and Science, Technology, Engineering, and Mathematics (STEM) strands.

Participants of the Study

The study participants consisted of two independent groups of SHS learners - the 1,913 learners officially enrolled in the Traditional Face-to-Face Learning Modality in School Year 2019-2020, and the 1,449 learners officially enrolled in the Online Distance Learning Modality in SY 2020-2021. The disparity in the number of participants in the two learning modalities was considered a limitation of the study. More so, the participants' average final grades were considered the primary comparative variable in examining the differences in the academic performance between the traditional face-to-face and online distance learning modalities in this study.

Sampling Technique

The participants of this study were mainly selected based on the purposive sampling technique. It was a non-probability sampling technique in which the researcher carefully selected the samples with the assumption that the participants would be able to provide specific and rich data that are important to achieve the purpose of the study. The participants did not have particular preferences based upon their strand or class rank. Each participant was considered a single, discrete entity or statistic in this study.

Test Instruments

The academic performance of the SHS learners was determined by their average final grades. The average final grades were computed based on the learners' scores in the written works (e.g., pen-and-paper tests/quizzes,

homework), performance tasks (e.g., projects, laboratory reports), and quarterly examinations. The individual weights of the three assessments mentioned above were based on the Department of Education Order No. 8, series of 2015. The average final grades were in the form of numerical values with a base grade of 75%. The lowest numerical average final grade was 60%, while the highest numerical average final grade was 100%.

Data Collection

The researcher initially wrote a permission letter explaining the purpose and nature of the study to the Director and School Principal of NDMU-IBED SHS. Subsequently, with the approval to request the necessary data for the realization of this study, the average final grades of the 1,913 officially enrolled learners in the Traditional Face-to-Face Learning Modality in School Year 2019-2020, and the average final grades of the 1,449 officially enrolled learners in the Online Distance Learning Modality in SY 2020-2021 were obtained from the NDMU-IBED SHS Registrar's Office. The obtained data were analyzed and processed using the SPSS software to calculate the necessary values. The generated values from the data were subsequently used to answer the study's objectives and draw conclusions.

Ethical Consideration

The researcher conducted this study in complete accordance with established research protocols. The researcher ensured that the obtained final grades of the SHS learners would be utilized solely for academic purposes and would be kept with the utmost confidentiality.

Data Analysis

To conduct an objective analysis of the gathered data, the researcher used descriptive statistics such as frequency, weighted mean, and percentage to determine the demographic profile of the SHS learners in terms of (a) strand and (b) class rank. An exploratory data analysis on the average final grades of the learners in SY 2019-2020 and SY 2020-201 was initially employed, i.e., normality test. The Shapiro-Wilk test results showed that the average grades of the learners in SY 2019-2020 and SY 2020-2021 were not normally distributed with $p=0.000$ in both school years. Hence, nonparametric tests - Mann-Whitney test and Kruskal-Wallis test were utilized to compare the academic performance of SHS learners in traditional face-to-face and online distance learning modalities.

Results

Demographic Profile of Senior High School Learners

This study sought to determine the demographic profile of SHS learners in terms of (a) strand and (b) class rank. The frequency, mean, and percentage were computed. The demographic profiles of SHS learners in the traditional face-to-face and online distance learning modalities are presented in Table 1.

Based on Table 1, there were 1,913 officially enrolled learners in the Traditional Face-to-Face learning modality

in SY 2019-2020. The highest number of learners in the population was observed in Grade 11 with 995 learners, followed by Grade 12 with 918 learners. Meanwhile, there were 1,449 officially enrolled learners in the Online Distance learning modality in SY 2020-2021. The highest number of officially enrolled learners was observed in Grade 12 with 814 learners, while Grade 11 registered a total of 635 learners.

Table 1. Demographic Profile of SHS Learners

	Modality			
	Traditional F2F (SY 2019-2020)		Online Distance (SY 2020-2021)	
	N	*%*	*N*	*%*
Grade 11				
ABM	164	16.5	75	11.8
HUMSS	205	20.6	94	14.8
STEM	626	62.9	466	73.4
Total	995		635	
Grade 12				
ABM	205	22.3	121	14.9
HUMSS	171	18.6	148	18.2
STEM	542	59.0	545	67.0
Total	918		814	
Overall	1913		1449	

On this note, Science, Technology, Engineering, and Mathematics (STEM) strand registered the highest number of learners in both grade levels in all learning modalities. Meanwhile, the Accountancy and Business Management (ABM) strand registered the lowest number of learners in both grade levels, except for the Grade 12 in the traditional face-to-face learning modality in SY 2019-2020, wherein the strand registered a population of 202 or 23.3%, which is higher than the registered population of Grade 12 Humanities and Social Science learners which is 171 or 18.6%.

Academic Performance of Senior High School Learners

This study also sought to determine the academic performance of SHS learners in the traditional face-to-face and online distance learning modalities. This is to examine if the changes in the learning modality and instructional delivery employed by the school to mitigate the constraints brought by the COVID-19 pandemic, i.e., the shift from traditional face-to-face to online distance learning modalities, affect the academic performance of the learners. Hence, to realize this goal, the average final grades of the officially enrolled learners in SY 2019-2020 (exposed to the traditional face-to-face modality) and SY 2020-2021 (exposed to the online distance learning modality) were considered for analysis.

Table 2 shows the comparison of SHS learners' academic performance in traditional face-to-face and online

distance learning modalities across class ranks and strands. Based on Table 2, the academic performance of learners exposed to traditional face-to-face learning modality was generally considered "proficient" (M = 86.203 ± 7.4653). However, it was observed that the academic performance of Grade 11 and 12 HUMSS learners exposed to traditional face-to-face learning modality were both considered "approaching proficiency" with the average grades of 81.906 ± 9.75.34 and 83.989 ± 7.9591, respectively. Further, the Grade 12 ABM learners registered the highest average grade of 89.075 ± 6.2102, while the Grade 11 HUMSS learners showed the lowest average grade of 81.906 ± 9.7534 in the traditional face-to-face learning modality.

Table 2. Comparison of SHS Learners' Academic Performance

		Modality		*Difference*	*%*
		Traditional F2F (SY 2019-2020)	Online Distance (SY 2020-2021)		
		Weighted Average Grade ± SD	*Weighted Average Grade ± SD*		
Grade 11	ABM	85.784 ± 7.9037$^{(P)}$	86.566 ± 8.3672$^{(P)}$	0.782^{a}	0.91
	HUMSS	81.906 ± 9.7534$^{(AP)}$	84.902 ± 7.2588$^{(AP)}$	2.996*^{b}	3.66
	STEM	86.817 ± 7.0524$^{(P)}$	88.185 ± 5.9161$^{(P)}$	1.368*^{c}	1.58
	Total	85.624 ± 8.0577$^{(P)}$	87.279 ± 6.7406$^{(P)}$	1.655*	1.93
Grade 12	ABM	89.075 ± 6.2102$^{(P)}$	87.388 ± 3.9589$^{(P)}$	-1.687*^{d}	-1.89
	HUMSS	83.989 ± 7.9591$^{(AP)}$	86.639 ± 4.4382$^{(P)}$	2.650*^{e}	3.16
	STEM	87.171 ± 6.1087$^{(P)}$	88.020 ± 5.0626$^{(P)}$	0.849*^{d}	0.97
	Total	86.829 ± 6.7160$^{(P)}$	87.676 ± 4.8282$^{(P)}$	0.847*	0.98
	Overall	86.203 ± 7.4653$^{(P)}$	87.466 ± 5.9180$^{(P)}$	1.263*	1.47

Note. a. * mean difference is significant at 0.05 level of significance.

b. Values per grade level with different superscripts on the *"Difference"* column have a significant mean difference at 0.05 level of significance.

c. $^{(A)}$Advanced = 90.00% and above
$^{(D)}$Developing = 75.00% - 79.99%
$^{(P)}$Proficient = 85.00% - 89.99%
$^{(B)}$Beginning = 74.99% and below
$^{(AP)}$Approaching Proficiency = 80.00% - 84.99%

Meanwhile, the academic performance of the learners exposed to online distance learning modality was generally considered "proficient" (M = 87.466 ± 5.9180). However, the Grade 11 HUMSS learners were considered "approaching proficiency" (M = 84.902 ± 7.2588). Nonetheless, the Grade 11 STEM learners showed the highest average grade of 88.185 ± 5.916, while Grade 11 HUMSS learners showed the lowest average grade of 84.902 ± 7.2588 in the online distance learning modality.

This study also sought to determine if there is a significant difference in the academic performance of SHS learners in traditional face-to-face compared to online distance learning modality in terms of (a) strand and class rank. An exploratory data analysis on the average grades of the learners in SY 2019-2020 and SY 2020-201 was initially employed, i.e., normality test. The Shapiro-Wilk test results showed that the average grades of the learners in SY 2019-2020 and SY 2020-2021 were not normally distributed with p=0.000 in both school years. Hence,

nonparametric tests were utilized to analyze data to compare the academic performance of SHS learners in traditional face-to-face and online distance learning modalities.

The Mann-Whitney test was utilized to examine if there is a significant difference in the academic performance of SHS learners in traditional face-to-face and online distance learning modalities. The analysis results showed a statistically significant increase of 1.655 and 0.847 in the academic performance of Grade 11 and Grade 12 in the online distance learning modality, respectively. Specifically, the Grade 11 HUMSS and STEM strand learners showed a significant increase of 2.996 and 1.368, respectively. While there was an increase of 0.782 in the academic performance of Grade 11 ABM learners, the increase was found to be not statistically significant.

Meanwhile, in the case of Grade 12 learners, HUMSS and STEM learners registered a statistically significant increase of 2.650 and 0.849 in their academic performance, respectively. On the contrary, the Grade 12 ABM learners showed a significant decrease of 1.687 in their academic performance in the online distance learning modality. Furthermore, the results of the Mann-Whitney test (see Table 3 and 4) revealed a statistically significant difference ($p<0.05$) between the academic performance of SHS learners in the traditional face-to-face and online distance learning modalities.

Table 3. Ranks of the Overall SHS Learners' Academic Performance

	Modality	N	Mean Rank	Sum of Ranks
Academic	Traditional Face-to-Face	1913	1742.69	3399985.50
Performance	Online Distance	1449	1943.85	3347315.50
	Total	3362		

The academic performance of SHS learners in online distance learning modality (mean rank = 1943.85) was statistically higher than the traditional face-to-face learning modality (mean rank = 1742.69), U = 1495809.500, z = -5.752, p = .000. A statistically significant increase of 1.263 or 1.47% in learners' academic performance exposed to online distance learning modality was observed.

Table 4. Test Statistics of the Overall SHS Learners' Academic Performance

	Academic Performance
Mann-Whitney U	1495809.500
Wilcoxon W	3399985.500
Z	-5.752
Asymp. Sig. (2-tailed)	.000

Note. a. Grouping Variable: Modality

As shown in Table 2, empirical evidence suggested that the significant differences in academic performance were due to the increase in the average grades of learners in the online distance learning modality. Hence, the Kruskal-Wallis test was employed to determine if there were differences in the academic performance of SHS learners among strands per grade level in the online distance learning modality, namely: Grade 11 ABM (N=75), Grade

11 HUMSS (N=94), Grade 11 STEM (N=466), and Grade 12 ABM (121), Grade 12 HUMSS (148), Grade 12 STEM (545).

The academic performance of SHS learners was not similar for all strands per grade level, as assessed by visual inspection of boxplots. The results of the Kruskal-Wallis test (see Table 5 and 6) showed a statistically significant difference in the academic performance of SHS learners in online distance learning modality among the Grade 11 strands, $\chi2(2) = 145.853$, $p = .000$. Likewise, statistically significant differences in the academic performance among the Grade 12 strands, $\chi2(2) = 76.637$, $p = .000$, were observed.

Table 5. Ranks of the SHS Learners' Academic Performance in Online Distance Learning Modality

	Strand	N	Mean Ranks
Grade 11	ABM	75	943.52
	HUMSS	94	673.38
	STEM	466	1059.48
Total		635	
Grade 12	ABM	121	987.68
	HUMSS	148	666.09
	STEM	545	910.52
Total		814	

Results of the Least Significant Difference (LSD) revealed statistically significant differences in the academic performance of SHS among strands per grade level. For the Grade 11, a significant difference between ABM and HUMSS strand was observed with a mean difference of 2.8430, p=0.000. Likewise, a significant difference between STEM and ABM strands was observed with a mean difference of 1.3326, p=0.005. Accordingly, a significant difference between STEM and HUMSS strands was observed with a mean difference of 4.1756, p=0.000.

Table 6. Test Statistics of the SHS Learners' Academic Performance in Online Distance Learning Modality

		Academic Performance
Grade 11	Chi-Square	145.853
	df	2
	Asymp. Sig.	.000
Grade 12	Chi-Square	76.637
	df	2
	Asymp. Sig.	.000

a. Kruskal Wallis Test; b. Grouping Variable: Strand

Meanwhile, for Grade 12, a significant difference between ABM and HUMSS strands was observed with a mean difference of 3.1586, p=0.000. Similarly, a significant difference was observed between STEM and HUMSS with a mean difference of 2.4209, p=0.000

Discussion

This study compared the academic performance of SHS learners in an online distance learning to traditional face-to-face learning modalities. The within-group analyses of learners' academic performance in the online distance learning modality suggest an increase compared to the traditional face-to-face learning modality. The results of this study are in consonance with the previous research (Patrick & Powell, 2009; Sptizer & Musslick, 2021; Gopal et al., 2021; Cano et al., 2022). Overall, the findings suggest that in the aftermath of the COVID-19 pandemic, the abrupt shift and adjustments in the instructional implementation positively influenced learners' academic performance.

On the other hand, the findings of this study contradict previous research findings that shifting the mode of instructional delivery from traditional face-to-face to online distance learning had a detrimental impact on the learners' academic performance (Engzell et al., 2020; UNESCO, 2020; Husky et al., 2020; Marelli et al., 2020). However, this study is not the first to show that learners' academic performance can be improved in an online distance learning environment. For instance, Gonzalez et al. (2020) assessed learner performance on weekly assessments in an online learning class on metabolism. They discovered that learners scored better than two cohorts of learners who completed the same online program in the previous two years. Furthermore, they discovered that more learners passed the subject and finished the tasks in an online distance learning setting than in a typical face-to-face setting. The authors credit this improvement in performance to the online setting's improved consistency in learning compared to the traditional face-to-face instructional delivery. On the other hand, Gonzalez and colleagues' study varies from the current study regarding learners' age and educational background.

Meanwhile, the improvements of SHS learners' academic performance in the online distance learning modality, as observed in this study, could be caused by several factors. Literature suggests that three critical success factors are especially relevant in online distance learning: access, learner autonomy, and interaction (Kuzmanović et al. 2019; Simonson et al., 2012; Atim et al., 2021; Conrad & Openo, 2018). The concern for access is vital to online distance learning. Since this type of learning modality focuses more on learners, leading to learning experiences in synchronous or asynchronous situations using online learning platforms (Kuzmanović et al. 2019; Dhawan, 2020; Atim et al., 2021); hence, access of learners to online learning platforms is imperative. The use of an online learning platform was proven to be effective in translating information in a study conducted by Herman and Banister (2007) on evaluating teachers' ability to design curricula for online delivery. Their study revealed that online distance learners successfully achieved learning outcomes comparable to learners taking the traditional face-to-face learning modality. Similarly, two meta-analyses found that increased exposure to online learning environments can enhance high school learners' academic performance (Means et al., 2009; Ran et al., 2020).

Nonetheless, the use of technology facilitates and constrains the purpose by expanding the reach of online learning while restricting it to learners who have access to the internet. As a result, it is critical to think about how the logistical requirements of particular online learning designs, such as bandwidth for accessing the learning management system, participating in synchronous sessions or activities, and accessing and using specific content

formats like videos, affect learner access (Bower, 2017). The technical literacy abilities and efficacy necessary for successful online learning can also explain the results of the study. For instance, learners with a high level of technology literacy and efficacy may be given higher incentives for submitting homework on time or before the deadline or actively engaging in online classes. Learners with stable access to the online learning platform and have devices, i.e., cell phones, may also obtain immediate feedback on their performance through online academic consultation. According to motivational theories of effort allocation, there is a relationship between incentivization and academic achievement (Shenhav et al., 2013; Musslick et al., 2015). As a result, the reported improvements in academic performance in this study may be due to higher teacher incentives given to the learners in the online learning compared to the traditional face-to-face learning modality. Similarly, the notion that learners who employed online learning resources at home received additional mentoring from adults, i.e., parents or tutors, and had ready access to the internet for assessment responses may cloud the significantly increased academic performance.

Meanwhile, previous research (Andrew et al., 2020; Azevedo et al., 2020; Engzell et al., 2020) suggests that the performance of approximately 350,000 K–12 learners in the Netherlands on national exams decreased significantly after the closure of schools that used online distance learning modality for instructional delivery. It was shown that learners from less-educated families experienced a significant decrease than those from highly educated families. Thus, the impacts of online distance learning on learners' performance in national exams need further research and may provide answers to critical educational problems such as whether online distance learning is a viable option suited when learners need to be taught amid crisis.

In terms of learner autonomy, studying without direct teacher observation requires learners to engage more autonomously (Simonson et al., 2012). In that light, learning autonomously might be a variable in understanding learners' higher academic performance in this study. It is indeed possible that at home, learners were less distracted by other learners, teachers, or even potentially unpleasant classroom conditions that might cause learning anxiety which is the feeling of oppression and alarm unconsciously felt by learners in trying something new for the fear that it will be too difficult. Learning anxiety has been linked to reducing cognitive capacities crucial for high performance in activities such as mental ability (England et al., 2019; Ajmad & Ahmad, 2019). A recent study reveals that learning anxiety may be reduced in online distance learning settings compared to more stress-inducing face-to-face settings. Learner autonomy is essential to several online learning theories (Anderson et al., 2005; Garrison, 2009) Moore's theory of transactional distance. Moore (2012) proposed that the separation of teacher and learner causes transactional distance, a psychological and communication space to be crossed, and potential misunderstanding between the teacher's and the learner's inputs (Simonson et al., 2012). The level of transactional distance is determined by three factors: dialogue, structure, and learner autonomy. Moore (2012) identifies a link between the three factors, noting that the more organized an instructional design is, the fewer opportunities for discourse between the teacher and the learner, necessitating learners to exercise greater autonomy. On that note, learner autonomy is vital even when transactional distance is relatively low, as in the case of traditional face-to-face learning. The degree of learner control, a component of learner autonomy, is vital to a learner's academic achievement (Simonson et al., 2012). It must be balanced with the other elements that influence transactional distance. A learner with competing life demands may be forced to drop out if there is too much organization in

the pace, sequencing, and timing of assessments, while too little structure may lead to confusion and alienation (Simonson et al., 2012). Therefore, it is imperative to think about how the design of learning activities affects online distance learners' capacity to practice self-directed learning (Simonson et al., 2012; Bower, 2017).

In addition to fostering academic performance, online learning environments may hold promise for reducing academic performance differences between learners. One possible explanation is that online learning environments, such as the one explored in this study, allow teachers to contextualize learning instructional design to the online distance setup and the needs of the learners. Despite the challenges posed by online distance learning, such contextualization has been acknowledged as an effective measure for bridging educational gaps since it intensifies interaction (Duflo et al., 2011). The literature posits that it is essential to design for interaction in any learning context, especially in online learning (Anderson et al., 2005; Simonson et al., 2012; Bower, 2017). Interaction is a specific and vital component of the educational process since it enhances learner motivation and academic performance (Anderson, 2003). Moore (2012) classified interaction into three types: learner-content, learner-learner, and learner-teacher interaction. These types of interactions are particularly effective in designing online learning instructional materials that can increase learners' academic performance. Learning materials built according to the principles of guided didactic conversation, Holmberg's term for conversational style, as noted by Moree (2012) of delivering content that engages the learner both intellectually and affectively, enable learner-content interaction. Learners' internal dialogue with learning materials (Simonson et al., 2012) leads to the development of learner autonomy. Most theories of formal education place emphasis on learner-teacher interaction. Learners receive feedback on how well they learn through this type of engagement. Learner-to-learner interaction allows learners to engage in social interaction, boosting motivation and social knowledge construction (Simonson et al., 2012). Transactional distance is reduced through dialogue from learner-teacher and learner-learner interactions that can eventually help improve learners' academic performance.

Limitations of the Study

The limitations of this study were on the learner's skills/abilities in online distance learning modality, the operationalization of the indicator for the learner's academic performance, and the nature of the learners and the sample group. The comparison groups were identified in this study without regard for the learners' intellectual and ability levels. There is a possibility that the online distance learners were more competent than the traditional face-to-face learners in this study, and vice versa. This restriction also applies to gender and class ranks (Friday et al., 2006). On the other hand, the operationalization measure of "grade" or "score" used to establish the learners' academic performance may be inadequate in terms of scope and depth. Grades obtained in a particular class may not always reflect the actual abilities and skills of the learners, particularly if the weights have been skewed excessively toward group work and writing projects. Other performance measures may be more appropriate for assessing learner performance accurately. Additionally, the learner population's composition must be analyzed further. It is conceivable that the online learners in this research had more time to master the content and receive higher grades than their peers (Summers et al., 2005). Finally, obtaining a representative group was limited because the study employed a purposive sampling approach.

Conclusion

This study sought to compare the academic performance of SHS learners in the traditional face-to-face and online distance learning modalities in terms of strands and class ranks. The study revealed that the learners' academic performance in the traditional face-to-face and online distance learning modality was generally considered proficient. Furthermore, a statistically significant difference ($p<0.05$) between the learners' academic performance in the traditional face-to-face and online distance learning modalities was observed across strands and class ranks. More so, it was observed that the learners' academic performance in the online distance learning modality was statistically higher than the traditional face-to-face learning modality.

Recommendations

While the current study sheds light on the impact of the sudden shift in instructional implementation on the academic performance of SHS learners in a traditional face-to-face vis a vis an online learning environment, additional research is necessary to elucidate the factors that contributed to the learners' reported academic performance improvements. Future research may benefit by including characteristics of teachers in online learning environments, particularly their use of incentives. Additionally, it is uncertain if teachers used more or less formative instructional materials than traditional face-to-face learning. Additionally, learners who lack access to e-learning platforms (e.g., due to a lower socioeconomic status) may have received degraded instructional material, resulting in lower overall academic performance rather than improved academic performance. Consequently, the present findings do not support conclusions concerning the effect of instructional modality modifications on learners affected by the digital divide

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Effective Leadership Types in Change Management in Sports Organizations

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Effective Leadership Types in Change Management in Sports Organizations

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Abstract

The aim of this study is to examine the types of effective leadership in change management in sports organizations. Qualitative research method was used in the study. In-depth individual interviews were carried out with the participants and the data obtained were analyzed by content analysis method. When the findings of the study were examined, it was seen that five dimensions came to the fore: flexible, authoritative, insightful, situational, and meritocracy. The leadership type that emerged as a result of the study was seen to be "leadership type that includes flexible, authoritarian and understanding dimensions". It has emerged that there are two leadership types that contain these dimensions. These are autocratic and democratic leadership types. In other words, the participants who defended being authoritarian from autocratic leadership style emphasized the understanding and flexible features of democratic leadership type. When the answers given by the participants are examined in its entirety, it has been understood that the leadership types used during the change in sports federations are a leadership type that includes many leadership types rather than a single leadership typeIn the light of the findings, it was discovered that a leadership practice that differs according to the situation rather than a standard leadership type is required. This necessity brings success while experiencing change. As a result, these views of the participants brought the situational leadership type to the fore. According to the situational leadership theory, it is necessary to examine each situation according to its internal subjectivity. Afterwards, the participants argued that after revealing the subjectivity of the situation, it is necessary to apply the most appropriate leadership type.

Introduction

With the beginning of their adventures on earth, people have been in a constant change from primitive to modern. In general, this change has included development in itself. However, change, albeit very little, did not fit into the same container as development. Especially with people's sedentary life with agriculture, there have been great changes in their lifestyles. These changes have evolved into civilization in the form of small villages around agricultural lands, then towns and eventually large cities. As it is seen, change has been a phenomenon that

accompanies human nature since its existence. Now, the greatest need of people living in cities has been to manage and be managed. Management is a tool and a method that people necessarily implement in order to ensure that people live together. In the early times, the form of government practiced by people showed itself in the form of kingdoms and empires based on autocracy. This form of government was sometimes undertaken by a dynasty, and sometimes by people with leadership characteristics.

Especially in the 15th century, when the empires were shuttered, nation states began to emerge. With the emergence of nation states, administration has become a series of written rules that states put into practice. This set of rules is called “law”. With the French Revolution and the subsequent industrial revolution, societies started to make social contracts to live together. The leading event of these contracts was the "Magna Carta Incident" in England in 1215. This event ended with the taking of some rights from the King of England as a result of the revolt of the landowners. Afterwards, the book "Social Contract" by Jean Jacques Rousseau, who lived in the 18th century, who was the father of the French Revolution, was accepted as a touchstone. As a result of these developments, a new era has been entered with the Industrial Revolution. After the industrial revolution, small businesses have been replaced by large factories, and there has been great migration from villages to cities. These changes have differentiated the owner of the business and the people who manage the business, and a class called the "manager class" has emerged. This managerial class has provided a new perspective with the idea of how to run businesses in the most efficient way.

The administration, which is shown as the beginning of the public administration discipline, differs from politics, law, economy, sociology, etc. Woodrow Wilson, who also served as the President of the USA, was the first to argue that it should be separated and examined separately as a field of interest and study. Wilson's article "The Study of Administration", which he wrote in 1887, is the first specific management writing in history that reveals that management should be handled and studied specifically. Management science is a science that emerged in the USA at the end of the 19th century (Yetim, 2018). Continuing on the path opened by Wilson, Frederick Taylor's 1911 article "Principles of Scientific Management" made the science of management a discipline (1880-1830). The new period is called the "classical management period". In this period, people were seen as the cogs of a machine. In the classical management approach, which materializes people and emphasizes the "reward-punishment" system, the "autocratic leadership" type is generally used. The second period (1930-1960) has been characterized as the neo-classical period. This period is referred to by Elton Mayo's theory of "human relations". The leadership type used in the neo-classical period was generally the democratic leadership type, the spiritual aspect of the people was emphasized, and it was argued that the motivation to lead the people passed through their spiritual side. The third period, the period from 1960 to the present, is called the "modern" or "contemporary" period. In the contemporary period, management has begun to be considered as “organization, people and environment” and has completed the missing aspects of classicalists and neoclassical management theorists. In this management approach, it is emphasized that leadership is no longer a standard form and that there should be a leadership that changes according to every situation. Theorists have called this type of leadership “contingency”. As a result, these changes show that it was inevitable for people to experience many changes with the emergence of the earth scene. The effects of these changes on management and leadership have also been complementary to each other.

Change

The Turkish Language Association defines the concept of change as "to enter another shape or situation", "to give a different appearance", "to bring new content", "to the sum of changes in a certain time period" (TDK, 2021). Change can be big or small, evolutionary or revolutionary, sought or resisted. (Hayes, 2010). Change at the operational and strategic level is a part of personal and organizational life (Todnem, 2005). From another point of view, change is a state of mind according to Albert Einstein: "The world as we create is a process of our thinking. It cannot be changed without changing our thoughts."

Similarly, Graetz (2000) argues that with increasing globalization, deregulation, fast pace, technological innovation, a growing knowledge workforce, and changing social and demographic trends, the primary task for very few in management today is to lead organizational change. Change management is the process, tools and techniques for managing the human side of change to achieve the required business result." Along the same lines, the Society for Human Resource Management (2004) defines change management as: "The systematic approach and application of knowledge, tools and materials." Resources, change management, identification and organizational strategies, structures, procedures and technologies to deal with change. adopting is dealing with changes in external conditions and the business environment." It is perfectly appropriate to understand the implicit and explicit meaning of change as follows. Often people associate this with changing the structure or vision of an organization. More precisely, change has become an accepted aspect of the modern workplace (Weber & Weber, 2001; McLagan, 2002) and has also become a popular cliché. It has been stated that "Change is inevitable and constant".

There is another view which suggests that mostly Organizational change is aimed. The organizational situation is to bring the desired "next" state or improved from the undesirable "previous" state (Ragsdell, 2000:48). That is, change aims at undertaking change by every organization for necessary technological, commercial and political purposes. This argument is supported by Oakland and Tanner (2006:64). It turns out that the reason for change to dramatically change the way we do things around the world is: "Evolving technology, changing needs, stakeholders, and economic pressures all add to the need for organizations."

Different motives trigger change attempts. According to Benjamin and Mabey (1993): "While the primary stimulus for change remains the forces in the world, the external environment is the primary motivator of how change is accomplished. With people within the organization." Similarly, Khatri and Gulati (2010) show that organizational change occurs for several reasons. These are outside the company, others are inside the company. External causes and internal causes are some of the following:

External Causes:

1. Government policies
2. Change in the economy
3. Competition
4. Raw material cost

5. Pressure groups
6. Technology push
7. Labor shortage
8. Social pressures
9. Legal requirements etc.

Internal Causes:

1. Change in leadership
2. Implementation of new technology
3. Decline in profitability
4. Changes in the employee profile
5. Union actions
6. Low morale

Organizational Change

The concept of change can be handled at three different levels. These are organizational, group and individual changes. At the organizational level, change is often the focus of restructuring. This may include different planned strategies as well as new policies and rules that affect the entire organization. In group-level change, the aim is to change business processes and be successful by integrating new technologies. In the change at the individual level, the behavior, attitudes and perceptions of the individual need to change. At this level, employee attitudes and new values must be harmonized. (Mills et al. 2009, p. 34).

Organizations are subject to a process of change arising from the need for cooperation to meet social needs and achieve common goals. Organizational change can manifest itself in the form of social, economic and technological changes that occur depending on internal and external effects in the management and activities of the organization. In simple terms, we can define organizational change as the transition from the current equilibrium state of the organization to a new and different equilibrium (Aslaner, 2010). In the process of change, organizations should work as a team as managers and employees in order to move from the current equilibrium state to a better equilibrium state. While performing this teamwork, they should act in line with certain goals (Koç, 2014).

Change in Sports Organizations

Sport is an important actor in determining personal development and motivation trainings (Ünlü et al, 2021). In the rapidly developing world, meeting the needs in the field of sports management in the light of the development of science and technology has necessitated the development of a human-centered, democratic, dynamic, open to development and productivity-oriented approach. Quality is seen as equivalent to change in sports organizations (Bilir, 2005). Sport is the most important factor affecting the health, morals, education, productivity, production and workforce of individuals in society (Mumcu et al., 2021).

When sports organizations are considered, it is not possible to prevent this change. Changes in social, political, cultural and economic areas in society cause positive or negative effects of sports organizations. Sports organizations, which must survive in the ever-changing and developing world order, should be open to all kinds of innovations and developments. Movement, which is the first sign of vitality, is also the basic tool for training the human body. From the first emergence of sports to its promotion by organizations, many areas of use have been created by creating savings. Another dimension of this saving is the science of sports management, which is formed by the use of management science (Bilir & Uyar, 2007, p. 44). The management of the sports organization involves the application of management techniques and strategies used in most modern businesses, public institutions and non-profit organizations. In other words, general management concepts and methods are also valid for sports management. From this point of view, sports management is the principle and rules of general management in the field of sports (Bozkır, 2020).

Effective Leaders in a Time of Change

Change is a face that all or most of the followers go through and is just a part of life. According to Wardle (2011), change is rarely smooth, but it becomes more and more regular. The change feature of the workplace can be anything from the product to the change in this workplace. As change leads to company policies, world of unknowns and competencies with the need to achieve set goals, commitment to the new task decreases. Under these conditions, the leader must observe the conditions well and lead according to the situation. Situational leaders must be decent, empowered with the skills needed to effectively manage change in the workplace. The goal is to grow, learn and develop through the use of different leadership styles, and there is no escape from this (McCauley & Van Velsor, 2004).

Effective leaders must be strong and recognize the good ideas of their followers and themselves to be able to challenge the changing process. Without talented leadership, there is no restructuring, no turnarounds and no change. They must adapt to change as quickly as possible and be innovative. Leaders should never be afraid to take the risk of failing, because that's the only way to learn from mistakes. After all, mistakes and successes are part of their diagnosis. Leaders must envision and communicate the future of the organization. To gain the trust of followers, he must anticipate where this change will lead in the future. Effective leaders must create an ideal image of what the organization can be and convince them how to get their followers to that point, and make them accept changes willingly by bringing their vision to life. Helping followers see exciting possibilities will increase their motivation and allow them to be willing to learn (Kotter 1996). This is how they should encourage cooperation between themselves and their followers. Leaders must identify the skill and level of knowledge each of their followers has in a particular task and use this to match their leadership style. Leaders must understand that mutual respect continues. Extraordinary efforts therefore create an atmosphere of respect for their followers. Confidence is an important virtue because followers do not hesitate to approach the leader. Leaders who make each person feel capable empower their followers throughout the development cycle. Effective leaders must lead by example, be clear about vision and values, and then act consistently with them. Leaders should be vigilant about the little things. Successful change is possible. The desire of an individual or group to achieve a desired result is critical for motivation (Carroll & Flood 2010).

Resistance to Change

It is well known that resistance to change arises because it threatens the status quo (Beer 1980). Change increases fear and anxiety, real or imagined consequences threaten personal security and self-confidence, and impair self-actualization (Morris & Raben, 1995). It requires the abandonment of personal values and beliefs; that is, transcendence for the good of the organization is understandably a process that questions the rationality of people's value systems and initiates sometimes displaced, conflict-prone defense mechanisms (Smith & Berg 1987) (see Figure 1).

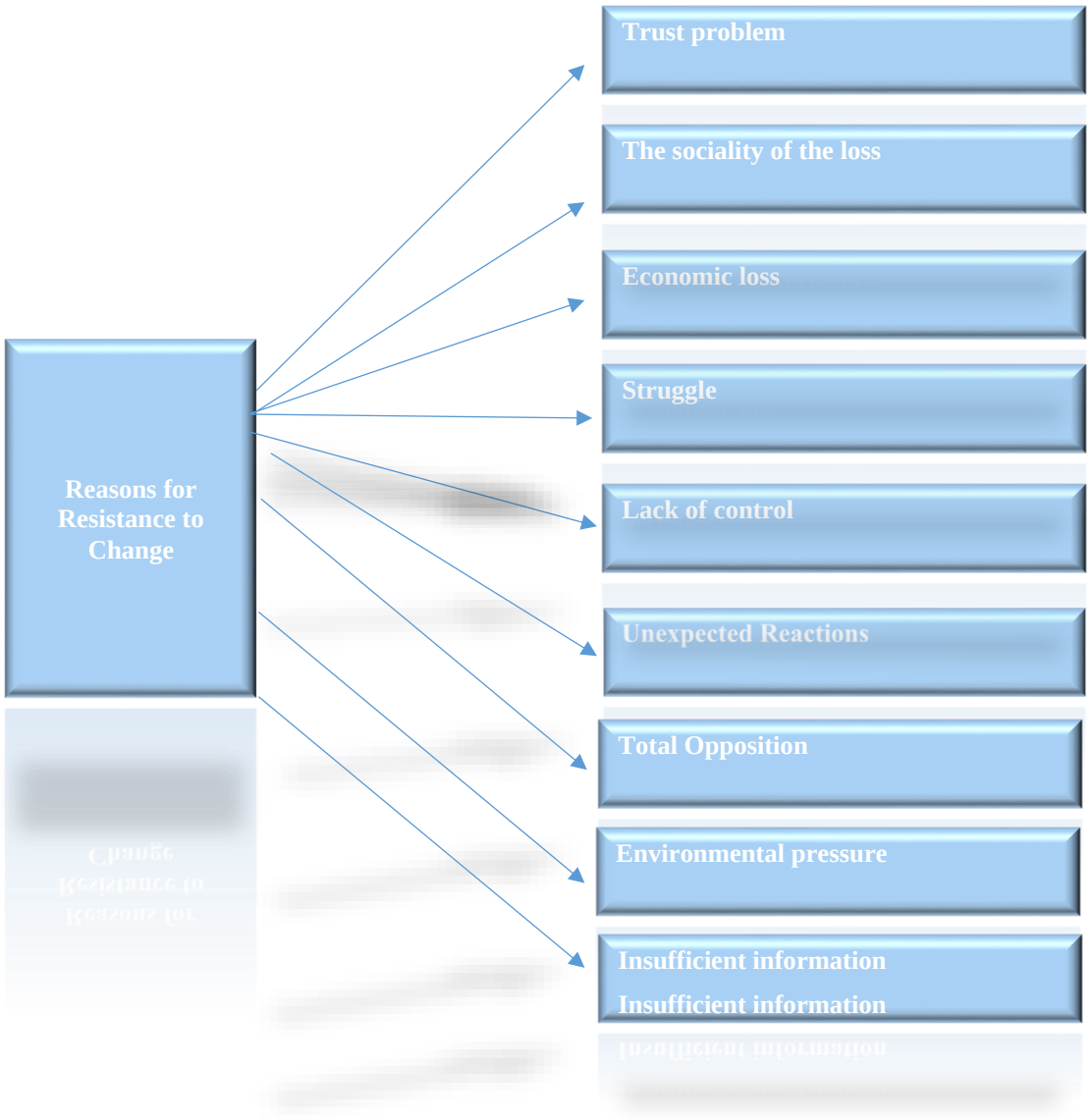

Figure 1. Reasons for Resistance to Change

Source: Gordon, J. R. (1993). A diagnostic approach to organizational behavior. Allyn & Bacon.

Effective management of change is about building the capacity for change. The main reasons for resistance to change can be listed as lack of trust, belief that change is unnecessary, economic threats, high personal costs, loss of status and power, threats to values/ideals, and fear of failure (Connor, 1995). On the other hand, resistance to

change can be beneficial and a constructive perspective should be adopted instead of viewing it from a traditional perspective (Waddell & Sohal, 1998). Resistance to change has classically been understood as an undesirable cause of conflict in a conflict. It can have devastating consequences for the organization. Both rational and irrational factors can arise in resisting change. To assume all changes are good, the resistor must be viewed as part of the resistor. The process of balancing internal-external pressures and needs for change is individual. It is possible to seek alternatives through resistance to change. It can be a critical source of innovation and motivation, providing solutions and energy flows. Resistance to change should be welcomed as part of the necessary evolutionary process, rather than perceived as an undesirable attack.

Leadership Theories

The leadership theories are listed in Figure 2.

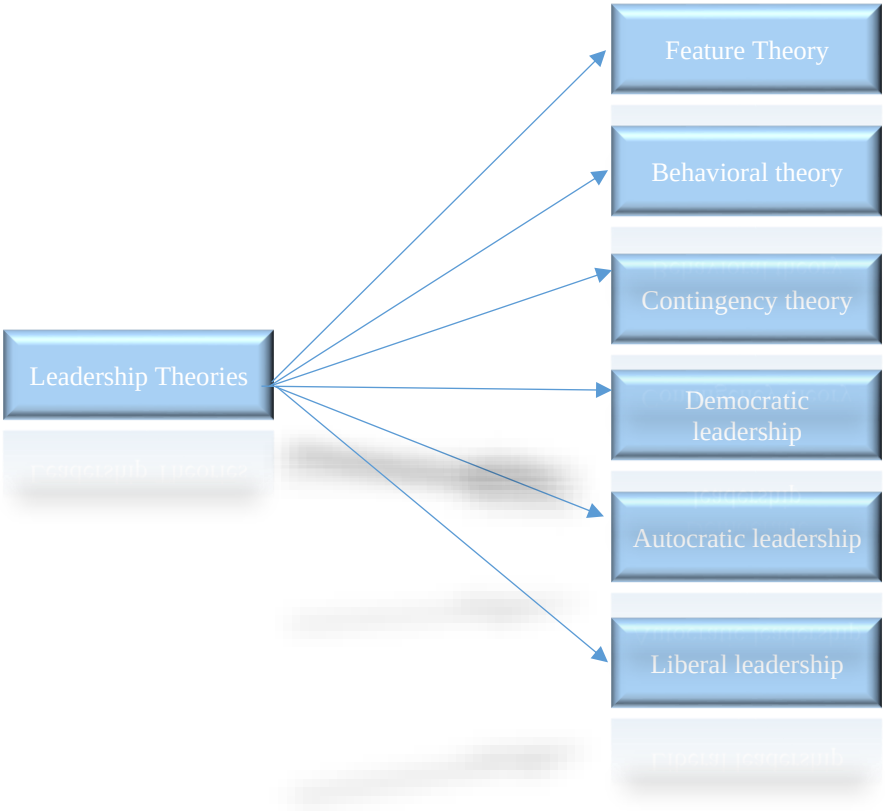

Figure 2. Leadership Theories

Feature Theory

According to this theory, leaders should have characteristics such as commitment, ambition and assertiveness. These characteristics of leaders must be in their own character from birth. This theory argues that leaders come to the forefront thanks to these characteristics and they lead in the society they live in. In other words, with the formation of the necessary conditions, the society brings to the forefront by assigning a different mission to the person who has the features to manage these conditions. Theoretically, a person who does not have these characteristics in himself/herself cannot lead, even if the conditions arise. Because leadership characteristics do

not exist in him (Karakucuk, 2005). Many researches have been conducted on this subject. The researches have tried to gather the characteristics of the leaders under a common roof by examining the great leaders in history. Therefore, another name for the trait theory is the great man theory. According to this theory, there are two types of characteristics in the leader. The first of these is physical characteristics, and the second is personal characteristics. Physical characteristics can be listed as height, weight, strength, age, signs of physical maturity and handsomeness. Personal characteristics can be counted as courage, intelligence, eloquence, human relations, reliability, risk taking and self-confidence. The most criticized aspect of this theory was its explanation by only considering the leader variable. In other words, leaders are critically directed to the theory that there may be more talented people in the groups they lead, but they cannot show these characteristics because they do not have the opportunity to lead somehow (Serikan, 2008).

Behavioral Leadership Theory

When the trait theory is insufficient to explain leadership with one dimension, leadership theorists have developed the behavioral theory to make a clearer distinction between the leader and the non-leader. According to the behavioral theory, “how does the person who is a leader behave during leadership?” became the question of behavioral theory. First of all, the theorists who emphasized the importance of understanding the difference between the theory of behavior and the theory of traits expressed this as follows: The theory of traits tried to explain leadership by researching what a leader is, whereas behavioral theorists tried to explain leadership on the basis of what the leader did and how he did it. Behaviorists asked the following questions while explaining this:

1. What does the leader do during the decision?
2. How does the leader do things?
3. How does the leader train his members in the group?
4. What type of behavior (authoritarian, democratic, liberal) does the leadership exhibit? (Koçel, 2003).

Contingency Theory in Leadership

Leadership theories, as in other theories, have progressed in layers in order to identify and complete each other's deficiencies. From this perspective, two dimensions emerged according to the behavioral theory, one of the leadership theories. The first of these is the leader's attitude towards work, and the second is the leader's attitude towards the person. However, the explanations of behavioral theory about where we should use these two dimensions were insufficient. The situation that this theory does not explain is that sometimes the attitude towards the person should come to the fore, and sometimes the attitude towards the job should come to the fore.

However, apart from these, the most important point of determination of the contingency theory is that these two attitudes can be used at the same time. According to the contingency theory, a person with certain qualifications argues that although he or she can be a good leader in some situations and conditions, they may not be successful when situations and conditions change. According to this theory, there should be a leadership style that is flexible according to situations and conditions rather than a leadership that is valid everywhere at all times. This theory tried to explain the leadership phenomenon by considering the conditions and conditions (Koçel, 2003).

Democratic Leadership

In the democratic leadership type, the leader takes decisions together with his subordinates, that is, he includes his subordinates in the decision-making process. This type of leaders cares about the views and opinions of their subordinates and listens to them before making decisions. In the democratic leadership type, subordinates are aware of the conditions affecting their duties. This type of leadership, in which communication is open, is the type of leadership that subordinates generally prefer. This type of leadership prefers to provide the authority with the power they receive from the group instead of providing control with authority as in autocratic leadership. Democratic leadership has many positive aspects as well as many negative aspects.

On the positive side, they try to achieve the goals of the advice in cooperation, while respecting everyone's opinion. Subordinates generally think that they will increase productivity, feel a sense of belonging and be connected to the group because they support decisions in which they participate. Besides, there are many negative aspects as well. Negative situations may occur such as loss of time, slow progress of the system, increased costs in cases where there are many subordinates, making wrong decisions by forcing everyone to give their opinion, and subordinates expressing their opinions on the subject they are not experts in. This type of leadership is preferred in organizations where rapid change is not experienced and subordinates are few (Okakın & Tınaz, 1997).

Autocratic Leadership

According to the autocratic leadership theory, leaders do not consult their subordinates when making decisions and take the decisions themselves. These types of leaders hold control and management in their own hands. Autocratic leaders do not care about the feelings, thoughts and wishes of their subordinates. These leaders do not allow subordinates to influence them, and they do not hesitate to give rewards and punishments while reaching the result. Autocratic leadership is often used in traditional societies. Such societies have low levels of education and are organizations with a large number of members. Autocratic leadership is often used in situations where immediate decisions have to be made. The disadvantages of this type of leadership are situations such as the subordinates not feeling belonging to the organization and hindering their personal development (Yetim, 2018).

Liberal Leadership

According to liberal leadership theory, the leader has little need for managerial authority. These types of leaders leave their subordinates to their own devices, and each subordinate makes plans, goals and programs without anyone's interference, within the resources given to him. The most important feature of liberal leaders is that they give complete freedom to their subordinates after providing the necessary opportunities for the job. In general, the leader acts more like a consultant than a leader. That is, it only appears when it is needed and when the question is asked. This type of leadership is usually found in professional specialties and self-developed subordinates. The point where this theory is criticized is that since it removes the authority of the leader, it is difficult to gather the group around a common goal and to reach certain goals. In such a case, it is inevitable that there will be confusion within the group (Erol, 2003).

Methods

The results, in which the opinions of the employees in sports federations were examined, were shaped according to the qualitative analysis paradigm and the situation pattern. In the basic qualitative research design, the focus is on how the participants in the study group live their lives subjectively and how they give meaning to their lives (Merriam, 2013). In this respect, it is aimed to investigate how employees in sports federations encounter the type of leadership during change. The study would be carried out mainly by the qualitative study method.

The Study Group

The participant group of the study consists of a total of seven participants from the sports federation employees (N=7). Easily accessible case sampling was used to determine the participants. The easy accessibility in determining the sampling method can be explained by the fact that the sports federations are located in the province of Ankara and are open to meeting in case of an appointment request.

Data Collection

During the data collection process, 10 questions were prepared by the researchers in order to be presented to the experts in order to get the opinions of the sports federation employees on the type of leadership during the change in sports organizations, these questions were presented to the opinion of 5 experts, the scope and content of the questions were changed as a result of the feedback from the experts, and in the last step, 10 questions were asked. The data collection tool was combined under 6 theories by researchers and experts and the data collection tool was finalized. The voice recording process was carried out successfully. The researchers contacted the people in the study group before the interview and provided brief information about the purpose of the research and that they wanted to interview them on a day when they were available. Then, on a mutually determined day, the first researcher went to the determined participants and made the interviews by using the mobile voice recording feature on the condition of informing the participants in their working offices. Voice-recorded interviews lasted an average of 15-20 minutes.

Data Analysis

Content analysis was carried out in the analysis of the data obtained in the study. The main goal in content analysis, which is one of the most popular analysis methods in social sciences, is to code a text and summarize it in categories in order to comply with certain principles and procedures (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2010). At this point, the audio recordings taken from the working group were first transcribed and systematized with the help of Microsoft Word Office. Afterwards, the codes were given to the interview transcripts, which were printed out, in the relevant forms by means of the office program. Secondly, themes created from these codings were created, and finally, each category and the codes that formed those categories were reported by quoting the ideas of the working group. In this report, the participants were given codes as K-1 (Participant 1) and the opinions of the participants were presented under the created dimensions.

Findings

The codes created by the content analysis used in the study and the relationship between the themes created from these codes are given under the titles of the study. The themes related to the main dimensions created and the codes under those themes were reported exactly by taking advantage of the views of the working group. The titles, themes and codings created are stated in line with the opinions of the participants. When Table 1 is examined, "What kind of definition do you think of when you think of leadership?" The participants stated that the leadership was the most important feature as merit (n=3), the humanistic feature (n=2) and the ability to use initiative (n=2) were other important features.

Table 1. What Definition Comes to Your Mind When You Think of Leadership?

Answer categories	f	Example expressions
Merit	3	"I think it should be fair in general. I also think that he/she should give importance to merit. These are the first things that come to my mind" (P3)
Humanist	2	"A person who has good command of the leader, has good manners, does not oppress his/her staff, and has human values. The leader is the person who will take it with him in human relations with his formality."(P4).
Using initiative	2	"I define myself as a person who can take initiative and implement his/her decisions."(P1)

When Table 2 is examined, "How does the leader establish a relationship with his/her subordinates in the organization during change?" The most important answer to the question of the participants was flexible (n=4), the second answer was understanding (n=3), and finally the authoritative answer (n=1).

Table 2. How Does a Leader Establish a Relationship with His/her Subordinates in the Organization During Change?

Answer categories	f	Example expressions
Flexible	4	"In other words, it is generally communicated collectively during the exchange. Establishes individual relations with some units. It can be hard and soft when needed. In other words, it may vary from subject to subject." (P3.)
Understanding	3	"It would be nice to be able to do what needs to be done by discussing about the subject, getting ideas from them, applying to their knowledge, but in a way that makes the other person feel valued in a way that he or she knows."(P4).
Authoritarian	1	"During change, he tries to impose his own plan and program. He draws the path he has given and says that it must be progressed on this path. So he/she is completely self-managed. He/she wants his/her own thoughts to be on the path he/she has drawn in his own mind, with his/her own plan and program."(P1)

When Table 3 is examined, “How do you think a leader should be during change?” The most important answer to the question was motivating (n=3). Secondly, the participants gave the answer of authoritarian (n=2). Finally, the participants answered that they should be flexible (n=2).

Table 3. How Do You Think A Leader Should Be During Change?

Answer categories	f	Example expressions
Motivating	3	“He/she should be positive, see his peers and act accordingly, that is, He/she should ensure that they are ready for a new change like him.” (P5)
Authoritarian	2	“First of all, if the leader cannot be firm by looking at the current structure in our country, he/she cannot bring about change. This is my personal opinion.” (P2).
Flexible	2	“He/she has to keep up with the change himself/herself, that is, he/she has to continue educating himself/herself. His/her subordinates may be knowledgeable of him/her. They should not hesitate to get the necessary information from them. Even if he/she knows, he/she should give them the necessary directions.” (P6)

When Table 4 is examined, “How should the function of the Leader be while the change is taking place?” The most important answer to the question was the participant (3). Secondly, the participants gave the answer as reliable (2). Finally, the participants gave the directing answer (2).

Table 4. What should be the function of the leader while experiencing change?

Answer categories	f	Example expressions
Participant	3	“I think we should go through everything together. That is, from the first step to the end, it should be exactly the same thing in all of them.” (P5.)
Trustworthy	2	We can say that the function of the leader should be persuasive for once, giving confidence, making the team feel that he/she is in control of the job, and making his/her team feel that the path he/she finds is the shortest and most reliable way.'(P1).
Router	2	“So it might be at the point of routing rather than getting involved in the first place. There may be trial time for current conditions. I think that a clear and definite decision should be made later on about this.” (P3.)

When Table 5 is examined, “How should the attitude of the leader be when managing change?” The most important answer given by the participants to the question was Flexible (5). Secondly, the participants answered that it should be Hard (2).

Table 5. How Should The Attitude Of The Leader Be When Managing Change?

Answer categories	f	Example expressions
Flexible	5	"One can observe first. I think it will be healthier if he/she evaluates and decides after that" (P3.)
Strict	2	"Leaders are actually people who can find short solutions to events and carry out their work in a more practical way, not those whose attitudes are harsh. So should it be harsh? It should be strict according to its place, but leaders are generally people who do not need to be very harsh because they make decisions in a short way."(P1).

When Table 6 is examined, "How does the leader approach it when the management is changing in your federation?" The most important answer given by the participants to the question was authoritarian (4). The second answer given by the participants was merit (3).

Table 6. How Leader Approaches When Management Changes in Your Federation?

Answer categories	f	Example expressions
Authoritarian	4	"The leader has something on his mind. If not, it is indispensable. Even if he/she sees changes in his consultation with his/her subordinates over time, he/she will still impose his/her own opinion" (P2.)
Merit	3	"So we have to adapt to it very quickly, we have to adapt. If he/she is a leader, if he/she really has leadership characteristics, he/she will not be affected by such changes. In other words, I think it adapts those who come to the system." (P7).

When Table 7 is examined, "How do leaders behave in the face of a problem during change?" The most important answer given by the participants to the question was Insightful (6). The second answer given by the participants was authoritarian (1).

Table 7. How Do Leaders Respond to a Problem During Change?

Answer categories	f	Example expressions
Understanding	6	"I think he uses problem solving methods. Once you understand the problem. What's the problem? Is it because of me, is it due to the system, is it due to resourcelessness? Or is it the structure of some people, the lack of knowledge and skills? That is, he/she must define that problem once" (P7.)
Authoritarian	1	"Leadership emerges when a problem is encountered during change. The leader is the person who really solves the problem. If he/she knows his/her own community or side, he/she will definitely go after that problem and solve that problem himself/herself. This is already at the beginning of change in the area where he/she himself leads and thinks about change. If it is based on an ideology, there is always a reasonable alternative solution. There is already a bit of egoism in the general characteristic of the leader. So he/she will put a stern stance on his/her first. In that framework, he/she will solve it with rigor."(P2).

When Table 8 is examined, “How do leaders communicate with you during change?” The most important answer given by the participants to the question was Situational (3). Participants were Holistic (3) second. Finally, the participants gave the one-to-one (1) answer.

Table 8. How Do Leaders Communicate With You During Change?

Answer categories	f	Example expressions
Situational	3	“For one thing, communication has to be positive. So a negative communication always complicates the things to be experienced in change. Be open to criticism, open to ideas. Sometimes you have to take a step back. Sometimes you want to go fast, it may be necessary to make a reverse gear when going fast. Because the structure, understanding, expectations or opportunities of the community you want to take may not fit what you think materially and morally. It may be necessary to postpone and revise them a little” (P7.)
Holistic	3	“During the change, the leader communicates with his/her staff and discusses the issue with them from start to finish. It guides change accordingly. It communicates with people collectively.”(P4).
One-on-one	1	“Leaders usually communicate with us one-on-one.”(P3.)

When Table 9 is examined, “What is the attitude of the leaders when they tell you about the change?” The most important answer given by the participants to the question was Situational (3). The second answer given by the participants was Authoritarian (2). Finally, the participants gave the answer Net (2).

Table 9. What Is The Attitude Of The Leaders While Telling The Change To You?

Answer categories	f	Example expressions
Situational	3	“As we said before, he/she confronts him/her in an explanatory way, talks, explains and tries to understand the situation. He/she needs to set an attitude. That is, but it should not be a rigid attitude. He/she should n't get into such an unnecessary harshness just because I'm going to be authoritarian. Sometimes they cannot adjust that dose” (P6.)
Authoritarian	2	“They often seem to have found the never found, the undiscovered. But in fact, there are no untested methods in many things in management. He/she seems so, especially in societies with a past like ours, but in the end, it will impose its own plan and program while putting an end to it.”(P2).
Net	2	“When leaders tell us about change, their attitudes are quite natural He/she is fluent and easy to understand, that is, in a clear way.”(P.4.)

When Table 10 is examined, “Does the leader use hierarchy during change? What kind of path does he/she follow if he/she does?” The most important answer given by the participants to the question was flexible (6). The second answer given by the participants was Traditionalist (2).

Table 10. Does the Leader Use Hierarchy During Change? If he/she uses it, what kind of path does he/she follow?

Answer categories	f	Example expressions
Flexible	6	"Of course he/she will use it if he/she has to. He/she may say that I have the authority, I make the final decision. He/she can also take a decision unanimously. In other words, according to the situation, a person can change and renew himself/herself. Sometimes the psychological state can also be a factor. We don't know the current mood may want to act authoritatively. He/she can only use his/her authoritarian and hierarchy. The manager of this place may say that what I say is okay. He/she may change momentarily, but as we said at the beginning, he/she may change according to the situation" (P6.)
Traditionalist	2	"He/she uses hierarchy, especially considering the current situation, because he/she is traditionalist. In other words, our administrators are traditionalists. Traditionalist leaders also strictly use hierarchy. He/she gives great importance to the subordinate-superior relationship. If a subordinate is against the opinion of the staff below him/her, he/she always adopts the idea in the hierarchical order and wants to implement it."(P2).

Discussion and Conclusion

In this qualitative study titled "Effective leadership types in change management in sports organizations", firstly change, change management, leadership theories were examined. The information obtained as a result of the literature study is included in the first part of the research. In the second part of the study, pre-prepared questions were converted into regular data by interviewing 7 adult individuals working in the federations with semi-structured interview technique and taking voice recordings. These data were discussed under the leadership of the theories in the literature and the results were included in the findings section of the study.

First of all, it was seen that some of the answers given by the participants in the study were in common with each other, and some of the answers were completely different. Historically, it has been observed that the preferred leadership type while experiencing change is not isolated from the social, cultural, political and political environment of the age. Societies have determined a management style according to the conditions of the age they live in and have applied the most appropriate leadership type to this management style. Sports organizations, in which the subject was specifically addressed, also responded to the changes experienced in this improvement. In particular, they implemented a prototype of the management styles of the countries they were in in their own organizations.

It has been seen that there are three dimensions that come to the fore in the study; these dimensions have flexible, understanding and authoritative answers. What are the characteristics of the leader that the participants in the

study are trying to determine? They revealed many features in the face of his question. To the question of which leadership type determined by leadership researchers is more effective during change, the participants emphasized that leaders should use many characteristics according to the situation, rather than a single leadership type. If we look at the subject in a little more detail, the participants, who argue that leaders can motivate employees during change by being flexible and understanding, but being authoritative when appropriate, emphasized that they have experienced this personally and that very productive results have emerged. Parallel to this study, another researcher on leadership emphasized motivation and explained it as follows: Motivation is activating the creative capacity of the employee, creating team spirit and a sense of responsibility. The main purpose of motivation is to get employees to strive towards organizational goals. Organizational change is made to achieve organizational goals more effectively and efficiently. The leader, who wants to realize organizational change and achieve the expected performance from the employees, should motivate the employees. The benefits and opportunities that organizational change will provide to employees should be well explained. Thus, employees who want and strive for organizational change can be created. The leader can also use motivation as a functional tool to increase organizational efficiency and effectiveness (Tuncer, 2011).

The fact that motivation is related to the spiritual aspect of people and that leaders know what the needs of this spiritual aspect of people are and act accordingly make people successful in the face of change. It is obvious that the emergence of motivation in management plays a very active role in finding its own way in management science. When management is now considered as a separate science from other sciences, management scientists, who primarily used its mechanical aspect, would not observe an increase in production if the material aspects of human were supported in their subsequent experiments. However, it has been observed that productivity increases in production when the spiritual needs of people are met. As a result, people who lead in institutions have taken this into account.

In another study, Unal's statements about the classical leadership type were as follows: Classical leadership type will not change in societies that have not passed the information age. Such leaders will also be limited in changing and directing their environment. There may also be resistance to change and an environment of conflict. In the global environment, the management of change will also be vital for the managers, institutions and societies of the future. It should create organizations that can manage change well, are open to developments and constantly renew themselves, keep people in the foreground and create a corporate culture. In this context, with effective leadership, it will be possible for institutions to adapt to the technologies of the future and produce technology. In our country, however, creativity has not been given enough value yet. In our country where the entrepreneurship culture has not developed, young talents should not be crushed between classical/bureaucratic management styles. We need creative young managers who follow technology closely, do not hesitate to apply it to their institutions, and who can make quick decisions in any situation and apply it (Ünal, 2012)

It is a necessity to know the effects of information and technology on change and to constantly improve and update themselves in order for leaders to use them efficiently. Changes in organizations cannot be isolated from the environment because organizations are an open system, that is, they act in harmony with the environment and owe their existence to this harmony. Reaching the findings that support the above view, Çolakoğlu expressed this

as follows: Change requires the organization to adapt itself to its environment in order to survive. Change is an endless, complex and dynamic process. For this reason, change can only be successful with planned and programmed studies based on scientific method and under the leadership of managers with transformational leadership characteristics. A strong, shared and clear vision of the organization plays an important role in ensuring that change is felt, adopted and implemented not only by senior officials but also by all organizational members (Çolakoğlu, 2005).

As a result, the leadership type that the participants have in common about the leadership types in change management has become the contingency leadership type. They supported this with their flexible, situational and authoritative answers. Particularly, the participants emphasized that the leadership types applied in the management of the countries in the 21st century are also applied in their own organizations. It was observed that the different answers given by the participants varied according to the subjective situation in the federations. This subjective situation can be explained by the fact that some federations are team sports and some are individual. These findings show that federations choose a leadership type application according to their own codes, regardless of which branch it is, namely combat sports, individual sports or team sports.

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Using Art to Reveal Democracy (Hint: It's A Little Punk Rock)

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Using Art to Reveal Democracy (Hint: It's A Little Punk Rock)

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Abstract

What is democracy? We asked this of our pre-service teachers but, instead of soliciting a response via more traditional methods, we assigned them a collage and artist's statement. The overarching goal was to model curricular applications of art that they may carry into their own p-6 classrooms to enable engagement with complex concepts. In exploring their work, however, we uncovered compelling ideas about the efficacy (and appropriateness) of the use of art to interrogate cultural ideals. If we started the project seeking to model classroom activities, we ended by uncovering many of the themes troubling contemporary democracy. We found in our pre-service teacher's artistic conceptions clues to the origins of current social discourse. Through assessing their artwork, thematically coding the statements, and follow up interviews, our examination of their experience of working within art and with democracy revealed perspectives about both. In this paper we address ways we as teacher educators may aid in both expanding the curricular choices pre-service teachers make in future classrooms and in creating the informational and reflective space to prepare them for civic engagement.

Introduction

We as teacher educators/researchers initiated an exploration of an existing project-- democracy through art. We modeled this learning activity, exploring a complex term like democracy, using the creation of a collage on poster paper and an explanatory artist's statement that pre-service teachers can incorporate into their future classrooms. After completion, we endeavored to think more deeply about what the project might mean, particularly as we confront the challenges to civic discourse and participation. Additionally, we sought to determine whether this was an appropriate way to engage pre-service teachers in thinking about classroom practice, and whether art was the correct vector. In this paper we delineate the resultant discussion.

Through pre-service teacher completion of the project and our artifact collection, interviews, and careful reading of artist statements, we were able to explore complex topics offering two powerful benefits: 1. the project allowed students to reflect on complex topics and instructors a glimpse into the abstract thinking processes of students, enriching communication and 2. it allowed instructors another way of investigating learning through expression, revealing something beyond the ordinary (Hughes, 2011; Ranciere, 2009).

Through utilizing art, and reflecting about the outcomes, both as pre-service teachers, and as faculty researchers and curriculum designers, we hoped to better initiate learning experiences for our pre-service teachers. This in

turn may lead to better potential learning experiences for K-12 students in classrooms across the culture. With this goal serving as lodestar, we asked the following questions about the art in democracy collage and artist statement project:

-Can we, through art, create an authentic experience of complex ideas like democracy?

-What can pre-service teacher expressions about democracy through artistic expression tell us about broader attitudes towards both art and democracy?

As we journeyed through the research, we also, through the inductive nature of basic qualitative research, opened new avenues of exploration, and challenged some of our own understandings of how we utilize art in classrooms and how we approach democratic ideals in education. Too, a central tension was exposed regarding the conservative nature of education and the potential reactionary punk rock explosiveness of artistic expression (Harrison, 1990). The project at the core of this discussion is indicative of Dewey's (1934) proposition of a pragmatic aesthetics, a way of participating through art that builds understanding and promotes consciousness and awareness of students' place (Swarts, 2014). This is an art anchored in humanness, a street art that, available to all, contains an expressionistic center of communication, politics, and the social, providing the mediating agent between individuals and the culture (James, 1963). When pre-service teachers engage in the process of summoning a vision, finding existing symbols to communicate that vision, arranging the symbols to create a narrative and then reflecting on the experience, they are, ideally, participating in art as a wider expression of the culture (Dimitriadis and Kamberelis, 2006).

Through this project, and our glimpse into inner worlds, we begin to discern the values and modes of democratic education of our pre-service teachers as they prepare to enter the field. Perhaps this gives us the foundation to begin to think about how we alter our practices in a college of education to better equip teachers to enter a profession that, as Dewey (1916) suggests, requires teacher-artists to expose and encourage deliberative debate and to investigate daily democratic practice as a way of life (Swarts, 2018). When we asked our pre-service teachers to express, through art, the meaning of democracy the resulting works compelled us as teacher educators to think more completely about how we make decisions related to curriculum and exposed larger questions about the goals of teacher preparation (Acuff, 2018). We challenged them, and they challenged us.

Democracy, Art, and Democracy-in-art

Democracy

For the sake of this paper and for this literature review, we will define democracy as it is most commonly understood: rule by the people (Mulgan, 1968). This simple conception reveals complexities we explore briefly through the merger of two lenses, Stanley's (2005) historical and Westheimer and Kahne's (2004) citizenship, to establish the translation through education of the rules of belonging (Garrison, 2004; Urban and Waggoner, 2009). That democracy and education are inseparable ensures the enduring question of who establishes the rules of belonging, becoming the source of near constant school reform (Tyack and Cuban, 1995). Stanley (2005) sums up this tension through the dichotomy of transmission or transformation. Transmission tends to produce Westheimer and Kahne's (2004) responsible citizen, viewing democracy as an agreement to obey the rules and

perform civic duties. Transformation, conversely, mirrors in many ways the goal of creating justice oriented citizens, ones who, beyond merely participating in the functioning of democratic systems, actively seek to expand the access of all (Westheimer and Kahne, 2004). The decisions teachers make within the classroom, often defined by demographics, influence the rules for belonging students that absorb (Duarte, 2016; Engebretson, 2018; Geboers, et.al., 2014). As Stanley (2005) suggests, if practicing teachers intuit a political system too complex or distant to influence beyond the traditional 'rights and responsibilities' mode of civics education (vote, obey the law, serve in the military, pay your taxes), they likely produce students who carry this as a civic ideal—the rules of belonging. This echoes the current discourse surrounding what kids should know, Stanley's and Westheimer and Kahnes' dueling conceptions finding expression in contentious debate over, for example, the 1619 Project and 1776 Commission.

Art

Here we refer to art in the realm of education. We subscribe to the importance of art as an effective tool in classroom contexts. However, in exploring the utilization (itself a fraught term) of art in this project we uncovered some potential sources of discord surrounding the role of arts in democracy and in expressions of democracy. Perhaps most relevant is the possibility and appropriateness of using art as a tool to access complex subject matter, whether in P-12 classrooms or teaching methods courses. Through observing artistic expression, even the sort that echoes the street instead of the gallery, we glimpse something of the undergirders of a time in a culture. In the works under consideration, there are clues to current thinking about politics and the society—a sense, as James (1992) writes, of the possible, even though we may lack the frame to fully comprehend what we are looking at. Through this lens pop art (the everyday expression of a mass of people), as opposed to gallery art (that which is walled off from the masses, a self-conscious marker of sophistication) we access a mode of sense-making, a sort of secret door, even if the complex whole remains unknowable (Buhle, 2017; Cruz, et.at., 2015; James, 1992; Ranciere, 2009).

As part of the collage assignment we arrived at a potentially less intimidating way of allowing pre-service teachers to probe their thinking about an ecologically multilayered topic (Graham, 2007). Utilizing art in the form of a collage also enabled participants to explore more deeply their thinking regarding democracy, and allowed us, in the role of instructor/researcher, a novel way of gauging thought processes (Hughes, 2011). Ecological intelligence can be measured through art projects, and we can assess the underlying content, or at least the thinking about the content (Bradshaw, 2016; Eisner, 2004). As students work through the project, they must, while having an end in mind, use critical thought and deliberation to piece together the vision they are attempting to communicate (Hughes, 2011). In other words, in a collage they balance communication to an anticipated audience, using images that may or may not relate to a specific vision, with images, words, or phrases to translate complex visions (Rodriguez and Stankowiecz, 2016). This constitutes a reflexive, symbolic, and critical thinking process, involving interpretation, synthesis, and creation allowing participants the space to conjure a work of art designed to initiate dialogue with someone else through using symbols pulled from the commons (Payne, et.al., 2017).

There is a conundrum if we concede that art tends to be subversive and allows often marginalized people a chance

to get ideas into the public sphere. In contrast, education is seen by many in positions of authority as delivery of the dominant values of the nation, ensuring students become responsible members in the prior determined narrative of the community. Through art, we challenge that dominant power structure. The question arises whether we can use a subversive medium to arrive at a traditional conception (Maxwell, 2018). In using art, a suspicion arises that we automatically challenge norms and values defining democracy. Or, more succinctly, we use punk rock to communicate suburban ideals. We risk coloring the water when trying to get a grasp on what pre-service teachers really think about democracy by having them use a subversive medium. Or, to the contrary, perhaps art, owing to its revolutionary potential, *is* the best form for getting these future teachers to critically assess their attitudes and beliefs about democracy (Maxwell, 2018).

Expanding the critique, Koutras (2018) writes that if democracy begins with the idea of equality, pedagogy does not. There is a teacher, and a student, and in this case there is also a researcher, all creating a power imbalance. When we ask students to critically address their conception of democracy, we do so in the context of a graded assignment. There is the risk that they are not thinking deeply about democracy, but about how to best communicate a version of democracy that will please their instructor. It may be what they think we want, as opposed to what they really think (Leporati & Jacklosky, 2021). We risk the appearance of curation as opposed to creation, studio churned out hits as opposed to garage band anarchy. We also persist in a realm where students are conditioned to abide by norms which may inhibit creative or emotional expression (Stark and Bettini, 2021). Added to the above concern is the threat of the collage to participant's well-being. If pre-service teachers fully engage in the experiential nature of the project there is the risk that they experience discomfort at the challenging not of ideas, but of identity and a sense of reality (McDermott, 2002). Participants may find the process fraught, uncovering hidden conceptions, or unintended controversy, or we may uncover master narratives, all subject to our own misconceptions (Yassi, et.al., 2016).

And yet these challenges appear to be surmountable. It may be necessary that we surmount them. As we move to a more regimented approach to education characterized by standardized curriculum and assessment and the de-professionalization of educators, we have embraced the version of American schooling that favors a human capital valuation of learning. Education becomes a numbers game and the more creative modes of expression are pushed farther to the corners in the schedulization of the day (Eisner, 2004; Sim, 2018). By neglecting arts and modes of creative expression in schools we have inculcated a null curriculum. Arts in pre-service teacher education are given short shrift around the world in favor of science, math, and English (Bolden & Ijdens, 2017). Consequently, teachers come to undergrad teacher preparation programs with little confidence or perceived competence in making art. This likely leads to less artistic expression later in their classrooms, and perpetuates the cycle again (McLaren & Arnold, 2016).

Democracy-in-art

We may start with an easy idea- artistic expression is vital to functioning democracy. Or, more aptly, artistic expression is key to understanding how a student (or anyone), perceives democracy. As James (1992) writes, a popular and expansive art is not just accessible to all, but the prime way we communicate our thinking about our

culture. In this form democracy is not something to simply be *memorized*, in the way that it is often taught, say, as in how a bill becomes a law, or checks and balances, or slavish adherence to the constitution as founding document, but instead as something that is *experienced*, over and over, in changing circumstances (Payne et al., 2017; Rosengarten, 2008). Perhaps democracy is a fluid set of tools for interacting and connecting with other people and institutions. Thus teacher-citizens are not simply responsible for character education, instead they must inculcate the qualitative process skills necessary to critically assess and interact with institutions (Fairley & Wilson, 2017; Sim, 2017). If we can incorporate the qualitative thinking powers required by artistic expression in classrooms, then perhaps we can get closer to the ideal proposed by Dewey (1934) of art as ultimate expression of the protean nature of our interactions in a complex culture. When confronting democracy in terms of artistic expression we actively engage students in learning, allowing them to be present in the experience and reflective afterward (Wildemeersch, 2019). Art in this context may allow for the self-reflection necessary to move beyond the rights and responsibilities understanding of democracy and into the critical engagement form.

Research has shown a significant correlation between preservice teacher's readiness to critically engage and their attitudes about democracy (Uluçınar & Aypay, 2018). If experiential learning, like through the collage and artist statement project, leads to critical reflection and engagement in forms of democratic expression it reflects Dewey's (1916) writings in Democracy of Education. As we approach something akin to experience with reflexivity, students gather images that they believe will communicate their ideas, single images cobbled together to build a coherent whole that effectively represents, or communicates, a complex idea (Hildebrand 2016). Within the difficult process of translating their work into artist's statements, we establish a need for self-conscious understanding here—they must understand themselves—and an acknowledgement of a socially constructed commons—they must understand their audience (Garrison, 2004). This is both direct experience and reflective experience, a single project that requires pre-service teachers to participate in the construction of a complex idea and the reflection of how their selections accurately conveyed their vision to an external audience. It is both internal and external, leading to awareness of democratic values in a very human way (Eisner, 2004; Hildebrand, 2016; Uluçınar & Aypay, 2018).

After pre-service teachers constructed their collage, they were asked to write an artist's statement describing the process and how the selected collection of images achieved their vision of democracy. The artist statement had two potentially impactful consequences: first, it allowed our students the chance to think more deeply about the collage making assignment, the images they selected, and the order in which they positioned them to communicate an idea revealed a metacognitive process and second, it allowed us as instructors and interpreters of the work the extra insight into the inner processes of the artists (Greer, 2015; Hughes, 2011; Johnson, 1982; Payne et al., 2017). Using art to communicate complex ideas has promise in the classroom. Collages, when paired with artists statements, allows for the "reflective expressive strategies of the artist" (Hughes, 2011 p. 228). Thus, the importance of the artists' statements is twofold- it allows the artist the reflective space to think more deeply about the phases leading to their unique expression, and it allows us the interpretive tool necessary to more fully understand that expression (Greer, 2015; Johnson, 1982).

Through art we can get closer to a more artistic conception of connecting the individual experience of democracy

with the educative experience resulting in something closer to Walt Whitman's democratic spirit (Swarts, 2018). If we are to contradict the contemporary model of education, seeing schooling as a numbers game designed to maximize human capital, then encouraging students to critically engage with complex ideas and master mythmaking like democracy may be worthwhile in creating democratic beings, not just capitalist beings-- creating citizens, not workers (Dewey, 1916; Sim, 2017).

Allowing students to participate in the inquiry, instead of simply accepting it from an authority, is democratic at its core-- it is people power. Further, the experience becomes communal, one shared across time and space. As students gather images and ideas for use in a new way, images produced by their culture but repurposed by them in the inquiry-based project of making new meaning from old, they find the self in relation to culture (Alazmi, 2017). Students engage in teasing out complex subjects by piecing together disparate cultural relics, or of making old images new through a unique personal vision, even if that vision is deeply informed by the cultural construct of past and present and even if that conception of art is sometimes constrained by temporal and hierarchical systems (Langfeld, 2018; Tavin & Tarvo, 2018). Students exploring questions that do not have easy answers develop thinking and reasoning skills that may lead to a better grasp of diversity, enable challenges to authority and tradition, equip them to—collectively-- improve outcomes, and realize possibility in ways representative of democracy (Alazmi, 2017; Green & Condy, 2016; Eisner, 2004; Payne et al., 2017; Scullion & Armon, 2018). Emphasizing art can lead to growing competence and confidence in the classroom, for both pre-service teachers and, one hopes, their future students. (McLaren & Arnold, 2016).

Method

Methodology

We chose a basic qualitative design to best reflect our participants' experience of their world (Crotty, 1998; Lincoln, et.al., 2018; Merriam & Tisdell, 2016). As the experience that defines the research changes, so must the analysis unique to the situation. The goal was not to establish a generalizable study, instead we sought to create a unique interpretation of an experience, one that is subject to shifting interpretations. Democracy, as indicated by our participants, is a difficult concept to define. It is equally difficult to attempt to describe those definitions.

Democracy itself is an emotion, if it was not, then all of us could have some objective understanding of it as a philosophy-- it is simply this, and that and this-- a textbook definition. But it isn't. It is attached to perception, perception that is grounded in emotional attachment to experiences that define, whether large or small, the definition of democracy. It is not an overarching societal level philosophy, but instead a deeply personal one that informs identity.

It is also one that helps to define membership in a tribe that one seeks to belong in. Thus, we don't define democracy so much as our conception of it defines us. It is part of the master narrative that determines our place in society (Gee, 2015). One that has been instilled from the very beginning, around campfires, dinner tables, or classrooms. Thus, a qualitative frame makes the most sense to us, related as it is to the social world and the concepts, behaviors, and the people in it (Anderson, 2010).

Participants

The research concerned a group of pre-service teachers at a mountain west university all of whom were taking a methods class in art. Of the 28 participants, the majority were female. The university is in a rural state with a small, homogenous population. The participants overall lacked diversity.

Data Collection

We collected data in the form of collages, artist's statements and conducted follow up interviews with two participants. We collected data with the understanding that the project concerned real world events, aware that our measurement would lead to new, inductive understandings and would, according to Dewey, never be complete (Hildebrand, 2016). During the entire process we kept notes in the form of a journal as a tool of self-observation informing the unfolding vignettes and contextualizing the emerging narrative. We sought to contextualize themes in the artifact collection with the expanding conceptions of art in democracy exposed by the review of literature (Kawulich, 2005). All data was analyzed through the evolving framework provided by both a historical foundation established by Stanley (2005) and a practical application framework established by Westheimer and Kahne (2004).

We utilized schema described by Saldaña and Omasta (2018) as an in vivo method of qualitative data coding to honor the participants' words, phrases, and images. From this approach we identified themes that presented from the works. We broke the coding into two sessions related to the statements and the collages. Further, meta-themes emerged requiring a deeper look at the artistic expressions and explanations. We contrasted the artist's statement codes with the collage codes to merge the two into a coherent data analysis. We then selected eight works for interviews, of which two responded to sit down discussions. The discussion allowed us to probe individual thinking more deeply, and to provide something of a model for thinking about how pre-service teachers approached the project. We first analyzed the collages themselves as standalone works of art, coding for themes in both composition and usage of symbols. We then read closely the artist's statements, both in relation to the individual works of art they accompanied and as standalone documents looking for common themes and dissonance throughout. When we had established compelling themes, we followed up with several students who had especially interesting takes on the assignment. The demarcation of interest was based on the researchers' discourse, field notes, and the meta-narratives emerging from student work (Emerson et al., 2011). We conducted the interviews from the following epistemological stance: to seek clarification of vision, to measure our own interpretations against that of original student intent, and to seek expansion (and minimize misinterpretation) of reflective practice on the part of students (Yassi et al., 2016).

Results

As we proceeded through a process of in vivo interpretive coding, we found striking similarities across all collages and statements, evidence of strong social components. We also noted some distinct outliers, evidence of independent voice. First, we look at the themes emergent in the works, then assess those few that showed different

narratives. For this section, we start with the collages, then analyze the artists' statements. We then correspond the statements and collages according to Westheimer and Kahne's (2004) and Stanley's (2005) lenses, matching themes to the three types of citizen engagement in democracy.

There were striking similarities, more so among the collages. Nearly every collage featured the military, many times this was the most salient feature, iconography of various military branches spread throughout the works. This was more obvious than in the artists' statements. Most collages featured presidents, although almost all were from the 1990s onward, either Clinton, Obama, Bush, or Trump. All featured symbols used to represent government. These consisted of monuments, buildings, and memorials, among the most common the White House, the capitol building, as well as the Lincoln Memorial and Mt. Rushmore. The symbols as we coded them also included images of eagles, the flag, the Liberty Bell, the Statue of Liberty, and founding documents. Variations on these symbols appeared in all collages.

The most common imagery outside of distinctly American semiotics were 'I voted' stickers, appearing in nearly every collage, and political party icons, typically represented in cartoonish fashion by the donkey or elephant. Equally common were depictions of money. When freedom was included, it was always in text. When freedoms were described, they always concerned the first two amendments to the constitution. The most common specific reference to freedom was the images of guns by a substantial margin, followed by various incarnations of the first amendment; press, speech, and religion. Diversity, ironically, was represented monolithically-- it was almost always represented by a childlike drawing with every color of the rainbow, or was represented by hands, whether raised or interlocked. Education showed up only four times, represented by books or, again, childlike renderings of schoolhouses.

There were outliers (and provocative imagery) among the collages, those that did not match the themes or commonalties of the majority of pre-service teacher work. One of these was a collage of all business logos, with the word money most prominent. Another featured an image of a revolver looming over the statement black lives matter. The final of these that did not match the thematic thrust of other work was also the only one of them that transcended the collage task. It featured a central figure, white, in a suit. His eyes were Apple loges, his smile the Amazon shipping logo. All around him were situated negative imagery- people yelling, people in conflict, people pushing narratives aggressively. Over his shoulders businesses representing fast food and pharmaceuticals figured prominently. It was a compellingly critical take on the concept of democracy.

When coding, themes were fewer in the collages than when reading the artist's statements. Meaning was also more saliently communicated in the statements. There were themes related to the project itself, and to conceptions of democracy. Based on the ideas expressed in the statements, we were able to place the works into one of three categories established by Westheimer and Kahne (2004). Like the collages, the statements were strikingly similar in vision, with, again a few outliers.

Nearly all pre-service teachers mentioned the difficulty of capturing democracy in the project, most also suggested that the concept was different for everyone without going into detail. One desired to make a statement about

democracy, a critique. Several used the collage shape to extend a message. All but two presented democracy as a core American thing, although several noted its Greek origins. There were some meta themes: the idea of democracy as under threat and needing arms or a military to defend it. The most striking meta theme was the idea that we have power in a democracy, but the only way to express that power is through voting, and voting is presented as a powerful act, the most powerful for the clear majority of the artists' statements. Voting is presented as triumphant.

There was also a tribal undercurrent about who belongs and who doesn't. It was about identity, how we appropriately identify as members of a democratic and capitalist system. Multiple perspectives conflated democracy with capitalism. The dollar was a significant theme. One statement utilized money as a concept to introduce the idea of people as economic individuals, with freedom expressed through economic choices. There were not as many gun references in statements as in the collages. Freedom again featured prominently, particularly freedom as enshrined in founding documents. The Declaration of Independence and Constitution were used as shorthand for documents establishing individual freedoms. As part of the meta theme of tribal identity, there was an interesting conflation, presenting the American story and democracy as one and the same, along with capitalism. Religion was surprisingly absent from all but one of the statements, fairness showed up twice. Equality, particularly when paired with opportunity was common. Democracy was explicitly linked with capitalism in six, there was also the idea that without money the government can't function. This also came up as criticism in several, citing the corruption of politics through money.

There was a link between typical civics education-- rights and responsibilities-- and the explications. There were detailed descriptions of separation of power, checks and balances, and the three branches and how they work together. The president, interestingly, came up most often as a sign of democratic process. Even if congress is demonstrably more democratic, few mentioned congress, or their local congressperson, and fewer still discussed local level political action or discourse. Statements were almost exclusively national in scope.

Of the 28 total art in democracy collage projects, 19 fell into a rights and responsibility framework, a mirror of participants' experiences of civics, government, and US history course work. These, based on coding and interpretation, were firmly ensconced in Westheimer and Kahne's (2004) responsible citizen model. They reflected an attitude of a narrative of the individual, one that accounts for rights as delineated in founding documents and paying some heed to issues of equality and diversity. In many ways, as shown by the predominance of childlike images of social justice, it is a grade school approach to teaching civic engagement. It is, in short, character education. This is not surprising as participants in the sample are all future primary school teachers. Three of the collages and statements represented something of a mix, acknowledging rights and responsibilities but indicating a desire to harness collective power to ameliorate continuing social injustice. Three works represented direct critiques of the system, indicating a need to enact social reform to address enduring issues of inequity and all of these three showed a theme of the corrupting influence of money in politics, shorthand for democracy in many cases. These three appeared most comfortable in Westheimer and Kahne's (2004) participatory citizen framework. One collage and statement represented something of Westheimer's and Kahne's social justice orientated formula, an appeal to using the democratic system to assert transformative power to

address entrenched inequality, ensure justice, and resolve historical wrongs. The work assumed the role of critical engagement in the political system to enable equal justice for all people.

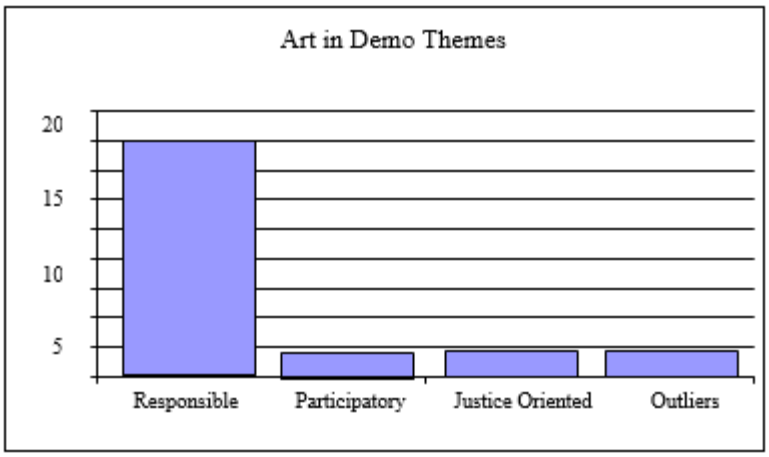

Figure 1. Emergent Civic Types

Three statements were outliers in the sense that we had difficulty fitting them into a single framework. One was aspirational, one global, and one was focused solely on the individual in relation to economic choices. It is not to say that they did not fit, just that we struggled to interpret them in a way that matched the framework. All were interesting in their own way. All enriched the experience of data analysis for the researchers. One of these outliers we assigned as aspirational, the collage was abstract in the attempt to render an "idyllic democracy," featuring a child by a lake in contemplative pose. The artist's statement that accompanied the collage was akin to a prose poem, its creator refusing to adhere to a similar procedure as their peers. It was artistic, and thus, ironically, difficult to consign to any strict framework. Another of the outliers was unique in that it did not, as all of the others, contain itself fully within an American context. This outlier took a global view of democracy, featuring images from various cultures as it assessed democracy not as a uniquely American institution, but one that was emergent and submergent across the planet. The final of the outliers was exceptional in that it assigned a powerful sense of individuality to participants in a democracy. If most of the collages and statements addressed freedoms and individual power in some way, this particular work focused solely on it, characterizing democracy in a strictly economic decision-making way. The collage featured only corporate logos and terms associated with economics, and the statement suggested that humans in democracies were Adam Smith-like independent operators, democracy itself serving as an expression of market based decision making that allowed rational actors to determine, solo, what worked best for them as individuals. It was an unselfconscious reflection of the belief in the invisible hand.

We conducted interviews with two of the participants. Both indicated, in collage, statement, and when discussing in person, democracy as a difficult concept. Both interviewees explained the central struggle of finding existing images to communicate the vision they had in their minds. In both interviews participants expressed a desire to sound smart when discussing the topic. I confessed that I would also struggle to define and communicate an idea as complex as democracy. Several times I pointed to specific images that represented something to me-- for example, an image of Thurgood Marshall in one collage as evidence of the accession of influential people of color-- to have the artist tell me they were looking for images that looked like they represented something they

were communicating, diversity, or an image of stately power. In all forms of communication, rights and responsibilities was the dominant form of democracy.

While some participants critiqued democracy as corrupt and voting as the illusion of power, most indicated the power of voting as individual right, one equated with expressions of freedom. The majority of artistic expression presented government documents, buildings, monuments and American symbols as the dominant expression of democracy. Most also explained this as a civics lesson in how the government works. For those indicating a rights and responsibility approach-- Westheimer and Kahne's (2004) responsible citizen-- democracy was conflated with the United States Government and was static and impersonal. For those falling into latter categories, according to coding, democracy represented a system serving to check government authority and corruption, a method of changing outcomes to improve the lives of people. There was a distinct difference between the former, which had strong depictions of political parties and military branches, and the latter, which often featured images of refugees and collective energy.

Discussion

Democracy is a difficult concept. Expressing democracy through art adds a layer of complexity (Eisner, 2004). There is a theme of distance, both between using art to engage in the classroom, and in the act of participating in a democratic system. We are interested in how these things come together in a classroom, and what that reveals about larger cultural contexts. This led to our research questions. Can we help pre-service teachers get at the sinew of democracy by having them create a collage and then write about it? And further, can we determine their attitudes and conceptions of democracy by regarding their work?

Through art, people, including pre-service teachers, can achieve something of this deep dive into considering amorphous philosophical consideration of concepts like democracy. Anyone can be an artist, it may be the most natural default setting for us as a species (James, 1963). This represents art as discourse, a direct communicative conduit, from person to person, establishing a sphere of "reason that interrupts the violence of disenchanted thought" (Feola, 31). Art cannot be solo in this context, there is expression, and someone(s) to interpret it as compelling dialogue (Campana, 2011; Blandy, 2011). If a vision represents some core beliefs, then one can communicate it to others without all of the fuzz of contemporary communication, it is, therefore, base, it is cave paintings, it is in some sense universalized. It is, provided we can pick up a guitar with a little or a lot of expertise and turn up the amp, punk. We can get students (and pre-service teachers) to show us fundamental beliefs, or even the underpinnings of the beliefs. They desire communication and that communicative effort requires another perspective to decipher it, a process that leads, potentially, to understanding. Understanding grants it authority, grants our students some authority in the classroom because we as instructors are going to engage them in dialogue, we try to figure out what they are saying, and this process facilitates a sense of agency and power (Campana, 2011; Cruz, et al., 2015). Praxis is revealed in the many ways it combines sense-making efforts-- educator/student, pre-service teacher/experienced teacher, researcher/ participant, center/periphery-- to create something new.

And yet, we are in an educative phase that is withdrawing from the desire for critical engagement with concepts, instead focusing on a human capital paradigm. We educate for jobs, in a neo-liberal framework (Bialostok, 2015; Sim, 2017). When thinking of human capital, the value is placed on output and schools seek to maximize that number, mimicking a managerial state to impose ever more curricular controls as they seek to squeeze out the space for educating civic minded citizens to instead create lifelong consumers (Bjork et al., 2015). Thus, in many of the collages we see represented scenes of money and governmental authority in the form of monuments and monumental buildings. Democracy, in this sense, is equated with production, with capitalism, with human capital (Koutras, 2018). Under this aegis, democracy becomes the way in which we enrich ourselves. It is not problem solving, instead, problem making.

However, through these acts of re-creation we can unlock human potential to identify and solve real problems (Dewey, 1934). This idea in itself mirrors the process of the artist, it also creates a temporal relationship to the work of art, one must, just as the artist did, conceive the pattern of images in one's mind (and through the lens of experience) to make meaning. It is discourse across time and space. And it has form and meaning, across this space, the physical manifested through individual-in-collective thought experienced anew. These collages, simple as they at first appear, carry with them the weight of artist intent, effort, and experience, a way of introducing the idea of art as collective experience, and one that can uncover possibilities in community engagement and problem solving (Campana, 2011; Blandy, 2011). Through an art in democracy collage and artist statement project, we provided students the opportunity of voice and access to the commons ensured by the practice of democracy empowering them to think critically about their modes of belief. More importantly perhaps, pre-service teachers may take this experience and carry it into their classrooms, giving their own students a glimpse of genuine democratic engagement through art and statement.

Through the art in democracy collage project, we arrived at a hitherto inchoate goal-- witness the unrepresentable (Ranciere, 2009). This emerged at two levels, the irreducibility of a term like democracy, and the impossibility of representing (or interpreting) it through art. Despite the challenge, we sought to engage pre-service teachers in a thought provoking activity designed to absorb them in terrain defined by vagaries of experience and accessed through the ordering and re-ordering of image and representation (Ranciere, 2009). This is the goal of the collage project, a way of reordering existing reality in the form of existing images-- to make something new from something not-- into a coherent representation of a pre-service teacher's view of democracy. These collages took different forms, and yet all share strands of commonality, reflecting the social milieu in which students are immersed. As students work through the collage and then write a reflective description of the action, they began to think more deeply about why they arranged a certain group of images this way, or that, and why they focused on these symbols, and not those. And, in spite of individual effort, through common emergent themes, we see the culture leaking through. The struggle between what the student saw and desired to convey and the limitation imposed on them by the availability of images to communicate their ideas exposes the discourse. Student collages were an amalgam representing someone else's translation, of something likely vitally different, that forced a discourse between self and culture (Alazmi, 2017). This entanglement with both idea and process, through the images created by someone else, suggests something akin to Bruner's (1965) attempts to make the familiar unfamiliar, and in so doing elicit a more self-conscious process of thinking.

Pre-service teachers recognized this struggle with artistic expression when they confessed a lack of experience with it-- they had lower confidence, and consequently may be less likely to engage in this type of learning activity later. Art represents a reflection of democracy; it is difficult and complex. To succeed in this evolving project, we need to see democracy not as a tribal identifier, not as insurance of our individualism, but as a collective effort to ensure the best outcomes for all of us (Nussbaum, 2010). In these collages is evidence of both, the idea that a conception of democracy identifies a person as a certain sort of person, one with an individual stake in a shared world. How one interacts with other humans is expressed through the collages and statements, whether self-determined or as evidence of collective identity. Some of this is revealed in the creation of the collages, a tapping of a collaborative "narrative imagination," or our ability to see from other's perspectives (Nussbaum, 2010. p 95). This is crucial to understanding diversity, equality, and fairness. Art in the classroom, as demonstrated by pre-service teachers, is an effective way to expose youth to methods of shifting point of view, allowing multiple perspectives. All of us already have these tools, it is just a matter of engaging them in the classroom.

Perhaps through art we allow pre-service teachers the opportunity to engage with a complex topic in the most effective way, a process described by Rancière (2009) as the competence of the incompetent, a leveling that allows any participant or student to reflect on democracy, even if poorly equipped previously to do so. Rancière, similarly to CLR James (1963), illustrates the potential of artistic expression as equalizer through sophisticated communication across imposed ability levels. The DIY nature of street art, like punk music, has the potential of upending the official brokering of what voices will be heard, it has the power of subverting approved discourse and tilting the democratic commons in new directions (Campana, 2011; Desai & Darts, 2016; Drass, 2016; Relles & Clemons, 2018). This belief allows creation and translation, a dialogue between artist and audience that undermines any idea of inequality of intelligence (Wildemeersch, 2018). Everyone, through a self-expressive collage project, can build meaningful connections between knowing and feeling within the shared cultural narrative (McLaren & Arnold, 2016). When investing in the creation and interpretation process we acknowledge a diversity of viewpoints (Feola, 2018). Indeed, this was among the most common themes in the artist statements-- democracy means different things to different people, thus opening the door to a needed re-engagement in discursive activity. When students intuit that they are creating work that will be viewed in different ways by different audiences, they participate in genuine qualitative reasoning, a higher demand on cognitive ability (Dewey, 1934). Perhaps going forward students can use something similar to engage in difficult and controversial issues requiring deliberative processes (Payne et al., 2017). Like democracy, the project represented a process of struggle and growth.

Conclusion

Instead of assigning students the composition of a formal paper on what democracy means to them, we offered students the chance to get at the sinewy, experiential stuff of learning. In the doing and thinking about art, students arrived closer to a core of democratic thought, the action that people initiate when they inhabit space, or more apt, when they reinterpret and communicate in that space (Payne et al., 2017). As students engaged in creating collages, they interacted within the common space of democracy in this (pop) culture. Whether they sought imagery from

magazines or the internet they were accessing and re-purposing collectively generated symbols with meaning and that meaning was altered through their re-narrating on the page. This represents a small experiential way for students, consciously or not, to engage in democratic processes of communication; the creation or "reframing of material and symbolic (communal) space" (Ranciere, 2009, p 24). Pre-service teachers constructed a collage, reflected on it, and shared it with us. As such, it was a communal exercise, re-purposing images from someone else that mean something else and transforming them into a new interpretation even if prescribed and controlled within democratic constructs of education.

Recommendations

We urge teacher education practitioners to incorporate art in the classroom in the effort to create the symbolic representations of thought and the expression of ideas that are unutterable in any other form. In short, art through this project serves to express a form of idea that could not be expressed in another way, thus qualifying it as unique experience. As pre-service teachers work through the artistic process, they express emotion as they cobble together raw resources in the form of images from print media, and create something wholly new, a representation of their interaction with complex ideas, their melding of art and democracy into new understanding (Ackerman, 2001; Dewey, 1934). It feels more like the street (and less like the gallery), more like punk, than anything else we do. If they merely wrote down thoughts on a paper, in standard essay form, they would be stating previous learning, a form of regurgitation, but, through the experience of merging forms with ideas in a new medium, then reflecting upon it, they arrive at something resembling the praxis-based liberatory education intended to empower students to participate actively in their society (Freire, 1970; Relles & Clemons, 2018).

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Teachers' Views and Experiences Regarding Acquiring Analytical Thinking Skills in the Middle School Mathematics Curriculum

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Teachers' Views and Experiences Regarding Acquiring Analytical Thinking Skills in the Middle School Mathematics Curriculum

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Abstract

In this research, the level of acquiring analytical thinking skills in the secondary school mathematics curriculum was examined according to the opinions and experiences of the teachers. The research was carried out by the phenomenology pattern, one of the qualitative research designs. The research was performed with the voluntary participation of eight mathematics teachers working in public secondary schools in the central district of Bursa in Türkiye. In the selection of teachers, it was considered that they had experience with the curriculum, had at least five years of professional experience, and received in-service training on the curriculum. The opinions and experiences of the teachers about the curriculum were obtained using a semi-structured interview form. The data were analyzed by content analysis, and themes were created. According to the results, the teachers found the curriculum insufficient for gaining analytical thinking skills. According to the teachers' opinions and experiences, the mathematics textbooks' questions and activities are insufficient for gaining analytical thinking skills. According to teacher experiences, leaving students alone with non-routine questions supports their analytical thinking skills. In addition, the modeling technique helps to embody the analytical thinking process. The teachers stated that the applications in the textbooks were prepared to assume every student would learn at the same pace and similarly. In addition, it has been revealed that students wanted to work by rote, not wanting to tire their minds and getting used to ready-made it difficult for them to acquire high-level thinking skills such as analytical thinking. Some suggestions have been developed according to the results obtained.

Introduction

There is a strong link between the quality of thinking and the individual's quality of life. Qualified and original thoughts enable individuals to make more accurate and effective decisions. In this way, the individual is more successful in daily, business, and academic life. Developing higher-order thinking skills is one of the ways to ensure quality thinking. In this respect, one of the curriculum's primary purposes is to provide students with higher-order thinking skills (MoE, 2008; MoNE, 2018). Analytical thinking is one of the higher-order thinking skills (Kabataş Memiş & Kaçar, 2021). This skill is a fundamental skill required for a meaningful learning process. It supports other high-level thinking skills, such as analytical thinking, reasoning, critical thinking, logical

thinking, divergent thinking, and problem-solving, and enables them to be used effectively (Akpur, 2021; Ocak & Akkaş Baysal, 2021; Ozdemir Baki & Kilicoglu, 2021). In this regard, it has been emphasized in different studies that analytical thinking is a fundamental skill that students should have (Elder & Paul, 2019; Robbins, 2011).

One of the courses in which analytical thinking skills are used effectively is mathematics (Anggoro et al., 2021; Sukmaningthias & Hadi, 2016; Qolfathiriyus, Sujadi & Indriati, 2019). Finding the parts for solving mathematical problems, establishing relationships between the parts, and producing solutions by combining the parts requires analytical thinking. Mathematics curricula are expected to support and develop students' analytical thinking skills. This study aims to examine teachers' opinions about the level of gaining analytical thinking skills in the mathematics curriculum. The results will provide information about the level of gaining high-level thinking skills in the curriculum. It will be understood by which methods and techniques the analytical thinking skill is taught in the classroom.

Mathematics curricula in Türkiye can be examined under two headings, before and after 2004. The curriculum developed before 2004 adopted the traditional education approach. The teacher is in the position of conveying the knowledge. Gaining predetermined target behaviors is one of the most important aims of the curriculum in this period. The curriculum developed in 2004 and the following years brought a new understanding to mathematics teaching. A constructivist approach was adopted, and student-centered practices were added to the program. The "every child can learn mathematics" principle is adopted in the program. Self-control, consideration of individual differences, and development of individual skills were the most important objectives of the program. It aims to support students' cognitive, affective and psychomotor development (MoNE, 2005). In this period, teachers were provided with in-service training to become implementers of the new program. After the 4+4+4 system was put into practice in 2012, the mathematics curriculum was revised. In the program, importance was given to developing mathematics-specific skills and using information and communication technologies. In 2017, 8 basic skills (communication in the mother tongue, mathematical competence, digital competence, etc.) and domain-specific skills (problem-solving, association, etc.) specified in the Turkish Qualifications Framework were added to the program. The curriculum aimed to support high-level thinking skills, ensure permanence in learning, integrate knowledge and skills with abilities, gain human values and transfer what is learned to daily life (MoNE, 2018).

Theoretical Framework

Analytical Thinking

Knowing the standard primary stages of the thinking process and thinking according to these stages can prevent distorted, biased, and prejudiced thinking. Our life and the quality of everything we produce, do or build depend precisely on the quality of our thinking. Thinking of poor quality is more costly in terms of money and quality of life. Although Elder and Paul (2019) stated that there are analysis methods specific to different disciplines, they identified the primary stages of the analytical thinking process common to all disciplines (Figure 1). In this way, researchers aimed to guide individuals to think effectively and analytically.

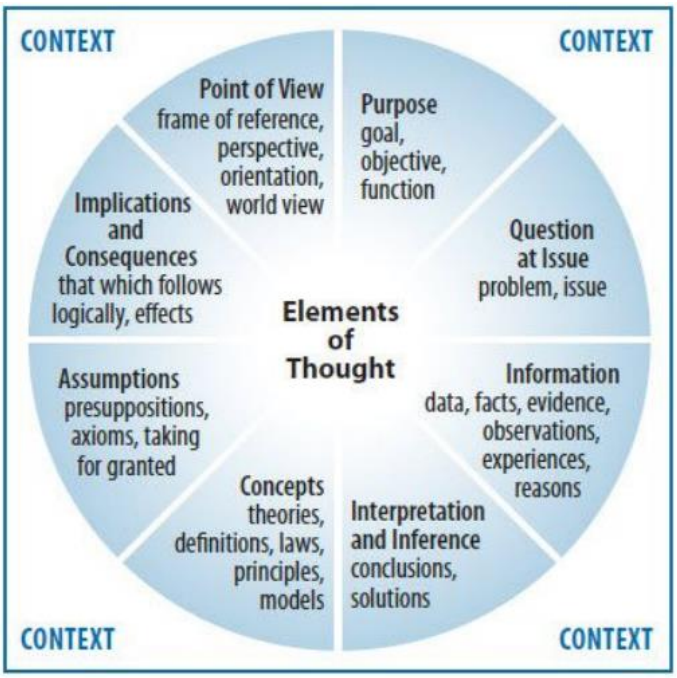

Figure 1. The Elements of Thought (Elder & Paul, 2019)

Thinking about the purpose, defining the question, collecting information, checking inferences, checking assumptions, explaining concepts, being aware of personal perspective, and thinking about results increase the quality of the analytical thinking process (Elder & Paul, 2019). Thinking about the purpose allows the individual to question their own goals and to understand what the task is for, for what purpose, and what objective. Defining the question and making it more understandable can guide the individual to think better. Gathering information provides information and evidence for solving the problem. This way, the individual can understand what information they need and what data types are relevant to the problem. Checking inferences allow interpretations and conclusions to be questioned based on available information. Controlling the implications allows the individual to consider alternative implications. Assumptions cover information that is accepted as accurate without question. Knowing what assumptions the results reached by the individual are based on can enable them to think more accurately. Explaining concepts and being aware of their effects on the thinking process is also necessary for correct thinking. Personal perspective affects what an individual looks at and sees. Knowing how the individual's point of view affects the thinking process can enable him to think healthily. Finally, the individual needs to reflect on the results achieved. The individual is expected to question what the choices, thoughts, and actions will bring and what they imply.

Analytical thinking is defined as examining any object, situation, or event from different aspects, separating it into its components, determining the relationships between components, classifying, seeing cause-effect relationships, and understanding the reasons for established relationships (Bloom, 1956). Analytical thinking skills are used in problem-solving situations (Chaffee, 2014). In order to produce practical solutions to the problems faced by individuals in daily life, they need to think analytically. Namely, it is possible to identify the factors that cause the problem and to see the relationships between them from an analytical point of view. Analytical thinking is also an essential part of academic life. Thinking analytically in mathematics, physics,

chemistry, social studies, grammar, and other disciplines is imperative. Analytical thinking is required to understand and analyze mathematical problems, chemical equations, physical experiments, and social events to realize their essential components and to develop a perspective.

Anderson and Krathwohl (2001) examined analytical thinking in the context of three basic skills: distinguishing, organizing, and dissecting. Discrimination is distinguishing what is essential in a given material or information obtained. Organizing is about understanding the relationships between parts and the whole. Understanding how the parts work and function as a whole makes organizing easier. Analysis by dissecting requires identifying a point of view that is not explicitly stated in a given material. Individuals who use the three fundamental skills effectively can evaluate the information to solve a problem, choose the most effective solution, and see the relationships between the whole and the parts (Anderson et al., 2001).

Core, metacognitive and cognitive systems are the three essential elements of Marzano's (1993) taxonomy that explain how information is processed. The cognitive system plays a crucial role in the processing of information. The cognitive system must work effectively to complete cognitive tasks successfully. In this process, analytical operations such as inference, comparison, and classification are performed, and the cognitive system is responsible for this process (Marzano & Kendall, 2006). Marzano (1993) explained analytical thinking by referring to the cognitive processes within the scope of the analysis step specified in Bloom's (1956) taxonomy. An analytical thinker can identify pieces of information and identify the relationships between these pieces. These individuals can quickly identify the main idea of a text or information and the supporting ideas. Analytical thinking is an essential skill for all students to master thinking. Analytical thinking skills are needed to learn the courses' high-level subjects quickly. Students with this skill can analyze poems, mathematical formulas, biological systems, textbook chapters, concepts and ideas, essays, novels, and articles (Elder & Paul, 2019).

Mathematics and Analytical Thinking

Analytical thinking is a skill that students use when encountering an uncertain situation or problem (Robbins, 2011). Problems faced by students may be related to social or academic life. One of the primary purposes of mathematics lessons, which is an essential part of academic life, is to develop students' higher-order thinking skills (MoNE, 2018). Students use some higher-order thinking skills, such as analytical thinking, to generate solutions to mathematical problems (Anggoro et al., 2021).

According to Bloom's (1956) taxonomy, analytical thinking is among the higher levels. According to taxonomy, analytical thinking is superior to remembering, understanding and applying. In this context, students need to remember, comprehend and apply mathematical knowledge and skills to solve mathematical problems. After this stage, students need analytical thinking to produce correct and valid solutions to the problem. By thinking analytically, they can identify the necessary information for solving a mathematical problem, grasp the relationships between information, and say which information is more critical.

Anderson and Krathwohl (2001) stated that the three essential elements of analytical thinking are distinguishing,

organizing, and dissecting. In solving a mathematical problem, the student's understanding of what information is vital among the given information requires the ability to distinguish. Students' understanding of the use of the information given in the problem and the order of operations requires organizing skills. Finally, the ability of students to produce new information that will lead to a solution based on the information given in the problem requires the ability to examine by disassembling.

In mathematics, analytical thinking is required to combine cognitive processes, plan solutions, produce solutions and reach a conclusion to produce correct answers (Anggoro et al., 2021). Accordingly, it can be said that analytical thinking is an essential skill for teaching mathematics. Studies have shown that using the problem-solving approach in mathematics supports analytical thinking. Sukmaningthias and Hadi (2016) stated that solving mathematical problems improves analytical thinking skills and using mathematical representations. According to these researchers, when a student is faced with a mathematical problem, he starts thinking analytically, albeit superficially. Students develop their analytical thinking skills over time, and accordingly, students use mathematical representations more effectively. There are individual differences in analytical thinking in mathematics. Individuals can have different analytical thinking features, including pre-analytical, partial-analytical, semi-analytical, and analytical. It has been observed that gifted students have high-level features such as pre-analytic and semi-analytic when solving mathematical problems (Qolfathirius, Sujadi & Indriati, 2019). These students effectively used their analytical thinking skills to understand mathematical problems, plan steps and check the answer. Theoretical explanations and research show that analytical thinking skills are essential in mathematics teaching.

Purpose of the Research

When the studies on analytical thinking in Türkiye are examined, secondary school (Kocabaş, 2021; Olça, 2015), high school (Kocaman, 2021), and university students (Arıol, 2009; Retired, 2021; Runyun, 2018) are more involved in the study groups of these studies. These studies discussed analytical thinking skills with mathematical problem-solving, conceptual understanding, critical thinking, context-based thinking, and life skills. There is a limited number of studies conducted with teachers. Yüksel (2011) conducted a study aiming to examine physical education teachers' critical and analytical thinking skills. The results revealed that teachers tend to think critically and analytically. Quantitative and mixed designs were preferred in studies on analytical thinking in Türkiye, and no study was found based on only qualitative research designs.

Numerous studies have been conducted in Türkiye aiming to evaluate mathematics teaching programs. In the research, the curriculum was examined according to the Bloom taxonomy (Aktan, 2020), the TIMSS evaluation framework (Delil, Özcan, & Işlak, 2020; İncikabı et al., 2016), the SOLO taxonomy (Erbaş, 2021), and the teachers' opinions (Çiftçi & Tatar, 2015; Yalçınkaya, 2018). These studies emphasized that the quality of the mathematics curriculum was not at the desired level. The current study aimed to examine the level of gaining analytical thinking skills in the secondary school mathematics curriculum according to the opinions and experiences of the teachers. In this way, information will be collected about the level of providing and supporting high-level thinking skills in the curriculum. Which teaching methods are preferred to gain analytical thinking

skills will be understood. It will be possible to determine the compatibility of the applications in the curriculum with the student's readiness level. The results can shed light on the studies to increase the quality of the mathematics curriculum.

The main problem of the current research is to reveal the opinions and experiences of the mathematics teachers working at the secondary school level regarding the level of acquiring analytical thinking skills in the curriculum. The questions to be answered in line with this fundamental problem are presented below:

1. What are the teachers' views on the level of providing analytical thinking skills in the secondary school mathematics course's official curriculum?
2. What are the teacher's views on the program's practices, methods, and techniques to gain analytical thinking skills?
3. What are the teachers' views on the problems and activities in the textbooks to gain analytical thinking skills?
4. What are the teachers' opinions about the level of gaining analytical thinking skills of the students who achieved the acquisitions in the curriculum?
5. What are the teachers' opinions about the appropriateness of the applications (question, problem, activity) that require analytical thinking skills in the curriculum to the student's readiness levels?

Method

Research Model

This research, which examines the opinions and experiences of teachers about the level of gaining analytical thinking skills in the secondary school mathematics curriculum, was designed as qualitative research. This research, in which the views and experiences of mathematics teachers were examined and described in line with the sub-problems prepared by the purpose of the research, was carried out under the phenomenology pattern, one of the qualitative research designs. This pattern aims to focus on facts that we are aware of but do not have an in-depth and detailed understanding of (Yıldırım & Şimşek, 2016). In this study, the reasons for choosing the phenomenology design are i) to obtain in-depth and detailed information by examining the opinions and experiences of the teachers regarding the level of gaining analytical thinking skills in the mathematics curriculum and ii) to reveal in detail how the secondary school teachers who implement the mathematics curriculum experience the program.

Study Group

This research was carried out with the voluntary participation of eight (8) mathematics teachers working in public secondary schools in the central district of Bursa province in the 2022-2023 academic year. In phenomenological research, data sources are individuals or groups that experience the phenomenon that the research focuses on and can express or reflect this phenomenon (Yıldırım & Şimşek, 2016). For this reason, it is recommended to use non-random sampling (Creswell, 2013) so that the researcher can choose the study group from which he can obtain the best information about the phenomenon (Creswell, 2013). In this context, the criterion sampling method was

used because the participants in the study should have experience with the researched phenomenon. In selecting the participants, the criteria were taken into account: i) teachers have experience with the 2018 official mathematics curriculum, ii) have at least five years of professional experience, and iii) have received in-service training on the current curriculum. Interviews were conducted with eight secondary school mathematics teachers who met these criteria and agreed to participate in the research voluntarily. Creswell (2013) stated that a heterogeneous group ranging from 3-4 individuals to 10-15 individuals is sufficient for phenomenological research. The demographic characteristics of the study group of the research are shown in Table 1.

Table 1. Demographic Characteristics of the Teachers

		f	%
Gender	Female	5	62.5
	Male	3	37.5
Age	35	2	25.0
	36	2	25.0
	37	2	25.0
	38	1	12.5
	41	1	12.5
Educational level	Graduate	3	37.5
	Postgraduate	5	62.5
Professional experience (year)	7	3	37.5
	10	2	25.0
	11	1	12.5
	14	3	12.5
Have you received in-service training on the curriculum?	No	0	0.0
	Yes	8	100.0

When Table 1 is examined, it is understood that 62.5% of the teachers are female and 37.5% are male. The ages of the teachers range from 35 to 41. 62.5% of the teachers have postgraduate education. The professional experience of teachers ranges from 7 to 14 years. All of the teachers stated that they received in-service training on the curriculum.

Data Collection Tool

In phenomenological research, participant's experiences of the phenomenon are analyzed through interviews, observations, documents, etc. (van Manen, 2017). In this context, the data collection tool of the research is the semi-structured interview form, which was created to examine the secondary school mathematics curriculum focused on teachers' opinions and experiences. In creating the draft interview form, four stages stated by Castillo-Montoya (2016) were followed. In this direction, in the first stage, care was taken to ensure that the interview questions were compatible with the purpose and problems of the research. For this, first of all, the literature was searched, and the studies examining the curriculum according to the views and experiences of the teachers were

concerned. In the second stage, draft interview questions based on questioning the opinions and experiences of teachers who implement the mathematics curriculum in the context of analytical thinking were structured. In the third stage, the questions in the draft interview form were submitted to expert opinions to receive feedback on their structure, length, way of expression, comprehensiveness, clarity, and intelligibility. After the changes were made according to expert opinions, some changes were made in the interview form. In the fourth and final stage, a Turkish language and literature teacher examined the draft interview form in terms of language and expression. Before the actual application, two mathematics teachers with the study group's characteristics carried out a pilot application. The opinions of the two teachers who were piloted about the clarity of the questions and whether any questions needed to be added, removed, or changed were received. After the pilot application, the interview form was given its final form. The questions in the semi-structured interview form are as follows:

1- What are your thoughts on the level of acquiring analytical thinking skills in the official secondary school mathematics curriculum?

2- Which applications, methods, and techniques do you include in the program to improve your students' analytical thinking skills? How do you apply these methods?

3- Can the problems and activities in the textbooks sufficiently develop your students' analytical thinking skills?

4- What are your views on the level of gaining analytical thinking skills of students who reach the acquisitions in the mathematics curriculum?

5- What are your views on the suitability of the applications (questions, problems, activities, etc.) that require analytical thinking skills in the mathematics curriculum and textbooks to the student's readiness levels?

Data Collection and Analysis

Before the data collection, pre-interviews were made with eight teachers in the study group. In this meeting, information was given about the purpose of the study. The questions that the teachers wondered about in the research were answered. In the next step, a semi-structured interview form was sent to the teachers via Google Forms. The answers given to the semi-structured interview form were analyzed by content analysis. Data were analyzed, and themes were created independently by the researcher and an expert (in the department of curriculum and instruction). The formula (number of consensus/total agreement + number of disagreements) proposed by Miles and Huberman (2018) was used to determine the percentage of agreement among coders. The percentage of agreement between coders was calculated as 85%. The lack of agreement between the coders was reviewed, and a consensus was fully achieved. In the coding of teachers, the first letter indicates the teacher (T), the second letter indicates the gender (M or F), and the following number indicates the order of the teachers. For example, the first female teacher was coded as TF1.

Validity and Reliability

In general terms, validity means that the inferences the researcher makes based on the collected data are appropriate, meaningful, and valuable. Reliability, on the other hand, refers to the consistency of these inferences

in terms of time, environment, and conditions (Fraenkel, Wallen & Hyun, 2012). However, in qualitative research, the concepts of credibility (internal validity), transferability (external validity), consistency (internal reliability), and confirmability (external reliability) are used instead of validity and reliability (Creswell, 2013; Yıldırım & Şimşek, 2016). Strategies such as long-term interaction, diversification, expert opinion, and participant confirmation are recommended in the field in order to ensure credibility that reflects the accuracy of the findings obtained from the research and meets the concept of internal validity (Creswell, 2013; Fraenkel, Wallen & Hyun, 2012; Miles & Huberman, 1994; Yıldırım & Şimşek, 2016). In this context, the researcher examined many documents related to the focus of the research and interacted with the data sources by communicating with the participants through preliminary interviews. However, expert opinion was sought for the interview form, a data collection tool.

Transferability, which meets the concept of external validity, expresses the extent to which the findings obtained from the research can be applied in different contexts and situations; in other words, to what extent they can be generalized (Fraenkel, Wallen, & Hyun, 2012). In order to increase the transferability of this research, he explained the research design, study group, data collection tools, and data analysis process in detail in the method section and included direct quotations in the findings section. In addition, the criterion sampling method, one of the purposive sampling methods, was used to determine the study group of this qualitative research, which was carried out in the phenomenology pattern. The formula (Reliability = Consensus / (Agreement + Disagreement) x 100) recommended by Miles and Huberman (1994) was used to calculate the reliability of the data obtained from the research.

Results

Teachers' Opinions on the Level of Gaining Analytical Thinking Skills in the Secondary School Mathematics Curriculum

For the first sub-goal of the study, the mathematics teachers were asked, "What are the teachers' views on the level of providing analytical thinking skills in the secondary school mathematics course's official curriculum?" The themes formed according to the teachers' opinions are shown in Table 2.

Table 2. Teachers' Opinions on the Level of Gaining Analytical Thinking Skills in the Secondary School Mathematics Curriculum

Theme	Participants	f	%
The effective aspect of the curriculum	TF2, TF3	2	22.2
The weakness of the curriculum	TF1, TM4, TM5, TF3, TF6, TM8	6	66.7
Advice	TF1	1	11.1

According to the coding, the "Effective aspect of the curriculum" theme has two frequencies, the "Weakness of the curriculum" theme has six frequencies, and the "Advice" theme has one frequency. It has been observed that the view that the program is not sufficient to gain analytical thinking skills has come to the fore. Some of the teachers' views on the theme of the missing aspect of the program are as follows:

"I think that the Official Curriculum is mostly aimed at gaining mathematical skills and subject skills. Even though the subjects in the program are tried to be associated with daily life, a way is followed as if the rules of the subject are made available to the students, but this remains only for learning the rules of the subject. I think it is limited for a role that develops analytical thinking." TF1

"The subjects and concepts in the program are not sufficient, and a program was designed to measure basic knowledge and skills. Practical studies are limited and limit the student's perspective." TF3

"There is no direct expression of analytical thinking skills in the program. There are more references to abstract thinking, mathematical thinking, and algebraic thinking. However, when I look at it on the basis of gains, there are more limitations and recommendations on how to follow a procedure according to the principle of succession. In the context of analytical thinking, opinions are expressed about what is more important and to be emphasized according to the discrimination component. I do not think that the achievements in the program have direct recommendations for gaining analytical thinking skills." TM5

"Although the current program aims to develop students in many ways, it does not give detailed information on how to do this. For example, I have not seen any gains aimed at directly gaining analytical thinking skills. Maybe they expect us as teachers to gain this skill and to explain it indirectly." TM8

According to the views of the teachers listed above, it is understood that the secondary school mathematics curriculum does not have targets for directly gaining analytical thinking skills. It was stated that the subjects and concepts in the program were insufficient in gaining analytical thinking skills and remained at the level of essential knowledge and skills. Although the program aims to develop students' higher-order thinking skills, it does not provide a clear roadmap on how to do this.

Teachers' Opinions on the Applications in the Program to Gain Analytical Thinking Skills

For the second sub-goal of the study, the mathematics teachers were asked, "What are the teacher's views on the program's practices, methods, and techniques to gain analytical thinking skills?" The themes formed according to the teachers' opinions are shown in Table 3.

Table 3. Teachers' Opinions on the Applications in the Program to Gain Analytical Thinking Skills

Theme	Participants	f	%
Associating with daily life	TF1	1	5.6
Developing the habit of reading books	TF1	1	5.6
Using the question-and-answer technique	TF2, TF3, TM4	3	16.6
Gamification	TF2	1	5.6
Solving new types of questions (non-routine problems)	TF3, TF6, TM4, TM5, TF7, TF6, TM8	7	38.8
Modeling	TF2, TM5, TF6, TF7, TM8	5	27.8

According to the coding, the "associating with daily life" theme has one frequency, the "Getting a habit of reading a book" theme has one frequency, the "Using a question-answer technique" theme has three frequencies, the "gamification" theme has one frequency, the "Solving new types of questions" has seven frequencies, and the "Modeling" has five frequencies. It is understood that teachers prefer methods of solving non-routine problems,

modeling, and gamification to gain analytical thinking skills. Some of the teachers' views on the theme of "solving new types of questions" are as follows:

> "Designing skill-based, logic and reasoning criteria such as PISA and TIMSS for the changing exam system LGS (High School Entrance System) exam is effective in gaining thinking skills. In the textbooks that can be designed to be used, the reasoning and hardware-based scenarios that will be derived from the models for LGS can be evaluated with questions and situation drawings." TM4
>
> "I try to create different problem scenarios from time to time by changing the conditions in the given problem. In order to reach a generalization by comparing the differences in such a new situation with the previous one. While solving a problem, I give feedback on how many steps the problem has been solved so that they are aware of the stages of the solution applied and can apply it. So I'm actually trying to improve this skill by using non-routine problems." TM5
>
> "I refer students to different resources to develop higher-order thinking skills such as analytical thinking. Especially for the LGS exam, we need to develop our eighth-grade students beyond what the program specifies. I think that students with analytical thinking skills will solve new-generation questions better. In this regard, I direct my students to different question books to enable them to solve new generation questions." TM8

According to the teachers' explanations, leaving students alone with non-routine questions supports their analytical thinking skills. The fact that the questions asked within the scope of the high school entrance exam also examine their high-level thinking skills shows that teachers encourage their students to solve non-routine problems that they describe as the new generation. Another method that teachers use to gain analytical thinking skills is modeling. The opinions of teachers about this method are as follows:

> "I use the layered teaching technique and make lists of the questions that need to be modeled more practically through the model. I think mathematical modeling questions in terms of analysis satisfy this. The issue of what is important or should be used in the given problem is important in solving these problems." TF6
>
> "Individually, I make students understand the question step by step by modeling it so that they can simply interpret the question and interpret it in a way they understand." TF7
>
> "I want them to model and visualize the information needed to solve the problem; this allows them to examine the problem better and see what is needed for the solution." TM8

According to the teachers' experience, modeling provides the concretization of analytical thinking. Since middle school students are in a substantial development period, modeling is an effective technique for gaining analytical thinking skills. In this respect, it can be said that a large proportion of teachers prefer to use this technique.

Teachers' Views on Problems and Activities in Textbooks to Gain Analytical Thinking Skills

For the third sub-goal of the study, the mathematics teachers were asked, "What are the teachers' views on the problems and activities in the textbooks to gain analytical thinking skills?" The themes formed according to the teachers' opinions are shown in Table 4.

Table 4. Teachers' Views on Problems and Activities in Textbooks to Gain Analytical Thinking Skills

Theme	Participants	f	%
Problems and activities are enough	TF1, TF2	2	22.2
Problems and activities are insufficient	TF1, TF3, TM4, TM5, TF6, TF7, TM8	7	77.8

According to the coding, the " Problems and activities are enough " theme has two frequencies, and the " Problems and activities are insufficient " theme has seven frequencies. The opinion that the problems and activities in the textbooks are insufficient for gaining analytical thinking has come to the fore. The opinions of the teachers on the subject are as follows:

> "After the introduction, students are faced with more exam-oriented and more mathematical, that is, technical questions. The student, who thinks he understands the subject in the introduction and thinks it is simple, falters regarding the more technical parts. Unfortunately, this is the result of a system that stems from the reality of the exam. For example, students who can make mental operations with integers with the air temperature think that they do not understand the subject when they encounter parentheses and exponential numbers in the questions. Considering all these, I can say that developing students' analytical thinking skills is not supported." TF1
>
> "I think that the activities in the textbooks are not at the level to develop metacognitive skills; I see that they are mostly at the level of remembering, comprehending, and applying and cannot pass to the analysis part. I think students should be supported with other resources that include logical reasoning and skill-based questions." TM4
>
> "The problems and activities in the textbooks are not enough to develop your students' analytical thinking skills. For example, the exercises are simple. Some of the questions and activities explain the order in which the given information should be used, and the operations should be done in order, but it is not enough for the student to use it. There is no redundant information regarding discrimination or skills, such as identifying the important variable. There is no high-level thinking approach in the sample exercises, and questions presented." TM5

According to the teachers' opinions, it is understood that the questions and activities in the mathematics textbooks are not suitable for gaining analytical thinking skills. It was stated that the problems and activities in the textbooks were mostly at the level of remembering, comprehension and application. It is emerging that problems and activities with understanding and explanations supporting high-level thinking skills, such as analytical thinking, should be added to textbooks.

The Opinions of the Teachers on the Level of Acquisition of the Analytical Thinking Skills of the Students Who Achieve the Curriculum Lesson Acquisitions

For the fourth sub-goal of the study, the mathematics teachers were asked, "What are the teachers' opinions about the level of gaining analytical thinking skills of the students who achieved the acquisitions in the curriculum?" The themes formed according to the teachers' opinions are shown in Table 5.

Table 5. The Opinions of the Teachers on the Level of Acquisition of the Analytical Thinking Skills of the Students Who Achieve the Curriculum Lesson Acquisitions

Theme	Participants	f	%
The acquisitions are enough	TF1, TF2,	2	25.0
The acquisitions are insufficient	TF3, TM4, TM5, TF6, TF7, TM8	6	75.0

According to the coding, the "The acquisitions are enough" theme has two frequencies, and the "The acquisitions are insufficient" theme has seven. The view that the gains in the curriculum are insufficient for gaining analytical thinking skills is more dominant. Some of the teachers' opinions stating that the achievements are insufficient are as follows:

> "The achievements guide us with the explanations below about what is more important. I care more about the explanations than the achievements themselves. In classrooms, when we teach according to achievements, we focus on the ability to process in a short time rather than thinking skills. This actually causes not only analytical thinking but also other thoughts not to be adequately developed in the classroom environment." TF3
>
> "I think that the achievements targeted in the curriculum generally remain at the level of comprehension and application. In order to develop analytical thinking skills of the students, they should encounter different types of questions apart from the routine problems and activities in the program." TM4
>
> "The student who achieves the goals can reach the level of knowledge and comprehension, cannot pass the application and analysis phase, students who develop themselves with different questions other than what the achievements require are more successful." TF7
>
> "I think that most of the achievements in the program are at the application level. Thanks to these achievements, students become more proficient in solving problems that we express more routinely. Higher level acquisitions, activities, and question types are needed to acquire analytical thinking skills fully." TM8

According to the teachers' views, the gains in the program are primarily at the knowledge, comprehension, and application level. In this respect, it was stated that the students who achieved these gains could not think analytically. In addition, the achievements and explanations do not provide enough guidance for teachers on how to gain higher-order thinking skills. Teachers recommended using non-routine problems and activities together with the achievements in the curriculum to support students' higher-order thinking skills.

The Opinions of the Teachers on the Compliance of the Applications Requiring Analytical Thinking Skills in the Curriculum to the Readiness Levels of the Students

For the fifth sub-goal of the study, the mathematics teachers were asked, "What are the teachers' opinions about the appropriateness of the applications (question, problem, activity) that require analytical thinking skills in the curriculum to the student's readiness levels?" The themes formed according to the teachers' opinions are shown in Table 6.

Table 6. The Opinions of the Teachers on the Compliance of the Applications Requiring Analytical Thinking Skills in the Curriculum to the Readiness Levels of the Students

Theme	Participants	f	%
Readiness is taken into account	TF1, TF2	2	16.7
Program-based issues	ÖK 1, TF2, TM5, TM8	4	33.3
Textbook-based problems	TF1, TF6, TM8	3	25.0
Student-based issues	TF3, TM4, TF7	3	25.0

According to the coding made, the "Readiness is taken into account" theme has two frequencies, the "Program-based issues" theme has four frequencies, the "Textbook-based problems" theme has three frequencies, and the "Student-based issues" theme has three frequencies. Some of the teachers' opinions stating that the curriculum and textbooks do not take into account the readiness for analytical thinking are as follows:

> "In the questions at the end of the topic, the student encounters question styles with no examples in the narration. What is worse is that the questions in the general official exams are not at all similar to these, and the new generation questions are precisely the questions for analytical thinking. In other words, there is no problem in the operation of the program and the connection of the subject in daily life, rules are given, and these rules are reinforced with examples. However, the question styles that will develop analytical thinking on the subject are not in the book, and there is no time to solve them from different sources due to the density of the curriculum." TF1
>
> "There is actually a lot to say about this situation. First of all, not every region in our country is advantageous, there are disadvantaged regions, but our program is a general program, not a local one. So I actually think this problem should be fixed first." TF2
>
> "I do not think that the textbooks and the program give too much space to activities aimed at directly gaining students' analytical thinking skills. It seems that it is aimed at gaining more basic skills. For this reason, I think that the necessary prerequisites for the student for analytical thinking are not specified in the program and are not taken into account. For example, activities and questions that improve students' thinking step by step, that is, going from simple to complex, are not included in the program. It is assumed that students will learn at the same pace and in a similar way." TM8

According to the teachers' opinions, it is understood that the applications in the textbooks are prepared by assuming that every student will learn at the same pace and in a similar way. A large proportion of the applications are aimed at gaining essential skills. Curriculums and textbooks do not meet the needs of students who want to develop their analytical thinking skills. There are no question types in the textbooks that will support the high-level thinking of the students and enable them to think analytically by using the knowledge and skills they have learned.

Teachers also stated that there are different obstacles apart from the curriculum and textbooks. Some teachers' views on student-based problems in the teaching of analytical thinking skills are as follows:

> "The problem is with the students; they want to work by rote; they want everything ready. It is difficult to analyze. I think the general problem of this age is that nobody wants to deal with anything; they want

> to have everything easily and quickly. This way of thinking is reflected in the school as well. They solve the question when you explain it, but they do not want to think about that explanation part." TF3
>
> "Students have a hard time solving logical reasoning and skill-based questions. I think that the metacognitive skills of the students are not developed enough because these types of questions are encountered from an early age. Even though the students' ability to remember, comprehend and apply these kinds of questions in the last year, that is, in the exam year, they have difficulty in reasoning because their analytical thinking skills have not progressed sufficiently." TM4
>
> "Students are not active in solving questions because their prior knowledge is insufficient. The weak foundation takes the form of an impossible problem, which progresses with the child's lack of knowledge at each level. The tests in the book are very inadequate and do not match the required skill level." TF7

According to the teachers' opinions, students' willingness to study by rote, not wanting to tire their minds, and getting used to the ready is a critical obstacle for them to acquire high-level thinking skills such as analytical thinking. The fact that students have not acquired the essential skills that enable high-level thinking before secondary school makes it difficult to think analytically in the secondary school process. This is especially true in solving non-routine problems. Students' deficiencies in basic mathematical knowledge and skills also prevent the acquisition of analytical thinking skills.

Discussion

This research aims to examine teachers' opinions and experiences about the level of gaining analytical thinking skills in the secondary school mathematics curriculum. The research was carried out with the voluntary participation of eight mathematics teachers working in public secondary schools in the central district of Bursa. The criterion sampling method was used because the participants in the study should have experiences with the researched phenomenon. In the selection of the participants, it was taken into account that they had experience with the curriculum, had at least five years of professional experience, and had received in-service training on the curriculum. The opinions and experiences of the teachers about the curriculum were obtained by using a semi-structured interview form. The data were analyzed by content analysis, and themes were created.

When the teachers' opinions about the level of gaining analytical thinking skills in the mathematics curriculum were evaluated, it was determined that the teachers emphasized that the curriculum was insufficient. According to the teachers' views, there are no targets for directly gaining analytical thinking skills in the secondary school mathematics curriculum. It has been stated that the subjects and concepts in the program are insufficient for gaining analytical thinking skills. There is a dominant opinion among teachers that the subjects remain at the level of gaining fundamental knowledge and skills. Although the program aims to develop students' higher-order thinking skills, it does not provide a clear roadmap on how to do this. When the secondary school mathematics curriculum is examined, it is understood that the program aims to gain high-level thinking skills (MoNE, 2018). However, there are different approaches to teaching thinking skills. These approaches can be general, infusion, embedded, and mixed (Ennis, 1989). In the general approach, skills are taught separately and expressly from the content of the current subject. The infusion approach aims to integrate the skills to be taught into the subject

teaching. In the embedded approach, on the other hand, the principles and practices related to the skills are not taught explicitly; they are gained indirectly. In the mixed approach, on the other hand, the general, infusion, or embedded approach is preferred depending on the situation in teaching skills. It can be said that the embedded approach is preferred in the secondary school mathematics curriculum. The program aimed to indirectly provide students with high-level thinking skills, such as analytical thinking, in line with the views and experiences of teachers. On the other hand, the program has no explanation on how to teach analytical thinking skills, even if indirectly. Teachers need to receive in-service training to gain high-level thinking skills. Different studies have also revealed that teachers need in-service training to understand the curriculum better (Çiftçi & Tatar, 2015; Karcı, 2012).

This study evaluated teachers' views on the program's applications to gain analytical thinking skills. It was determined that the teachers included the applications that were included in the program and those that were not. According to teachers' opinions, leaving students alone with non-routine questions supports their analytical thinking skills. The questions asked within the scope of the high school entrance exam and specified as the new generation questions require high-level thinking skills. Many teachers encourage students to solve non-routine problems, which they describe as the new generation. In the literature, it has been recommended to use non-routine problems to develop higher-order thinking skills in mathematics (Arifin, Putri & Hartono, 2021; Fortes & Andrade, 2019; Khaerudin, Praja & Sulaeman, 2021; Maharani et al., 2019). In this respect, it can be said that the teacher's method is appropriate. Another method that teachers use to gain analytical thinking skills is modeling. Modeling helps embody the analytical thinking process. In addition, since conceptual development has just begun in the secondary school period (Senemoğlu, 2003), using the modeling technique can help develop analytical thinking skills. In this respect, it can be said that a large proportion of teachers prefer to use this technique.

Teachers' views on the problems and activities in the textbooks were also evaluated to gain analytical thinking skills. According to the teachers' opinions and experiences, the mathematics textbooks' questions and activities are unsuitable for gaining analytical thinking skills. The teachers stated that the problems and activities in the textbooks were mostly at the level of remembering, comprehension and application. It has been stated that problems and activities that support high-level thinking skills, such as analytical thinking, should be added to the textbooks. In the literature, in studies examining official mathematics textbooks, problem-posing activities were not evenly distributed according to learning areas. All problem-posing types were not included (Çimen & Yıldız, 2017), high-level questions were not included according to the PISA mathematics proficiency scale (Şaban, 2019), Bloom According to the taxonomy, most of the questions measure low-level cognitive skills (Üredi & Ulum, 2020). They are fragile in gaining mathematical competence and skills (Akkaya, 2016). Mathematics textbooks should be developed with practices and activities to develop high-level thinking skills.

Within the scope of the research, the teachers' opinions about the level of gaining the analytical thinking skills of the students who achieved the achievements in the program were also examined. According to the teachers' views, the achievements in the program do not go beyond the level of practice. In this regard, it was stated that the analytical thinking skills of the students who achieved these achievements were not sufficiently developed. In addition, the explanations of the achievements do not guide the teachers on how to gain high-level thinking skills.

Teachers recommended that non-routine problems and activities be used together with the achievements in the curriculum to support students' higher-order thinking skills. Teachers' opinions are consistent with the results of studies in the literature. Aktan (2020) stated that the achievements in the mathematics curriculum focus on low-level steps such as application, understanding, and remembering. Erbaş (2021) determined that few of the achievements in the mathematics curriculum and the questions in the textbooks are found in the extended abstract level, which is the highest level according to the SOLO taxonomy. Çelik, Kul, and Çalık Uzun (2018) stated that according to the revised Bloom's taxonomy, a large proportion of the achievements in the mathematics curriculum are found in the cognitive process dimension in the understanding and application steps, and the knowledge dimension in the conceptual and procedural knowledge steps. Yorulmaz, Çekirdekçi, and Önal (2021) stated that the number of acquisitions for high-level thinking skills, such as creative thinking, is insufficient in the mathematics curriculum. The research and results of this study indicate that the achievements in the current mathematics curriculum are insufficient for gaining high-level thinking skills.

The teachers' opinions about the suitability of the applications that require analytical thinking skills in the curriculum to the student's readiness levels were also evaluated. The teachers stated that the applications in the textbooks were prepared to assume that every student would learn at the same pace and similarly. A large proportion of the applications are aimed at gaining essential skills. Curriculums and textbooks do not meet the needs of students who want to develop their analytical thinking skills. However, the teachers also mentioned the student-based factors that hinder teaching analytical thinking skills. Teachers stated that students' wanting to work by rote, not wanting to tire their minds, and getting used to the ready-made makes it difficult for them to acquire high-level thinking skills such as analytical thinking. In addition, the fact that students did not acquire the essential skills that enable high-level thinking before secondary school makes it difficult for them to think analytically in the secondary school process. This is especially true when solving non-routine problems. In addition, students' deficiencies in basic mathematical knowledge and skills make it difficult to think at a higher level. Teacher views and experiences are consistent with the results of studies in the literature. Arslan and Özpınar (2009) stated that students' prior knowledge is not considered sufficiently in the mathematics curriculum, and there is a disconnection between the units. Tekalmaz (2019) stated that teachers have criticisms that students' readiness levels are not taken into account sufficiently in the mathematics curriculum. Demir and Akar Vural (2017) stated that teachers struggle with some problems conveying the mathematical competence and skills that the curriculum aims to provide students. These problems are; The exam system is listed as having insufficient time to complete the program, and the student's readiness level is inappropriate. The research and the results obtained in this study revealed that the readiness problems arising from the curriculum, textbook, and students make it challenging to acquire analytical thinking skills in mathematics teaching.

Conclusions

When the teachers' opinions about the level of gaining analytical thinking skills in the mathematics curriculum are evaluated in general, it is understood that the teachers mainly emphasize that the program is insufficient. According to the teachers' opinions and experiences, the mathematics textbooks' questions and activities are unsuitable for gaining analytical thinking skills. The gains in the program do not go beyond the application level.

In this regard, it was stated by the teachers that the analytical thinking skills of the students who achieved these achievements were not sufficiently developed. In addition, the explanations of the achievements do not guide the teachers on how to gain high-level thinking skills.

It has been determined that teachers include applications that are included or not in the program in order to improve their analytical thinking skills. When the opinions obtained are evaluated, leaving students alone with non-routine questions supports their analytical thinking skills. In addition, the modeling technique helps to embody the analytical thinking process. The teachers stated that the applications in the textbooks were prepared to assume that every student would learn at the same pace and similarly. In addition, it was stated that student's willingness to work by rote, not wanting to tire their minds, and getting used to the ready-made makes it difficult for them to acquire high-level skills such as analytical thinking. In addition, the fact that students did not acquire the basic skills necessary for higher-order thinking before secondary school makes it difficult for them to think analytically during secondary school.

Recommendations

Acquisitions aiming to teach high-level thinking skills, such as analytical thinking skills, directly or indirectly can be added to the curriculum. It is advisable to increase the number of non-routine questions in textbooks. More attention can be paid to ordering activities and questions in the textbooks from simple to complex. Teaching students' different methods and techniques for solving non-routine questions can directly support the development of analytical thinking skills. Teachers can receive in-service training on developing non-routine problems. In addition, teachers should encourage students to solve non-routine problems.

This research has some limitations. The ages of the teachers, whose opinions were taken about the level of gaining analytical thinking skills in the mathematics curriculum, ranged from 35 to 41. In order to evaluate the curriculum, studies with the participation of more experienced teachers can be conducted. This study examined the level of acquiring analytical thinking skills in the curriculum. With different studies, the level of acquiring high-level thinking skills, such as critical and creative thinking, in the curriculum can be examined. In addition, the level of questioning and the higher-order thinking skills of the questions teachers use in their exams can be investigated.

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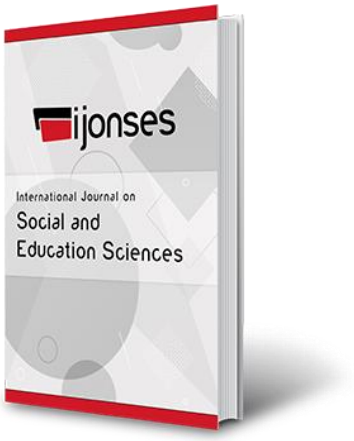

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Using Digital Customer Communities as a Marketing Tool to Connect and Educate Customers in the Manufacturing Industry

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Abstract

The application of digital customer communities has been observed over the past years but primarily in the business-to-consumer sector. The COVID-19 crisis has affected positively the usage of digital tools in business-to-business, including customer communities. A digital customer community aims to connect individuals and share information between them. It has therewith a positive effect on the trust, loyalty and behavior of customers. The present study reviewed scholarly databases in an attempt to ascertain the current knowledge on the use and relevance of digital customer communities. Several studies have discussed the advantages of using digital customer communities in e-commerce, brand management or business cooperation, but a framework supporting the application of digital customer communities is lacking. The present study used content analysis to examine the existing academic knowledge. It recommends answering the three questions "What does the digital transformation change?", "Why use customer communities?" and "What drives the customer experience?" when starting to consider using digital customer communities in business-to-consumer.

Introduction

Digitalisation is the challenge of the 21st century. During the COVID-19, crisis the speed at which business-to-business (B2B) companies have been using technology has increased dramatically (Ossiannilsson, 2020), and information technology has been used during the crisis to support organisations in improving process resilience (Remko, 2020). Before COVID-19, most B2B customer engagement was typically based on face-to-face meetings (Barari et al., 2020).

The manufacturing industry is one of the largest industries in the European Union (Eurostat, 2018), and it has been hypothesised that digital customer communities are not being heavily used as marketing tools to connect and educate customers within it (Chae et al., 2019; Orji et al., 2020). Digital media elements, such as social media, chats or videos, are well accepted as tools in customer communication, and the COVID-19 crisis has shaped the overall usage in a positive way (Bond et al., 2018; Klein & Todesco, 2021)

Using cooperation to generate value as well as to share risks or costs between partners is a well-known approach in managerial practice and in the academic literature. In the future, joint efforts and cooperation may receive more

attention. Customers and suppliers work together towards a joint target; this requires trust between the business partners and the individuals. The management of customer expectations and customer experiences thus moves in a new light for B2B organisations also (Rose et al., 2021). The use of communities in business is not a new phenomenon (Holtkamp & Bange, 2020), but lockdowns forced B2B organisations to change their day-to-day business practices which affected the acceptance of digital media elements, such as social media (Hu, 2021). Social media offers new ways of working with partners and how information is shared and customers are connected or educated (Chaker et al., 2022).

Engagement of Customers

Customer engagement means the commitment of an individual customer, and the better it is, the better the actual relationship between customer and supplier (Barari et al., 2020; Zhang & Du, 2020). It is understood to be a key success factor in achieving a successful long-term customer relationship. The engagement of a customer is critical for business success as a connection between actual customer engagement and the profitability of a customer (Harvard Business Review, 2014).

Customer engagement has received more attention in the most recent years of the digital transformation in the business environment. Customers used to be passive receivers of information in the relationship between supplier and customer. Through the ongoing digital transformation, the relationship of supplier and customer has developed. Today, the customer is often a value co-creator and has become an important as well influenceable element in the new product development and service innovation process (Rasool et al., 2020).
Different approaches are identified in the academic literature calculating customer engagement. In the study "The influence of brand experience and service quality on customer engagement", the four dimensions of purchase engagement, referral engagement, influence value engagement and knowledge engagement are used to measure customer engagement (Prentice et al., 2019).

Customer engagement affects several components in the overall customer relationship model between a supplier and a customer, including trust, loyalty monetary evaluations, self-connection and intrinsic enjoyment (Li et al., 2020; Thakur, 2018). Furthermore, customer engagement is affected by actual customer satisfaction (Thakur, 2018). Thakur thus recommends to "put in place initiatives to increase customer engagement. Customer engagement arises out of experiencing the retail environment repeatedly" (2018, p. 57). The quality of service seems to be a universal condition for successful customer engagement (Prentice et al., 2019). The use of the two terms customer satisfaction and customer experience should be mentioned, as these terms are often used simultaneously in the academic literature (Prentice et al., 2019; Thakur, 2018). Customer experience means typically everything related to a supplier that affects the actual customer's perception and feelings about this supplier. Its core focus is the existing relationship between a supplier and a customer. It therefore includes all interactions between the two parties regardless how brief, intensive or successful the single interaction is. An essential component of customer experience management is to recognise the customer as an individual and to manage the customer in such a way. The management of many customer simultaneously seems to not be the intention of successful customer experience management (Kreutzer, 2018).

Managing customers individually and recognising them as co-creators in the value creation process leads to the need to form customer communities. The participation of customers in such a customer community leads to improved customer relationships and affects actual customer engagement (Algesheimer et al., 2010). A customer community is a place where different individual customers can connect. Its purpose is to enable customers to have conversations, answer questions and share ideas or information. It is also an additional service offered to customers by suppliers (Beckers et al., 2018). A customer community is furthermore a source of innovations of suppliers and a way to create or strength a connection or a context between individuals as well as business organizations (Weissenfeld et al., 2020).

An increase in the use of technology in B2B relations affects the relevance of digital customer communities (Adam et al., 2020) because of a higher degree of complexity in managing customers individually and its positive effect on customer behaviour. Independently of the location and the use of digital media devices, customers are able to exchange and share experiences (Weissenfeld et al., 2020).

Digital customer communities gain in importance as customer feedback on brands, supplier loyalty or ratings are more trustable. Customers have started, especially enabled through social media, to exchange views about their supplier experiences and exactions. That this has a very strong business-to-consumer (B2C) perspective but is also valid for the customer and supplier relationship in the B2B environment (von Rüden et al., 2020) needs to be taken into account. Customer communities can be used to build business-oriented objectives, such as customer awareness, image and new customer acquisition (Holtkamp & Bange, 2020). Customer communities have also the potential to increase the likelihood of positive customer reviews and post-purchase activities (Wu et al., 2018). Xue and Wang's (2021) study showed that customer communities have the potential to positively affect customer loyalty and related profits. The management and maintenance of customer communities thus become important marketing tools beyond being a way to allow customers to rate products or provide feedback. It has a strong potential to positively support and enhance the sales activities of a business.

Customer communities have become an essential factor in customer experience management and a touchpoint along the customer journey. The customer journey itself has received increased attention in the B2C and B2B business world during the recent years of the digital transformation (von Rüden et al., 2020; Zimmermann & Westermann, 2020). Often discussed in the academic literature is the use of social media to connect with individual customers. Customer communities are used to share information, to improve the actual customer experience or to understand the customer needs (Wibowo et al., 2021).

The management of customer communities is extremely dependent on the business of the supplier. Well known are the customer communities for the B2C business, such as clothes, food products or other consumer goods. Using and managing customer communities in the B2C environment is very similar, independently of the consumer goods sold. Often the establishment of a customer community is also used to promote a lifestyle or other customer experience to enhance marketing efforts and get customers closer to the business (Rowley et al., 2007). This is different in the B2B environment. Here which product is sold and whether the products can be similarly presented to the customer, like consumer goods, needs to be considered. This might be, for example,

software solutions (Holmström, 2004). A strong benefit of customer communities in the B2B environment seems to be in value co-creation. Customers can be cooperatively integrated into the process of value creation in order to share risks or combine skills (Novandalina et al., 2022).

Method

The engagement of customers and the usage of digital customer communities as a marketing element are discussed extensively in the literature. The COVID-19 crisis has increased the need for new ways to connect B2B professionals via any kind of communication as well as for the management of the actual customer engagement. This research study intends to understand the relevance of digital customer communities as a marketing tool in the manufacturing industry. As a primarily research approach for the data collection and evaluation, content analysis was used. This research study followed a stepwise process based on the "Preferred reporting items for systematic reviews" (Moher et al., 2009). In the research study "A systematic literature review and meta-analysis: The theory of planned behavior's application to understand and predict nutrition-related behaviors in youth", this approach was successfully used and is therefore used as a references for this study's similar research approach (Riebl et al., 2015).

To understand the relevance of digital customer communities as a marketing tool, the explicit aim of this research study is to gather the most current academic knowledge about customer communities in the B2B environment. On 8 March 2022, therefore, the scholarly databases ScienceDirect, Wiley and Emerald were used to search for research articles and journals. A search related to the occurrence of the terms "digital customer communities manufacturing industry" and "digital B2B customer communities" was undertaken. The verification of the literature found was based on the publication's title, abstract and keywords. As the digital transformation is a fast ongoing occurrence and therefore to capture only the most recent and relevant academic knowledge about digital customer communities, published research studies since 2018 were taken into further consideration. In addition, only journals and research articles were selected as publications with current academic knowledge. The process of publication identification included research papers discussing models, frameworks, platforms and customer experiences.

From the search results of the scholarly databases ScienceDirect, Wiley and Emerald, the first 100 search results were systematically reviewed to verify their suitability for consideration as a source of current academic knowledge. The first fit-for-relevance scan of the search results was done by title. Of the publications evaluated as relevant for the research aim, the abstract and main content were reviewed. The quality of the relevance of such publications considered was analysed through reviewing the scope of each individual publication and its managerial implications.

This research study was designed to answer the following two research question:

RQ1: How are digital customer communities used in the manufacturing industry?

RQ2: Which elements affect the benefits of digital customer communities?

With these research questions, it is on the one hand expected that it will be possible to identify the elements required to develop a digital customer community and on the other hand to understand better how digital customer communities can be organised. The benefits of digital customer communities are seen as the driver to implement and maintain such communities. These research questions were developed to explore the known benefits of digital customer communities in the manufacturing industry as well as to understand existing frameworks or models supporting the usage of digital customer communities. To answer these research questions, publications discussing the most current practices and new ways of connecting customers for communication purposes were considered.

Results

In total the online library search identified 7.944 publications (journals and research articles) in the he scholarly databases ScienceDirect, Wiley and Emerald. The results are given using the search terms “digital customer communities manufacturing industry” and “digital B2B customer communities”.

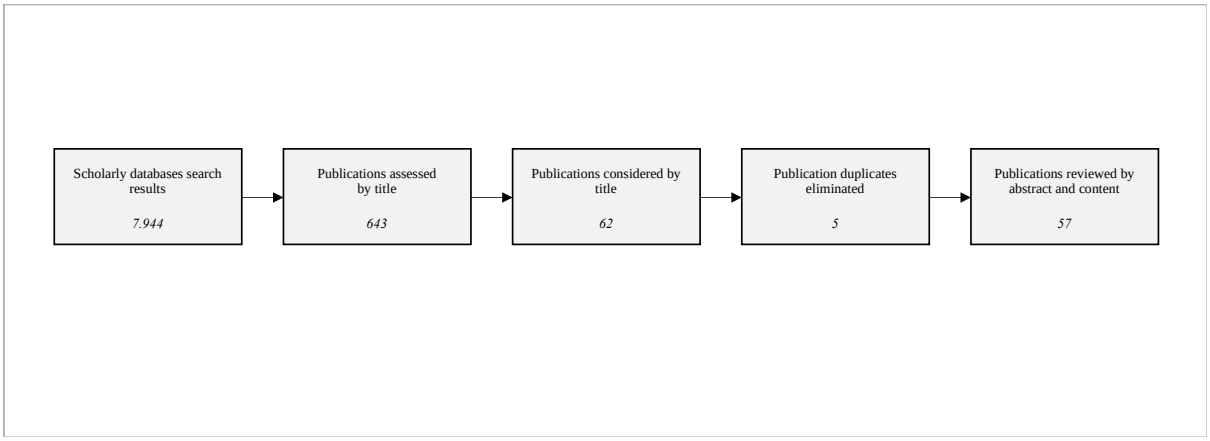

Figure 1. Identification Steps

The medium-large number of search results indicates that the topic has been discussed in the academic literature, but it has not evaluated deeply. To answer the research question, 643 publications were assessed by title to gain an overview of the topic in scope. A detailed review of all search results was not seen as relevant for the defined scope of this research study.

After assessing the 643 publications by title, 62 publications were taken forward for a detailed abstract and content review process. Only five duplicates between the scholarly databases ScienceDirect, Wiley Online Library and Emerald were identified and excluded from the detailed review. 57 publications were reviewed by abstract and content in detail (Figure 1).

The study’s findings showed that the scholarly databases ScienceDirect and Emerald publish more academic literature discussing digital customer communities in B2B than Wiley Online Library (Figure 2). The topic of digital customer communities has received a certain level of academic attention, but it seems that a more specific search is more successful than a broader search term. The term “manufacturing industry” appears to be more

relevant in the evaluation compared to the term “B2B”.

In total 6,531 publications in the scholarly databases ScienceDirect, Emerald and Wiley Online Library were found with the search term “digital customer communities manufacturing industry” compared to only 1,413 publications for the search term “digital B2B customer communities”. Wiley Online Library appears to be the publisher with the lowest impact on the topic, while ScienceDirect and Emerald are show more relevant search results.

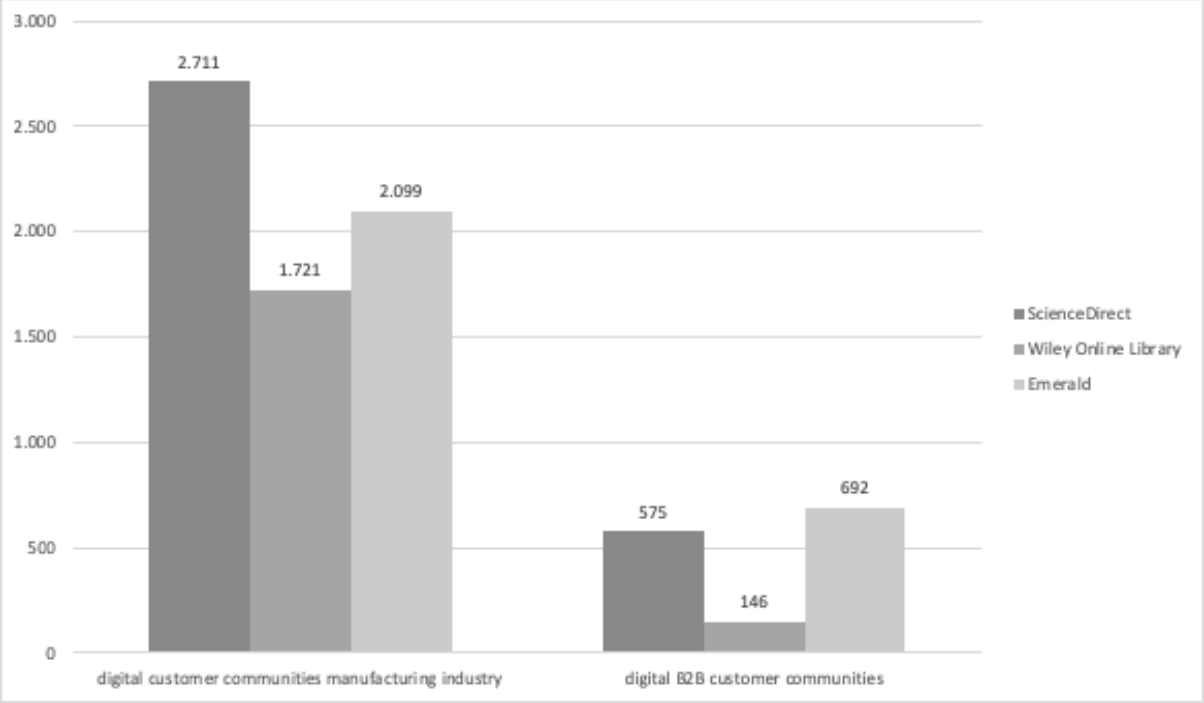

Figure 2. Scholarly Database Search Results

The in details reviewed 57 publications showed a relatively even spread for the years 2018, 2019 and 2020, while 2020 already indicated a small increase in publications (Figure 3). A massive increase in publications identified was found for the year 2021. The drop in 2022 might be explained by the search being executed on 8 March 2022. However, this limited view of 2022 with 7 publications already shows almost as many publications as in 2018 (10), 2019 (9) and 2020 (12).

The increase in 2021 might be explained by the COVID-19 crisis, which led to lockdowns and home-office situations in almost all countries around the world. This crisis has increased the speed at which technology is used in business circumstances, such as digital customer engagement and management. In the second half of the 20th century, the acceptance and usage of digital marketing, such as social media or videos, increased significantly, which also affected the customer engagement in B2B and the community management of B2B organizations (Rakshit et al., 2021; Tajvidi & Tajvidi, 2021). This might have changed the real-world B2B circumstances and academic researchers have been able to collect new and additional insights about digital customer communities for the manufacturing industry.

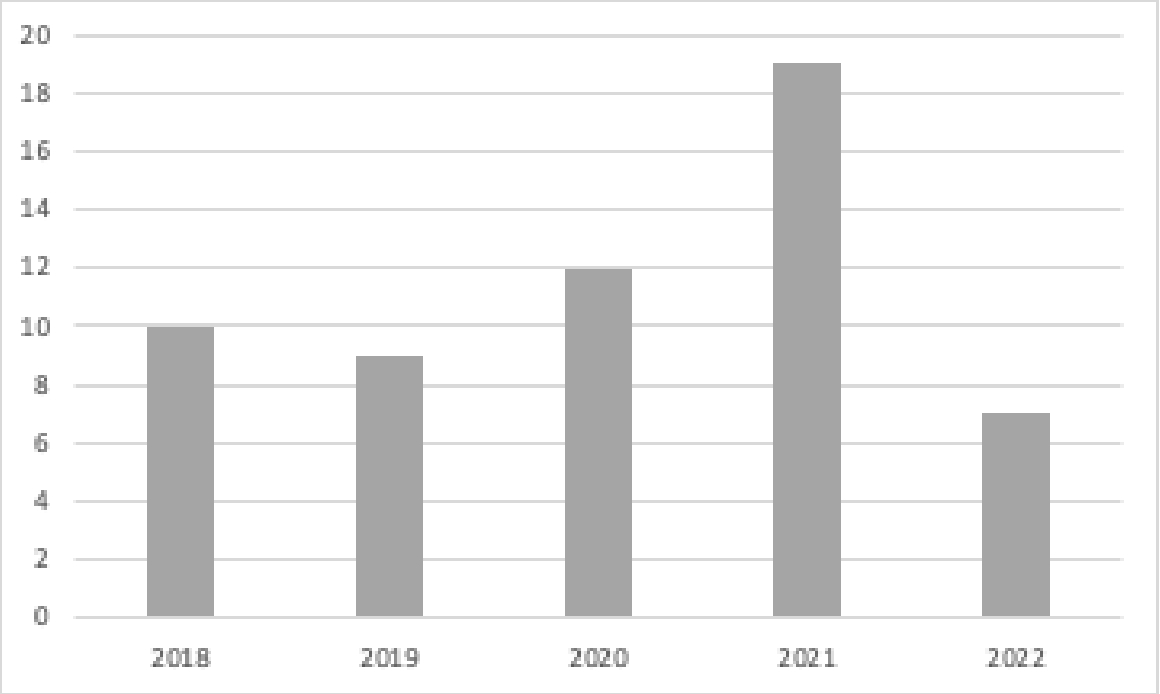

Figure 3. Identified Publications by Year

Discussion

During the detailed review process of the identified academic publications, it was found that social media is one of the dominating elements in discussions related to using, establishing or benefiting from digital customer communities. It seems that there is a strong relation between customers' social media activities and participation in a digital customer community. Social media is used to connect and to share information, for example for education purposes, between individuals and also in the B2B environment. The purpose of a digital customer community is seen as affecting customer engagement positively through supporting customers, for instance through online reviews after purchase (Bowen et al., 2021; Wu et al., 2018). Social media activities and digital customer community involvement have in common to share information and to connect individuals, which explains its close relationship (Beckers et al., 2018).

In addition to the increased importance of networks in today's B2B relationships, the adoption of platforms has received a higher level of importance. Platforms can be used to manage the complexity of solution networks in order to affect the customer experience positively. Platforms may offer the opportunity to connect customers in B2B environments to acquire knowledge or receive information from others (Wei et al., 2019). Social media platforms are especially established and used for communication, to share information as well as to create digital communities (Michaelidou et al., 2011). This explains additionally the strong relation between social media and customer communities in the B2B real-world and in the discussions in the academic literature.

From this perspective, in the paper entitled "Sharing is the name of the game: Exploring the role of social media communication practices on B2B customer relationships in the life sciences industry" by Rose et al. (2021), it is shown that customer-to-customer relations in the B2B environment positively benefit from brand communities.

They found a stronger level of trust between suppliers and customers. Marketing efforts may need to be adjusted, allowing the use of social media in B2B business activities to form and create customer communities to achieve an increased level of trust.

A common understanding in the existing academic literature seems to be that a digital customer community in the B2B environment can focus on a specific customer target group, like B2C communities (Chaker et al., 2022). Organisations active in the manufacturing industry typically serve a wide range of different customers, requiring different information or activities to operate in a digital customer community (Veile et al., 2020). Important to note is that B2B organisations have the opportunity and freedom to operate multiple digital customer communities organised for a specific customer target group.

The work of Mohapatra et al. (2021) explored the key factors impacting the manufacturing industry during the COVID-19 crisis. They found that big data is one of the advanced digital technologies that can be used to overcome the constraints of the COVID-19 restrictions. Digital customer communities have the potential to deliver additional and useful data used for big data analytics. Digital customer communities should not be underestimated as a source for customer data with respect to long-term benefits from using big data (Hofacker et al., 2020).

Discussion about B2C or brand communities seem to dominate the academic literature, whereas some recent academic publications have investigated customer community management, specifically under the umbrella of social media use. The research study of Chaker et al. (2022) found "that for inside salespeople, social media communities are one essential way to overcome limitations to being confined to a remote location and unable to visit their customers in person" (p. 134). Furthermore, they pointed out that on the one hand digital customer communities have the potential to boost sales activities through connecting to sales prospects or existing customers, whereas on the other hand, communities are used to network and build social connections with customers or other business partners. This shows the wide range of opportunities that digital customer communities may have and that they may add additional benefits to the business.

In the reviewed academic publications, it seems that the approach to creating or maintaining B2B digital customer communities is seldom explored, evaluated or discussed. A reason for this might be that B2B organizations are not yet deeply familiar with the benefits of using customer communities so that, for instance, case studies can be academically studied. As mentioned earlier, there seems to be a good and developed understanding of social media use in B2B environments, but the link to a truly managed digital customer communities has not been found in the most recent academic literature. There are academic publications in the more recent studies from 2012 or earlier (for example (Agnihotri et al., 2012)) that discuss B2B customer communities. This research study has specifically focused on the most recent years, starting in 2018. The COVID-19 crisis has affected positively the usage of digital tools, and organisations may be more open adopting digital customer communities today.

In the academic literature there seem to be a common understanding that digital marketing efforts and objectives in the B2B environment will change in the near and long-term future. The work from Hofacker et al. (2020) found

that seven areas are shaping the future of B2B relationships. These areas are coopetition, value co-creation, B2B branding, servitisation, innovation networks, relationship dynamics and power and trust. These seven areas have in common that customers and suppliers move closer together in their actual relationship. Whether this is through cooperation in developing new products or an increased link between B2B organizations to meet customer needs. Digital customer communities might be a critical element in this future business transformation, allowing individuals to connect to each other, to share information or to provide educationally relevant aspects.

Proposed Framework for Digital Customer Communities

The academic literature agrees that the digital customer community may be feasibly used to affect actual customer engagement. Less discussed in the academic literature is how to structure and manage digital customer communities, especially in the manufacturing industry. It appears that the focus of the academic literature is the exploration and the understanding of the benefits of digital customer communities, such as customer loyalty.

A positive side effect of the COVID-19 crisis might be seen in the acceptance of digital working behaviours across individuals and within the manufacturing B2B industry. Individuals and B2B organizations in the manufacturing industry have started adopting and using digital media elements, such as social media, more heavily since lockdowns forced almost the whole world to stay home (Klein & Todesco, 2021; Ossiannilsson, 2020). To support managerial staff in manufacturing industries considering digital customer communities in their day-to-day practices and constructing such, three questions are recommended to be discussed in order to benefit from such digital customer communities. Such questions shall function as an umbrella for the introduction of digital customer communities.

1. What does the digital transformation change?

The ways individuals work with each other, share knowledge, network and socialise are fundamentally different in the digital century (Rose et al., 2021; Wu et al., 2018). The employment of younger employees may bring new expectations regarding the usage of digital-technology-based solutions to day-to-day practices. In addition, the digital transformation allows manufacturing organisations to collect new data and draw new insights from it.

2. Why use customer communities?

The use of customer communities is recommended as an area to be considered to affect the level of customer trust and loyalty in the B2B environment (Rose et al., 2021). Offering customers an opportunity to share information, help each other and initiate co-created value seems to be a future trend. A digital customer community is the platform establishing the foundation to enable the B2B organizations' employees to work this way.

3. What drives the customer experience?

Trust plays a core role in customer experience management, and digital customer communities have the potential

to positively affect the trust of customers (Chaker et al., 2022). The advantage of digital customer communities is seen in providing and sharing new or additional information with customers, with respect to the business relationship. Digital communities are an efficient way to connect and educate customers.

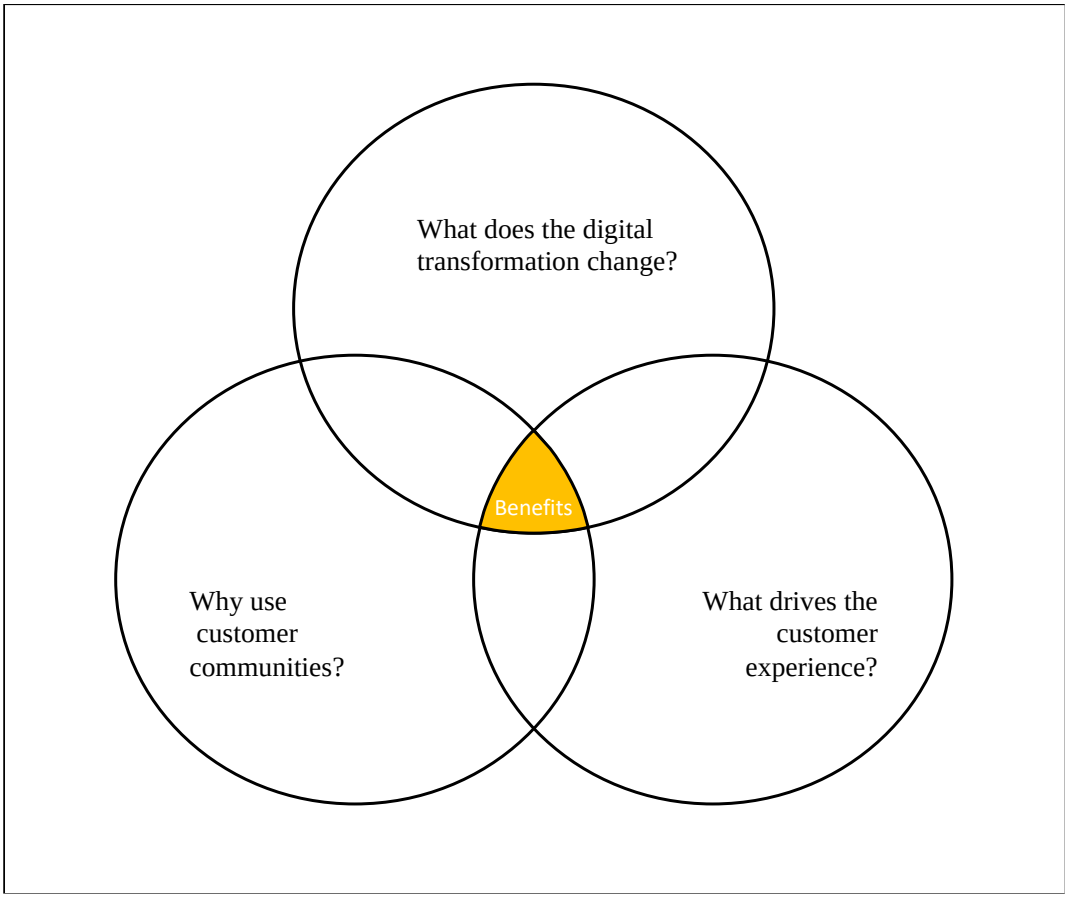

Figure 4. Recommended Areas for Discussion

The proposed framework is intended to provide an overview of how digital customer communities can be formed or prepared. This may lead to the need to develop new and additional skills on the part of the individuals maintaining the digital customer communities as well as of the B2B organizations attempting to operate the digital customer community (Beverungen et al., 2020). This proposed framework is not in contrast to the other academic knowledge debating the benefits of digital customer communities; it is seen instead as an extension. In answering these three questions, managerial staff have set the fundament to position the digital customer community.

Limitations and Future Research

This research has its key limitations in the relatively small number of journals and research articles analysed after the identification process. This limitation is accepted because of the number of reviewed publications by title to understand the relevance of the topic and to validate the opportunity to establish a framework. It seems that B2B customer communities were discussed before 2018, and future research is recommended to compare knowledge about B2B customer communities.

The objective of this research study was to understand the most current academic knowledge published in recent years to establish key areas for the proposed framework. The proposed framework intends to support future research focusing on an approach to establishing digital customer communities in the manufacturing industry. More research is needed to understand the long-term implications of digital customer communities on the sales and marketing presence in the manufacturing industry.

Conclusion

This research study has provided a brief overview of the current academic knowledge regarding the use of digital customer communities in the manufacturing industry. It has attempted to understand the relevance of digital customer communities for the relationship between supplier and customer, also in a post-COVID-19 time. It also outlines that in the future cooperation between customers and suppliers should receive more attention for the value-creation process. Digital customer communities might be an appropriate way to organise such joint efforts.

It is deemed relevant to discuss three main questions organising digital customer communities, which are "What does the digital transformation change?", "Why use customer communities?" and "What drives the customer experience?" These questions are an attempt to support managerial staff considering setting up digital customer communities. The proposed framework, which offers an umbrella for the use of digital customer communities, might be used by researchers who wish to explore the subject further.

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Examination of Mobbing Exposure of Physical Education and Branch Teachers and Organizational Silence Levels

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Examination of Mobbing Exposure of Physical Education and Branch Teachers and Organizational Silence Levels

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Abstract

In this study, it was aimed to comparatively examine the levels of exposure to mobbing of physical education and branch teachers and organizational silence in terms of some variables. In the study, based on the comparative relational screening method, the levels of physical education and branch teachers' exposure to mobbing and organizational silence were compared according to the variables of gender, age, professional seniority, school level and school type. The sample of the research consists of 212 physical education and branch teachers working in Konya. Organizational Silence Scale and Negative Behaviours Questionnaire were used to collect research data. According to the research findings, physical education and branch teachers' exposure to mobbing and organizational silence levels show significant differences according to branch, gender, age and school type. In addition, there is a significant positive relationship between physical education and branch teachers' mobbing exposure and organizational silence levels. This research aimed to test the effects of mobbing and silence, which affect productivity and performance, on branch teachers, physical education and sports teachers. The fact that the research findings are based on quantitative data is an important limitation of the study.

Introduction

One of the most important social institutions in a society is the educational institution. On the other hand, the most important input of an organization is the human. Although the organization has the structural physical and economic conditions for effectiveness it is not possible to achieve institutional success if the necessary attention is not given to the person responsible for the operation of the system. If the problems and expectations of teachers in schools are not taken into account, it may not be possible for that system to work efficiently (Kara, 2020; Kibici, 2021; Sarikaya, 2021; Sokmen & Kilic, 2019).

Human input becomes more important in educational organizations because in other organizations, the human element is less involved at any stage of the system's input-process-output cycle. In fact, this is sometimes negligible in organizations based on automation. However, there is a human element at every stage of the input-process-output cycle of educational organizations. Its input is student, processor is teacher, output is qualified workforce. In addition, what the student gains is behavioural change. So, the most important thing in educational

organizations is human and behaviour as product. The extent to which teachers' duties are carried out effectively is related to the quality of the working environment. The concept of sense of work environment is discussed under the name of organizational effectiveness, environment, climate, organizational ideology, ecological field and organizational knowledge (Hoy et al., 1991). Depending on the characteristics of the working environment, teachers' sense of working environment can affect their working style. One of the factors that form the basis of teachers' working environment feelings is teachers' interests and attitudes towards objects in the working environment (profession, work, colleagues, student, school). In this sense, it is possible for teachers to show an activity according to the importance they give to these objects and the quality of their relationship with them (Kaleli, 2020; Kasimoglu, 2021; Reichenberg & Lofgren, 2019; Sokmen & Kilic, 2019). So, two of the most important phenomena that negatively affect the employee's interest in the objects in the working environment are mobbing and organizational silence.

The phenomenon of mobbing is considered to be an action or behaviour that refers to an employee or includes continuous and long-term harassment or intimidation of that employee. This phenomenon causes significant negative consequences in the workplace but most important of all are the consequences that are devastating for the victims (Vveinhardt & Sroka, 2020). Mobbing in the workplace refers to situations such as verbal abuse, offensive words, sarcasm, slander or social isolation that repeatedly target a specific person in a specific time period (Einarsen, 2000; Tatar & Yüksel, 2019). Mobbing is systematic aggression towards a person or group and is different from individual, temporary interpersonal conflicts (Rayner et al., 2006). Long-term exposure to persistent negative activities that the individual has difficulty in coping with is a basic feature of mobbing (Tatar & Yüksel, 2019). It can be said that conflicts are practically inevitable in any organization. However, since satisfactory working conditions are key to the psychological health of employees, management has a duty to both resolve them promptly and prevent psychological abuse from occurring in order to prevent it (Soljan et al., 2008). Conflicts that arise in the organization can create conditions for the emergence of mobbing and psychological bullying (Minárová et al., 2020). Therefore, an unhealthy organizational culture and a dysfunctional psychological climate create favourable conditions for mobbing to occur (Sroka & Vveinhardt, 2020).

Revealing occupational mobbing and stress has an important preventive role in ensuring health and safety in the workplace. Teaching is a highly prominent profession in terms of mental and emotional workload. Work-related mobbing in the education sector and the resulting stress are increasing day by day due to higher job requirements and personal demands (Skaalvik & Skaalvik, 2018). There are many negative features associated with the teaching profession (Čecho et al., 2019). Teachers' mental health is affected by mobbing, daily conflicts, life-changing events, daily challenges and cumulative factors at the macro level. Therefore, teacher boredom, professional silence and overload trigger a higher risk of burnout (Rentzou, 2015). The mobbing that teachers are exposed to and the resulting organizational silence can negatively affect the interaction between teachers at school, teacher-student communication, the quality of work and teachers' perception of their profession. Being exposed to excessive mobbing can cause teachers to drop out of school with low achievement and is among the problems that can affect school efficiency. Teachers who are exposed to mobbing may cause the school to deviate from its teaching purpose by showing passive behaviour in the working environment. Such negative situations may result in the teacher directing his students to develop behaviours outside the purpose of education and school in the

classroom environment. It may not be possible to control or realize these attitudes that trigger each other, because it is not easy to evaluate the product objectively in education, and it is not possible to immediately observe the mobbing caused by negative attitudes and behaviours towards the teacher since the education process takes a long time.

Prolonged mobbing in the profession causes many potential problems such as indifference to work, absenteeism, silence and loss of performance, as well as a number of health problems (Novak et al., 2013). Teaching is a helping profession that includes mental abilities, communication skills and social interaction (Järvelin-Pasanen et al., 2018). However, mobbing against teachers causes communication conflicts to increase and teachers to take professional silence (Skaalvik & Skaalvik, 2016).

Organizational silence is the term used to refer to the collective-level phenomenon of saying or doing little in response to significant problems facing an organization or industry (Henriksen & Dayton, 2006; Morrison & Milliken, 2000). The consequence of silence, both inside and outside the education sector, is a heavy price (Millenson, 2003; Perlow & Williams, 2003). The flow of information within an organization is one of the most critical factors of the organization's success. However, hiding information is common too. Employees of any organization will likely form their own opinions in business processes and gather information about the organization's core work. Employees are often faced with the choice between voicing these ideas and observations or keeping quiet and hiding this potentially valuable information (Bagheri et al., 2012). An employee's voice can be defined as attempts to express ideas, concerns, information or opinions to people inside or outside an organization. The absence of sound is considered silence, although the motivation behind silence is the most meaningful message to analyse when considering organizational silence (Brinsfield, 2013). Through the use of purposeful silence, employees collectively withhold information that can undermine corporate growth and success (Bagheri et al., 2012). Therefore, organizational silence can be considered as a situation in which employees have seemingly valuable information, views, concerns or ideas and choose to keep this information (Christian, 2020).

Employee silence refers to situations where employees intentionally or unintentionally withhold information that may be useful to the organization of which they are a part. As a matter of fact, when there is a problem in the workplace, employees have two options: to keep quiet or to raise their voice. However, many employees prefer to remain silent because they do not want to share information that could be interpreted as negative or threatening (Milliken & Morrison, 2003). Employees often remain silent about conflicts with co-workers, disagreements over corporate decisions, potential weaknesses in business processes, illegal or dangerous behaviour, and personal complaints (Panteli & Fineman, 2005). Employee silence can often occur in organizations where communication is problematic. Employee silence is highly damaging when employees, managers, and supervisors do not meet regularly (Vakola & Bouradas, 2005). There are many different reasons for employee silence to begin in an organization. According to Colquitt and Greenberg (2005), “culture of injustice, mobbing and communication conflicts in organizations can lead to employee silence.” In other words, “in an unjust environment characterized by the organizational norm, intense supervisory control, suppression of conflict, unclear reporting structures and poorly executed performance reviews, employees choose not to be heard.”

The fact that teachers, who are among the most important determinants of the quality of education services, do not experience mobbing and organizational silence means increasing the quality of education. The results of this research will provide clues about what kind of attitudes and behaviours education decision centers should display in such situations. In summary, this research is important in terms of revealing the effects of mobbing and organizational silence that affect productivity and performance on branch teachers, physical education and sports teachers.

Method

The research was carried out by using the comparative relational screening method in order to reveal whether the levels of being exposed to mobbing and silence levels of physical education and other branch teachers differ according to their demographic and job qualifications. In this context, the participants' exposure to mobbing and organizational silence levels were examined with a relational and comparative approach according to demographic variables such as gender, age and branch, and job variables such as professional seniority, working time, type of job and working time at school.

Participant

The participants consisted of 212 teachers working at secondary and high school levels in public and private schools in the city center of Konya (see Table 1). Field research was carried out between November and December 2021.

Table 1. Distribution of Teachers by Demographic Characteristics

		N	%
Branch	Physical Education	102	48.11
	Others	110	51.88
Gender	Male	129	60.8
	Female	83	39.2
Age	21-30	72	34.0
	31-40	87	41.0
	41-50	43	20.3
	+51	10	4.7
Marital Status	Married	169	79.7
	Single	39	18.4
	Divorced	4	1.9
Year Experience at Work	1-10 Year	146	68.9
	11-20 Year	33	15.6
	+21 Year	32	15.1
Working Status	Permanent Teacher	185	87.3
	Contract Teacher	20	9.4
	Other	7	3.3
School Type	State School	108	50.9
	Private School	104	49.1
	Total	212	

According to Table 1, 102 (48.11%) of the participants were physical education teachers; 110 (51.88%) of them work as branch teachers. In terms of gender, 129 (60.8%) of the participants are male; 83 of them (39.2%) are women. 72 (34.0%) of the teachers in the sample are 21-30 years old; 87 (40.00%) 31-40 years old; 43 (20.3%) 41-50 years old; 10 (4.7%) are 51 and above. Of the participants, 169 (79.7%) are married, 39 (18.4%) are single, and 4 (1.9%) are divorced. When the sample is examined in terms of working time in the profession, 146 (68.9%) of the participants are 1-10 Years; 33 (15.6%) 11-20 years; 32 (15.1%) are found to have 21 years or more of professional seniority. 108 (50.9%) of the participants are in public schools; 104 (49.1%) work in private schools.

Data Collection Tools

Mobbing Exposure Scale

In this study, the 'Negative Behavior Scale' developed by Einarsen and Raknes (1997) and adapted into Turkish by Cemaloğlu (2007) was used to measure teachers' exposure to mobbing. The scale, which has a 2-dimensional structure (Mobbing in Social Relations-Mobbing at Work) reveals the low and high levels of mobbing exposure perception in total scores. The reliability coefficient calculated in the sub-dimension and total scores of the Negative Behaviour Scale is .97 for the Mobbing in Social Relations sub-dimension; It is determined as .91 for the sub-dimension of Mobbing on the Job.

Organizational Silence Scale

The 5-point Likert-type Organizational Silence Scale developed by Kahveci and Demirtaş (2013) is used to measure teachers' perceptions of organizational silence. The scale consists of School Environment, Emotion, Source of Silence, Administrator and Isolation sub-dimensions. The internal consistency coefficient of the Organizational Silence Scale is 0.89. The internal consistency coefficient of the sub-dimensions of the scale is .74 for School Environment, .81 for Emotion, .80 for Source of Silence, .79 for Administrator, and .83 for Isolation.

Data Analysis Techniques

Parametric statistical techniques are used in the study because the scores obtained from the physical education and other branch teachers' exposure to mobbing and silence scales in the study sample met the skewness and kurtosis values of the normal distribution assumptions (Yurt, 2011). The descriptive analysis of these participant teachers' mobbing exposure and silence levels; arithmetic mean and standard deviation; Unrelated Sample t-Test and One-Way Analysis of Variance Techniques are used to compare dependent variables with respect to other independent variables. In addition, the Multiple Regression Analysis Technique is used in the analysis of the relationship between exposure to mobbing and silence levels of physical education and other branch teachers.

Results

When Table 2 is examined, the mean scores of the participant teachers on the Mobbing Exposure Scale and its

sub-dimensions are respectively 1.63 (±0.76) in the social relations dimension, 1.64 (±0.84) in the task dimension and 1.64 (±0.87) in the total points. According to the participant opinions, it is seen that the teachers' exposure to mobbing is at a very low level. On the other hand, when the averages of the scores obtained from the Organizational Silence Scale are examined, 2.76 (±0.67) in the dimension of school environment, 3.94 (±0.87) in the dimension of emotion, 3.35 (±0.78) in the dimension of the source of silence, 4.07 (±0.83) in the dimension of the administrator, 3.60 (±0.94) in the isolation dimension and 3.54 (±0.64) in the total organizational silence scores are calculated. According to these results, it is seen that the school environment, the source of silence and the organizational silence in general of the participating teachers are at a moderate level. On the other hand, it is determined that they have a high level in the dimensions of emotion and manager-based silence.

Table 2. Descriptive Analysis Results of Research

	N	Min	Max	Mean	Std. Dev.
Social Relation	212	1.00	4.87	1.63	0.76
Work	212	1.00	4.83	1.64	0.84
Total Mobbing	212	1.00	4.85	1.64	0.77
School Environment	212	1.00	4.25	2.76	0.67
Emotion	212	1.00	5.00	3.94	0.87
Silence Source	212	1.40	5.00	3.35	0.78
Administrator	212	1.00	5.00	4.07	0.83
Isolation	212	1.00	5.00	3.60	0.97
Total Organization Silence	212	1.35	4.80	3.54	0.64

When Table 3 is examined, it is understood that the mean scores in the dimension of the source of silence of the Organizational Silence Scale of physical education and branch teachers differ significantly according to the branch ($p<0.05$). It has been observed that physical education teachers participating in the research have a higher perception of organizational silence in the dimension of the source of silence compared to branch teachers. However, no significant difference is observed in the other dimensions of the Mobbing Exposure Scale and the Organizational Silence Scale according to the branch variable.

When Table 4 is examined, there are significant gender differences in physical education teachers' social relations, job and total mobbing exposure scores according to their gender ($p<0.05$). It has been observed that male physical education teachers have the perception that they are exposed to mobbing at a higher rate compared to the average scores. No significant difference is found in the mean scores of the other branch teachers' Mobbing Exposure Scale. In terms of organizational silence of physical education teachers, significant differences are found in emotion, source of silence, isolation and total organizational silence scores according to gender. It has been observed that male physical education teachers have a higher level of organizational silence perception in these dimensions and total scores. On the other hand, in terms of organizational silence of branch teachers, a significant difference is found in emotion dimension according to gender variable ($p<0.05$). In this dimension, female branch teachers have a higher level of emotional perception compared to their male colleagues.

Table 3. Comparison of Mobbing Exposure and Organizational Silence Levels of Physical Education and Branch Teachers

	Branch	N	Mean	Std. Dev.	t	p
Social Relation	Physical Edu.	102	1.65	0.80	.37	.71
	Other Branches	110	1.61	0.73		
Work	Physical Edu.	102	1.65	0.87	.15	.88
	Other Branches	110	1.64	0.82		
Total Mobbing	Physical Edu.	102	1.65	0.82	.26	.79
	Other Branches	110	1.62	0.73		
School Environment	Physical Edu.	102	2.70	0.69	-1.22	.22
	Other Branches	110	2.81	0.65		
Emotion	Physical Edu.	102	3.93	0.90	-.15	.88
	Other Branches	110	3.95	0.84		
Silence Source	Physical Edu.	102	3.51	0.74	2.79	.01*
	Other Branches	110	3.21	0.79		
Administrator	Physical Edu.	102	4.11	0.85	.57	.57
	Other Branches	110	4.04	0.81		
Isolation	Physical Edu.	102	3.59	0.93	-.04	.97
	Other Branches	110	3.60	1.01		
Total Organization Silence	Physical Edu.	102	3.57	0.64	.51	.61
	Other Branches	110	3.52	0.65		

Table 4. Comparison of Mobbing Exposure and Organizational Silence Levels of Physical Education and Branch Teachers by Gender

		Physical Edu. Teachers				Branch Teachers			
		Mean	Std. Dev.	t	p	Mean	Std. Dev.	t	p
Social Relation	Male	1.77	0.88	2.581	.011*	1.64	0.73	.394	.694
	Female	1.32	0.38			1.58	0.73		
Work	Male	1.76	0.96	2.135	.035*	1.66	0.85	.341	.733
	Female	1.35	0.45			1.61	0.79		
Total Mobbing	Male	1.76	0.90	2.406	.018*	1.65	0.74	.387	.699
	Female	1.33	0.40			1.60	0.73		
School Environment	Male	2.70	0.68	.057	.955	2.81	0.68	-.054	.957
	Female	2.69	0.73			2.82	0.62		
Emotion	Male	4.05	0.75	2.319	.022*	3.78	0.93	-2.006	.047*
	Female	3.59	1.16			4.10	0.71		
Silence Source	Male	3.60	0.70	2.104	.038	3.15	0.84	-.769	.443
	Female	3.25	0.81			3.27	0.74		
Administrator	Male	4.20	0.85	1.847	.068	3.96	0.75	-1.010	.315
	Female	3.85	0.81			4.12	0.87		
Isolation	Male	3.72	0.82	2.236	.028*	3.51	0.98	-.956	.341
	Female	3.26	1.13			3.69	1.04		
Total Organization Silence	Male	3.65	0.56	2.310	.023*	3.44	0.67	-1.258	.211
	Female	3.33	0.77			3.60	0.63		

When Table 5 is examined, no significant difference is found between physical education teachers mobbing

exposure and organizational silence levels (p>0.05).

Table 5. Comparison of Mobbing Exposure and Organizational Silence Levels of Physical Education and Branch Teachers by Age

		Physical Edu. Teachers				Branch Teachers			
	Age	Mean	Std. Dev.	F	p	Mean	Std. Dev.	F	p
Social Relation	21-30	1.57	0.77	1.105	.351	1.59	0.64	.461	.710
	31-40	1.86	0.90			1.68	0.78		
	41-50	1.51	0.60			1.51	0.71		
	+51	1.51	0.92			1.43	0.63		
Work	21-30	1.57	0.79	1.386	.251	1.58	0.49	1.266	.290
	31-40	1.91	1.01			1.78	0.95		
	41-50	1.47	0.75			1.46	0.77		
	+51	1.47	0.95			1.30	0.30		
Total Mobbing	21-30	1.57	0.76	1.309	.276	1.59	0.53	.932	.428
	31-40	1.88	0.93			1.73	0.82		
	41-50	1.49	0.66			1.49	0.72		
	+51	1.49	0.94			1.36	0.45		
School Environment	21-30	2.79	0.66	1.377	.254	2.66	0.61	.891	.448
	31-40	2.51	0.69			2.91	0.67		
	41-50	2.84	0.71			2.75	0.68		
	+51	2.60	0.91			2.80	0.41		
Emotion	21-30	3.86	1.00	.669	.573	3.94	0.76	.798	.498
	31-40	3.98	0.72			4.01	0.93		
	41-50	4.15	0.93			3.93	0.73		
	+51	3.60	0.80			3.40	0.76		
Silence Source	21-30	3.56	0.79	.431	.731	3.25	0.78	1.209	.310
	31-40	3.53	0.62			3.32	0.87		
	41-50	3.39	0.85			2.98	0.61		
	+51	3.24	0.79			3.08	0.59		
Administrator	21-30	4.12	0.82	2.116	.103	4.13	0.59	4.324	.006*
	31-40	4.19	0.76			4.22	0.71		
	41-50	4.19	0.83			3.75	1.01		
	+51	3.20	1.39			3.20	0.77		
Isolation	21-30	3.57	0.98	.711	.548	3.58	1.05	.130	.942
	31-40	3.74	0.77			3.62	1.05		
	41-50	3.52	1.00			3.63	0.99		
	+51	3.13	1.19			3.33	0.78		
Total Organization Silence	21-30	3.58	0.67	.745	.528	3.51	0.58	1.169	.325
	31-40	3.59	0.47			3.62	0.69		
	41-50	3.62	0.73			3.41	0.63		
	+51	3.15	0.96			3.16	0.58		

While no significant difference could be determined in the sub-dimensions of the level of exposure to mobbing of the branch teachers, a significant difference is found in the organizational silence levels only in the sub-dimension of the manager ($p<0.05$). The significant difference stemmed from the branch teachers between the ages of 31-40 and 41-50.

When Table 6 is examined, no significant difference is found in the levels of being exposed to mobbing and organizational silence according to the staff status of physical education and branch teachers ($p>0.05$).

Table 6. Comparison of Mobbing Exposure and Organizational Silence Levels of Physical Education and Branch Teachers by Working Status

		Physical Edu. Teachers				Branch Teachers			
	Working Status	Mean	Std. Dev.	F	p	Mean	Std. Dev.	F	p
Social Relation	Permanent	1.61	0.72	.770	.466	1.59	0.72	.957	.387
	Contract	1.73	1.12			2.10	0.90		
	Other	2.04	0.88			1.67	0.94		
Work	Permanent	1.61	0.82	.607	.547	1.64	0.83	.037	.963
	Contract	1.76	1.16			1.58	0.62		
	Other	2.00	0.59			1.50	0.71		
Total Mobbing	Permanent	1.61	0.75	.712	.493	1.62	0.74	.185	.831
	Contract	1.74	1.14			1.84	0.73		
	Other	2.02	0.68			1.58	0.82		
School Environment	Permanent	2.71	0.70	.648	.525	2.83	0.66	.650	.524
	Contract	2.56	0.67			2.63	0.52		
	Other	2.95	0.76			2.38	0.18		
Emotion	Permanent	3.91	0.88	.239	.788	3.95	0.85	.429	.652
	Contract	3.92	0.92			3.67	0.72		
	Other	4.20	1.19			4.33	0.47		
Silence Source	Permanent	3.46	0.73	.921	.402	3.21	0.79	.018	.982
	Contract	3.74	0.83			3.25	1.06		
	Other	3.44	0.75			3.30	0.14		
Administrator	Permanent	4.07	0.90	.563	.571	4.03	0.83	.271	.763
	Contract	4.31	0.63			4.25	0.32		
	Other	4.00	0.67			4.33	0.00		
Isolation	Permanent	3.56	0.93	.881	.418	3.60	1.02	.292	.747
	Contract	3.85	0.76			3.33	0.98		
	Other	3.33	1.31			4.00	0.00		
Total Organization Silence	Permanent	3.54	0.64	.284	.753	3.52	0.67	.093	.911
	Contract	3.68	0.60			3.43	0.41		
	Other	3.58	0.72			3.67	0.03		

When Table 7 is examined, no significant difference is found in the levels of being exposed to mobbing and organizational silence according to the school level of physical education and branch teachers ($p>0.05$).

Table 7. Comparison of Mobbing Exposure and Organizational Silence Levels of Physical Education and Branch Teachers by School Level

		Physical Edu. Teachers				Branch Teachers			
	School Level	Mean	Std. Dev.	t	p	Mean	Std. Dev.	t	p
Social	Elementary School	1.64	0.80	-.060	.952	1.50	0.51	-1.255	.212
Relation	High School	1.65	0.82			1.68	0.83		
Work	Elementary School	1.66	0.89	.161	.873	1.65	0.83	.112	.911
	High School	1.64	0.85			1.63	0.82		
Total	Elementary School	1.65	0.83	.056	.955	1.57	0.62	-.558	.578
Mobbing	High School	1.64	0.81			1.65	0.80		
School	Elementary School	2.66	0.67	-.834	.406	2.69	0.67	-1.585	.116
Environment	High School	2.78	0.74			2.89	0.63		
Emotion	Elementary School	3.96	0.96	.460	.647	3.91	0.94	-.383	.702
	High School	3.87	0.78			3.97	0.78		
Silence	Elementary School	3.50	0.82	-.133	.895	3.15	0.92	-.659	.511
Source	High School	3.52	0.60			3.25	0.70		
Administrator	Elementary School	4.09	0.87	-.324	.747	3.95	0.84	-1.003	.318
	High School	4.14	0.82			4.10	0.79		
Isolation	Elementary School	3.68	0.94	1.264	.209	3.63	1.07	.231	.818
	High School	3.44	0.90			3.58	0.98		
Total	Elementary School	3.58	0.70	.196	.845	3.46	0.73	-.749	.456
Organization Silence	High School	3.55	0.52			3.56	0.60		

When Table 8 is examined, no significant difference is found in the levels of mobbing exposure and organizational silence according to the type of school (state-private) ($p>0.05$). On the other hand, a significant difference is determined in the social relations sub-dimension and total mobbing score averages of the branch teachers' exposure to mobbing, and in the organizational silence levels in the source of silence sub-dimension score averages. When this difference is examined, it is determined that branch teachers working in private schools have higher levels of mobbing perception and organizational silence compared to their colleagues working in public schools.

When Table 9 is examined, it is understood that the regression model developed to test the effect of teachers' exposure to mobbing on organizational silence scores is found to be statistically significant $R=0.27$; $R^2=0.07$; $p<0.001$. Mobbing exposure of the participants explains about 7% of the total variance in organizational silence scores. When the significance values of the calculated standardized path coefficients are examined, exposure to mobbing as a whole affects teachers' organizational silence positively and significantly.

Table 8. Comparison of Mobbing Exposure and Organizational Silence Levels of Physical Education and Branch Teachers by School Type

		Physical Edu. Teachers				Branch Teachers			
	School Type	Mean	Std. Dev.	t	p	Mean	Std. Dev.	t	p
Social Relation	State	1.62	0.79	1.270	.207	1.59	0.71	-2.436	.017*
	Private	1.99	0.92			3.33			
Work	State	1.62	0.87	1.173	.243	1.63	0.82	-1.062	.291
	Private	2.00	0.84			2.50			
Total Mobbing	State	1.62	0.81	1.250	.214	1.61	0.72	-1.996	.047*
	Private	2.00	0.84			2.92			
School	State	2.69	0.69	-.339	.735	2.81	0.65	.098	.922
Environment	Private	2.78	0.74			2.75			
Emotion	State	3.95	0.86	.859	.392	3.94	0.84	-.861	.391
	Private	3.67	1.32			4.67			
Silence Source	State	3.54	0.73	1.416	.160	3.20	0.78	-1.986	.049*
	Private	3.15	0.85			4.60			
Administrator	State	4.13	0.86	1.097	.275	4.04	0.81	.052	.958
	Private	3.79	0.64			4.00			
İsolation	State	3.63	0.90	1.502	.136	3.60	1.01	.264	.792
	Private	3.13	1.18			3.33			
Total Organization	State	3.59	0.62	1.228	.222	3.52	0.65	-.534	.595
Silence	Private	3.30	0.79			3.87			

Table 9. The Results of the Regression Analysis

Independent Variables	B	Std. Error	Beta	t	p
(Constant)	3.176	.102		31.218	.000*
Social Relation	.134	.107	.159	1.249	.213
Work	.091	.097	.119	.941	.348

Discussion

In this study, exposure to mobbing and silence levels of physical education and branch teachers are examined comparatively. According to the results in Table 2, it has been seen that the physical education and branch teachers' exposure to mobbing is very low, on the other hand, organizational silence is moderate and high. In this respect, the most important reason why physical education and branch teachers are exposed to less in-school-based mobbing may be due to the fact that administrators in Turkey are also teachers. However, organizational silence may have an impact on the functioning of the system, the central organization of the ministry and the strict hierarchical structuring at the provincial-district directorates. According to the results in Table 3, no significant difference is found in the levels of physical education and branch teachers' exposure to mobbing. On the other hand, it is observed that physical education teachers have a higher perception of organizational silence in the

dimension of the source of silence compared to branch teachers. There is no distinction between branch and physical education teachers in terms of the functioning of the school. In this respect, both groups are exposed to low and similar levels of mobbing. In organizational silence, teachers' reactions to policy and educational decisions specific to their fields may have been determinative.

According to the results in Table 4, there are significant differences in terms of exposure to mobbing and organizational silence levels of physical education and branch teachers by gender. It has been determined that male physical education teachers have a higher perception of being exposed to mobbing and a higher level of perception of organizational silence. On the other hand, while the level of exposure to mobbing of branch teachers does not differ according to the gender variable, it is determined that female branch teachers have a higher level of emotional silence perception compared to their male colleagues. These findings are similar to the research findings carried out Atman (2012), Carneroa et al. (2010), Somunoglu et al. (2013). Although exposure to mobbing is reported in these studies, no significant difference could be found between the genders. On organizational silence, Bastug et al. (2016), Demirtaş & Nacar (2018), Kahveci & Demirtaş (2013), and Near & Miceli (1996) have similar research findings. In these studies, it has been reported that women exhibit higher levels of organizational silence in their workplaces. According to Pinder & Harlos (2001), organizational silence is greatly affected by the identity and characteristics of individuals. In these studies, it is stated that women mostly prefer to remain silent in situations of authoritarian leadership and conflict situations in the workplace.

According to the results in Table 5, no significant difference is determined in the levels of being exposed to mobbing and organizational silence according to the age of physical education teachers. These findings are similar to the research findings of Kaya, Ahi & Tabak (2012), Dikmetaş et al. (2011). On the other hand, there are significant differences in one dimension of the Organizational Silence Scale of branch teachers. Branch teachers aged 40 and under have a higher perception of managerial organizational silence than their peers in the upper age group. These findings are similar to the research findings of Millikenet et al. (2003) and Karacaoğlu & Cingöz (2008). According to Millikenet et al. (2003), employees with low professional seniority experience higher levels of anxiety and fear at the managerial level compared to older employees, which leads them to organizational silence.

According to the results in Table 6 and Table 7, no significant difference is found in the levels of being exposed to mobbing and organizational silence according to the staff status and school level variable of physical education and branch teachers. Teachers in Turkey have predominantly similar powers and responsibilities at all levels. In this respect, school level and staff status may not have caused a significant difference in these two dependent variables. According to the results in Table 8, no significant difference is determined in the levels of mobbing exposure and organizational silence according to the type of school (public-private). On the other hand, it has been observed that branch teachers working in private schools have a higher level of mobbing perception and organizational silence perception compared to their colleagues working in public schools. These findings are similar to the research findings of Gürsel, Sunbul and Sarı (2002), Kara (2020), Kaleli (2021), Kızılkaya (2021) and Kibici (2021), and Sunbul (2003). The fact that teachers working in private schools in Turkey face the risk of losing their jobs due to insufficient social security may be the reasons for their exposure to mobbing and

organizational silence in part. According to the results of the regression analysis in Table 9, exposure to mobbing in both physical education and branch teachers directly affects and increases organizational silence. These findings are same as study findings of Vveinhardt and Streimikiene (2015), Wang et al. (2019), Zahed (2015), Zhou et al. (2020). Zahed (2015) states that mobbing those employees are exposed to by their colleagues or a supervisor in an organization causes employee silence within the organization. Huang et al. (2018), on the other hand, reveals that a negative relationship with an impersonal and rude manager are one of the important causes of employee silence.

Conclusion

With this research, it is aimed to create a general framework regarding the reasons why physical education and branch teachers are exposed to mobbing and remain silent. Conducting the research in different educational institutions and different samples will make it easier to generalize the results to the field of education. In new studies, it is recommended to examine the causes and consequences of mobbing and organizational silence and their relations with other organizational behaviour issues such as school climate, job satisfaction, burnout, leadership and school culture. This research aimed to test the effects of mobbing and silence, which affect productivity and performance, on branch teachers, physical education and sports teachers. The fact that the research findings are based on quantitative data is an important limitation of the study. It is recommended that future research on this subject be supported by qualitative methods.

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